The Study of Life Change Unit as Stressor Agents among Tehran University of Medical Sciences Hospitals' Employees

Hossein Dargahi[1] and Mohammad Kazem Sharifiy Yazdi[*2]

[1] *Department of Health Care Management, School of Allied Health Sciences, Tehran University of Medical Sciences, Tehran, Iran*

[2] *Department of Clinical Laboratory Sciences, School of Allied Health Sciences, Tehran University of Medical Sciences , Tehran, Iran*

Received: 17 May 2009; Received in revised form: 15 Sep. 2009; Accepted: 23 Nov. 2009

Abstract- Life crises as stressor agents can disrupt the best stress management regime. Different life crises have different impacts. A standard scale to rate change and its related stress impact has been developed commonly referred to as LCU (Life Change Unit) Rating. This allocates a number of Life Crisis Units or Life Change Units (LCUs) to different event and then evaluates them and takes action accordingly. This idea behind this approach of is to rundown the LCU table, totaling the LCUs for life crisis that have occurred in the previous one year. A Cross – sectional, descriptive and analytical study was conducted among 900 Tehran University of Medical Sciences (TUMS) Employees by a Holms and Rahe LCU questionnaire at 15 hospitals. The respondents were asked to determine their demographic information, list of stress symptoms which suffered from these diseases in the previous one year and finally, responded to 45 Life Change Unit as stressful life events and the value of each in "stress units" which occurred in the previous one year. The results showed that there is significant correlation between the employees LCU rating by sex, educational degree and size of hospital. Also we found that there are significant correlations between the employees stress symptoms with their LCU rating. Totally, 40% of the employees have less than 150 LCU rating (normal range) and 60% of them have 150-300 or more than 300 LCU rating (abnormal range). In conclusion most of TUMS hospitals' employees who had stress symptoms have more LCU rating. One third of these employees are not in danger of suffering the illness effect, while two third of them are in danger.

© 2010 Tehran University of Medical Sciences. All rights reserved.

Acta Medica Iranica 2010; 48(4): 255-259.

Key words: Life change unit; health, employee; hospitals; stress

Introduction

Because of the effect stress has on employees' health and productivity, ways to manage stress should be particular concern to human resources managers (1). Physiologist professor Han Selye defined stress as "the rate of wear and tear of the body". Stress may be categorized into physical, mental, emotional and behavioral ones (2, 3). The symptoms of stress seems to be in agreement by all are sleep difficulties, migraines and headaches, neck aches and back spasms, heart irregularities, digestive problems , menstrual problems and skin disorders such as hives, acne, and other rashes (4). Many companies understand the negative impact cumulative stress on performance at both the individual and organizational levels and offer programs to help employees counteract it (5). Also, stress is a costly and significant source of health problems and mental distress (6). Occupational stress literature emphasizes the importance of assessment and management or work related stress (7). To arrive at an explanation of chronic stress, an understanding is needed of both the worker's interpretation of threatening stimuli and the worker's behavior within the control system (8). Healthcare professionals in general, and these who work in hospitals, must cope with a number of stressors in the working environment (9). Content analysis of the view of occupational stress presented in the Annual Reports of an Australian Public Hospital revealed scant attention to occupational health and safety issues and less still to the issue of workplace stress (10). Few interventions with the aim of improving well-being and stress level in health care workers have been published focusing on staff defined work stressors and efforts for practical improvements (11). Different life crises as stressor agents have different impacts (12). Holmes and Rahe

*** Corresponding Author:** Mohammad Kazem Sharifiy-Yazdi
Department of Clinical Laboratory Sciences, School of Allied Health Sciences, Tehran University of Medical Sciences , Tehran, Iran
Tel: +98 21 88965608, Fax : +98 21 88951775, E-mail : hdargahi@sina.tums.ac.ir

(1985) found a number of "Life Crisis Units" (LCUs) to different events and then evaluate them and take action accordingly. The idea behind this approach is to run down the LCU rating and LCU table, totaling the LCUs for life crisis that have occurred in the previous one year. As a rule of thumb, we anticipate some form of serious mental and physical effects of the crises according to the following table (13).

Life Crisis Units and the possibilility of Illness

LCUs	Probability of Illness
300	80%
200-299	50%
150-199	33%

Materials and Methods

A cross sectional, descriptive and analytical study was conducted among 900 TUMS Hospitals Employees as twenty percent of total employees by questionnaire at 15 studied hospitals. Then, a stratified random sampling technique was used to select respondents. Response rate was 80 percent. The respondents were asked to determine their demographic information, list of stress symptoms which suffered from these diseases in the previous one year and finally, responded to 45 Life Crisis Units as stressful life events and the value of each in "stress units" which occurred in the previous one year. These "Life Crisis Units" were classified into social, occupational, familial, personal and economical agents. Before beginning the main survey, a pilot study was performed with 100 randomly respondents to check the reliability of questionnaire instrument. The reliability coefficient for this measure was relatively high. The data was collected by SPSS software and analyzed by statistical methods.

Results

76.2% of the employees are female and 23.8% of them are male. It seems, the female have more LCU rating in comparative with the male. There is significant correlation between the employees LCU rating by Sex using with chi-square statistical method (P= 0.013).

74.1% of the employees have B.S., 4.8% under diploma, 4.6% M.S. and 5% have doctorate degree. The employees who have B.S. degree have more LCU rating . There is significant correlation between the employees LCU rating by educational degree (P = 0.021).

The correlation between TUMS Hospitals' Employees with their age, marriage status, number of children, place of birth, type of job, work experience, executive position and house ownership was studied but there are not correlation between the employees LCU rating with them. Although there is significant correlation between size of hospital and the employees LCU rating. Also, the correlation between the employees who had stress symptoms in the previous one year with their LCU rating show that there are significant correlation between the employees' stress symptoms with their LCU rating . Thus, more of the employees who have stress symptoms in the past one year , have more LCU rating by using of chi-square method (P<0.05). Totally, 39.9% of the employees have less than 150 LCU rating, 14.8% have 150-199, 18.6% have 200-299 and 26.7% of them have more than 300 LCU rating (Table 1). TUMS Hospitals' Employees' LCU rating by social, occupational, personal, familial and economical problems was analyzed as below:

-25.5% of the respondents responded positive answer to change in social activities as highest and 3% of them responded positive answer as lowest social LCU (Table 2).

-25.7% of the employees responded positive answer to change in decreased income as highest and 1.9% of them responded positive answer to change in spouse stops work as lowest occupational LCU (table 3).

-40% of the employees responded positive answer to change in recreation as highest and 0.5% of them responded positive answer to jail term as lowest personal LCU (Table 4).

-21.8% of the respondents responded positive answer to change in health of family member as highest and 0.5% of them responded positive answer to death of child as lowest familial LCU (Table 5).

Table 1. The distribution frequency of TUMS hospitals' employees by life crisis unit (LCU) rating.

LCU	Less than 150		150-199		200-299		More than 300		Total	
	N	%	N	%	N	%	N	%	N	%
Employees	307	39.9	114	14.8	143	18.6	206	26.7	770	100

Table 2. The distribution frequency of TUMS hospitals' employees by social life crisis unit (LCU) rating

Raw	Frequency / Social Life Crisis Unit	Yes		No		Total	
		N	%	N	%	N	%
1	Outstanding personal achievement	47	6.1	723	93.9	770	100
2	Change in college	23	3	747	97	770	100
3	Change in social activities	196	25.5	574	74.5	770	100
4	Minor violations of law	41	5.3	729	94.7	770	100
5	Begin or end of college	72	9.4	698	90.6	770	100
6	Troubles with co-workers	65	8.4	705	91.6	770	100
7	New romantic relation ship	57	7.4	713	92.6	770	100

Table 3. The distribution frequency of TUMS hospitals' employees by occupational life crisis unit (LCU) rating

Raw	Frequency / Occupational Life Crisis Unit	Yes		No		Total	
		N	%	N	%	N	%
1	Change in work conditions	184	23.9	586	76.1	770	100
2	Trouble with boss	107	13.9	663	86.1	770	100
3	Change in work hours	192	24.9	578	75.1	770	100
4	Spouse stops work	15	1.9	755	98.1	770	100
5	Change in responsibilities at work	92	11.9	678	88.1	770	100
6	Decreased income	198	25.7	572	74.3	770	100
7	Change to a different line at work	121	15.7	649	84.3	770	100
8	Job demotion	122	15.8	648	84.2	770	100

Table 4. The distribution frequency of TUMS hospitals' employees by personal life crisis Unit (LCU) rating

Raw	Frequency / Personal Life Crisis Unit	Yes		No		Total	
		N	%	N	%	N	%
1	Separation	80	10.4	690	89.6	770	100
2	Jail term	4	0.5	766	99.5	770	100
3	Injury of Illness	96	12.5	674	87.5	770	100
4	Accident	61	7.9	709	92.1	770	100
5	Major dental work	159	20.6	611	79.4	770	100
6	Pregnancy	28	3.6	742	96.4	770	100
7	Gain of new family member	45	5.8	725	94.2	770	100
8	Death of close friend	63	8.2	707	91.8	770	100
9	Change in personal habits	150	19.5	620	80.5	770	100
10	Change in residence	175	19.5	595	77.3	770	100
11	Change in recreation	308	40	462	60	770	100
12	Change in prayer	196	25.5	574	74.5	770	100
13	Change in sleeping habits	263	34.2	507	65.8	770	100
14	Holiday	259	33.6	511	66.4	770	100

Table 5. The distribution frequency of TUMS hospitals' employees by familial life crisis unit (LCU) rating

Raw	Frequency / Familial Life Crisis Unit	Yes		No		Total	
		N	%	N	%	N	%
1	Change in number of arguments with spouse	77	10	693	90	770	100
2	Death of spouse	6	0.8	764	99.2	770	100
3	Divorce	9	1.2	761	98.8	770	100
4	Death of brother or sister	27	3.5	743	96.5	770	100
5	Death of parent	81	10.5	689	89.5	770	100
6	Death of child	4	0.5	766	99.5	770	100
7	Change in health of family member	168	21.8	602	78.2	770	100
8	Marital reconciliation	13	1.7	757	98.3	770	100
9	Marriage	50	6.5	720	93.5	770	100
10	Son of daughter leaving home	39	5.1	731	94.9	770	100

Discussion

The results of this survey were intended to assist decision makers in identifying key workplace issues, as perceived by employees, in order to understand why stress must be managed and determine the source of stress and improve their understanding and management of stress (14-15).

More of TUMS hospitals' employees who have stress symptoms in the past one year have more LCU rating. 40% of these employees have less than 150 LCU rating and therefore they are not in danger of suffering the illness effect. But 60% of the employees who have score of 150-300 or more LCU rating as stressor agents give them a 33-80% chance of developing an illness in the next year. The higher the total life event scores accumulated over a period, the greater the risk of developing a physical or psychological disorder subsequently. Ohlson and *et al*. showed that workers in human service organizations are often confronted with emotional strain experienced in human service work may cause psychological increase (16). A central assumption in the life crisis literature asserts a linear association between severity of life crisis and illness (17). In a study was conducted at a large regional hospital in Sweden in 1994 with a follow – up in 1995, Pakkarinen *et al.* reported the work stressors experienced by employees such as time pressure are related to the quality of life in Long Term Care Units (18). In conclusion, the findings of this study showed that TUMS hospitals' employees are exposed to many stress agents which scored by Life Crisis Unit. Stressor agents could increase susceptibility of employees to types of diseases. Social, occupational, familial, personal and economical stress agent may be impact on TUMS hospitals' organizational performance of employees. After working with 770 workers in 15 hospitals, the authors have found that learning to manage stress in easier than most people think. There is scientifically based system of tools, techniques, and technologies that TUMS hospitals can use to reduce the employees stress and boost overall performance. As a part of a program, supervisors and managers should identify stressors in the environment and suggest ways to alleviate or eliminate their effects. Once morale improves, coordinators should shift the programs' focus to maintaining employee morale.

Acknowledgments

The authors would like to thank TUMS Hospitals' Mangers and Employees, because this survey would not have been possible without their assistance.

This research was supported by Tehran University of Medical Sciences and Health Services.

References

1. Sailer HR, Schlacter J, Edwards MR. Stress: causes, consequences, and coping strategies. Personnel 1982;59(4):35-48.
2. Selye H. The Stress of Life. New York: McGraw-Hill Book Company; 1979.
3. Kua EH, Ko SM, Ung K, Fones CSL. Stress and Mental Stress and Stress Management. Singapore: SNP Publishing Private LTD; 2000.
4. Monograph on the Internet: Anonymous. Life Change Unit Stress Rating. 2005. Available from: URL:http://www.bestliquid vitamins.com
5. Cryer B, McCarty R, Childre D. Pull the plug on stress. Harvard Business Rev 2003;81(7):102-7.

6. Horan AP. An effective workplace stress management intervention: Chicken Soup for the Soul at Work Employee Groups. Work 2002;18(1):3-13.
7. Michailidis M, Georgiou Y. Employee occupational stress in banking. Work 2005;24(2):123-37.
8. Houben GJ. Production control and chronic stress in work organizations. Int J Health Serv 1991;21(2):309-27.
9. Johnson RP. Easing the burden of stress. A stress management program can help eldercare professionals cope. Health Prog 1991;72(1):56-9.
10. Trubshaw EA, Dollard MF. Representation of work stress in an Australian public hospital. A case study. AAOHN J 2001;49(9):437-44.
11. Petterson IL, Arnetz BB. Psychosocial stressors and well-being in health care workers. The impact of an intervention program. Soc Sci Med 1998;47(11):1763-72.
12. Monograph on the Internet: Anonymous. The impact of Life crisis, and how to minimize them. 2005. Available from: URL:http://www.mindtolls.com
13. Monograph on the Internet: Anonymous. Stress Management. 1985. Michigan State University, Extension Home-page 1714 B. Available from: URL:http://www.msue.msu.edu
14. Monograph on the Internet: Anonymous. Stress Management: Fundamentals for Managers. 2005. Available from: URL:http://www.trainingclasses.com
15. Monograph on the internet: Anonymous. Stress Management Training, Two day workshop. 2005. Available from: URL:http://www.associatedtraining.com.uk
16. Ohlson CG, Söderfeldt M, Söderfeldt B, Jones I, Theorell T. Stress markers in relation to job strain in human service organizations. Psychother Psychosom 2001;70(5):268-75.
17. Monograph on the Internet: Anonymous. Life Change and the level of rape impact. J Health and Social Behavior 1980;21(3):248-60.
18. Pekkarinen L, Sinervo T, Perälä ML, Elovainio M. Work stressors and the quality of life in long-term care units. Gerontologist 2004;44(5):633-43.