

# Relationship amongst Job Stress and Chronic Back-Pain: A Cross-Sectional Study of Teaching and Administrative Staff

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**Abstract— Background & Objective:** The job stress, undesirable work assignments, heavy workload and continuously working while sitting in office stimulates back-pain, however, the daily exercise can reduce the back-pain. The objective of the study was to examine the relationship amongst job stress and chronic pain in back and investigate the factors of chronic pain in back amongst teaching and administrative staff. **Methodology:** The study was conducted at Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan with the help of Questionnaire & Interviews. The methodology of the study was cross-sectional. The random sampling method has been applied in this study, and a sample of 300 respondents (150 teaching staff and 150 administrative staff) was selected for this study. **Results & Conclusion:** Results indicated that due to job stress and continuously working in the office, the pain in back gradually develops in both categories of staff, however, due to ignorance, the back pain leads to chronic back-pain with other severe complications. The results also indicated that the teaching staff possesses lesser back-pain while the administrative staff suffers from pain in back as they have to work in the office regularly. It was also observed that the staff who daily exercise have lesser back-pain while the staff who do not exercise regularly faces back pain. Hence the job stress is associated with chronic pain, and regular physical workout can reduce chronic back-pain.

**Keywords:** Relationship; job stress; chronic back-pain

## I. BACKGROUND AND INTRODUCTION

A job associated chronic back-pain is correlated with exposure to ergonomic stressors at work, physical, psychosocial and personal risk factors [1]. The disorders of musculoskeletal are common causes of disability in the work area; the back pain is one of the disorders of musculoskeletal & discomfort. The back pain is originating from the context of work and work relating complications. The World Health Organization

(WHO) has identified back-pain as one of top occupational health-related problems [2]

Prevalence of chronic back-pain is higher in the developing countries [3-4]. Chronic back-pain weaken employees in work efficiency, absence from duty, low performance & premature retirement from service [5]. It had been experiential that the employees who are suffering from chronic back-pain difficulties may grow physically, socially & mentally disturbed, the same can affect their profession [6]. Physical influence includes deteriorated health and loss of physical function. However, the decrease in social activities indicates that social impact, whereas, the depression, anxiety, irritability and insomnia indicates the psychosocial impacts [7]. The job stress, undesirable work assignments, heavy workload and constantly working while sitting in office stimulates back-pain, however, exercise on daily basis can reduce the back-pain.

Lu (1997) defined occupational stress as the condition in which some factors or combination of factors interferes with the worker and interrupts his or her psychological and physical health [8]. Raeissi and Tavakoli (2002) has generalized that a small amount of stress can bring about an increase in individual's efficiency which is the positive stress known as 'eustress,' while too much stress results in physical as well as mental ill health which is negative stress known as 'distress'[9-13]. Cooper and Marshal (1976) stated that occupational stress includes the stressors such as role ambiguity, role conflict work overload and poor working conditions related to a particular job. Researchers concur that stress is a serious problem in many organizations (Cooper and Cartwright, 1994; Varca, 1999) which results in high organizational costs. [14-16]. According to Holms (2001), the risks for individual well-being produced by occupational-

stress contain chronic back pain, anxiety, depression, increased costs, loss of motivation, poor staff performance, increased absence related sickness, etc.[17].

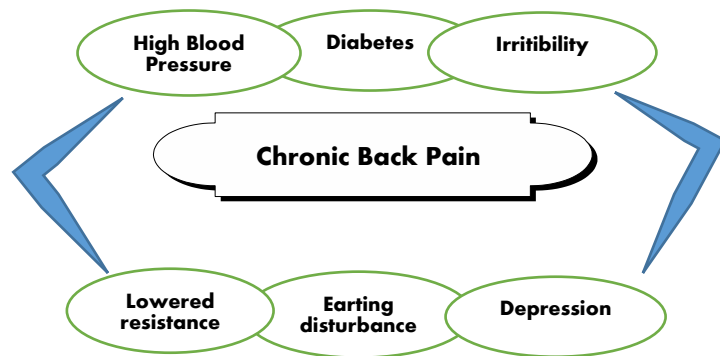
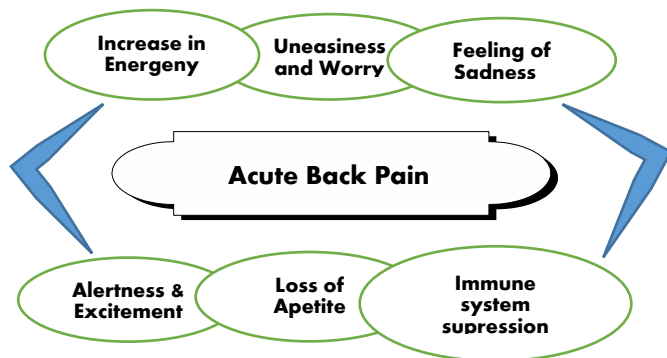
The literature of occupational stress contains several occupational stressors such as job qualities, work relations, role conditions, career progress and lack of challenges. However, insufficient studies have been conducted on job stress and chronic back-pain. [18]. Therefore the objective of the research was to examine the relationship amongst job stress and chronic back-pain and investigate the factors of chronic back-pain amongst teaching and administrative staff.

#### A. Chronic Back-Pain:

Low back pain can be defined as the pain that lasts between 4 and 12 weeks. Whereas, the chronic back pain is defined as the pain that persists for 12 weeks or longer.

The job stress, undesirable work assignments, heavy workload and continuously working while sitting in office stimulates back-pain

#### B. Job Stress-Related Conditions:



## II. OBJECTIVE OF THE STUDY

The objective of this research was to examine the relationship amongst job stress and chronic back-pain and investigate the factors of chronic back pain amongst teaching and administrative staff

## III. METHODOLOGY

The present study is a cross-sectional study, it was conducted at Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan. Initially, interviews were carried out with the teaching staff as well as administrative staff to find out their issues. During interviews, various issues were being raised including job stress and back pain due to heavy workload, continuously delivering lecturer, unfriendly environment and working in late hours. Considering various factors of job stress and back pain, a questionnaire was developed. The questionnaire is comprised of three parts; 1<sup>st</sup> part consisted of information regarding sex, age, level of education, designation etc. The 2<sup>nd</sup> part comprised of factors which were affecting job satisfaction like workload, working conditions, respondent's relations with co-workers, job description, working environment etc. The 3<sup>rd</sup> part comprised of factors to investigate the musculoskeletal problems. The questionnaire was drafted after reviewing the literature and in consideration of the objectives of the study. The Likert Scale was used with scoring 0 for "Never/almost never", 1 for "Seldom", 2 for "sometimes" and 3 for "often". The part-III of Questionnaire was scored with an eleven point rating scale from zero (0) to ten (10). The study was conducted between April 2015 and September 2015 at Liaquat University of Medical & Health Sciences, Jamshoro. The Random sampling method was applied in this study. The total sample size of the study was 300 respondents, 150 teaching staff and 150 administrative staff and the data was analyzed using SPSS: 20.

## IV. RESULTS & DISCUSSION

The results indicate that 80 respondents were Male Teaching Staff, and 85 were Male administrative staff (Total 55%), and whereas the ratio of Female respondents was 70 Teaching Staff and 65 administrative staff (Total 45%). Hence the majority of respondents were Male rather than Female. Moreover, the majority of respondents were aged between 30-39 years and 31% respondents were single. The majority of the respondents were having 05-10 years of experience and the usual working hours were 07 per day. The demographic profile of participants has been demonstrated in Table No.01.

**Table No.01**  
**Demographic Profile of Respondents**

		Teaching Staff	Admin: Staff	
		Frequency	Frequency	Overall %
Gender	Male	80	85	55.00
	Female	70	65	45.00
Total		150	150	100.00
Years of Exp.	01-05 years	13	17	10.00
	05-10 years	58	52	36.67
	11-15 years	42	47	29.67
	More than 16 years	37	34	23.67
Total		150	150	100.00
Qualification	Bachelor	59	55	38.00
	Master	84	95	59.67
	Ph.D	7	0	2.33
Total		150	150	100.00
Marital Status	Single	40	55	31.67
	Married	110	95	68.33
Total		150	150	100.00

The age wise distribution of the present study has been highlighted in Table No.02

**Table No.02**  
**Age Wise Distribution of respondents**

		Teaching Staff	Admin: Staff	
		Frequency	Frequency	%
Age (Yrs)				Mean±SD
Male	25-29	30	35	21.67
	30-39	28	28	18.67
	40-49	15	15	10.00
	50-59	7	7	4.67
Total		80	85	55.00
Female	25-29	17	13	10.00
	30-39	38	40	26.00
	40-49	10	11	7.00
	50-59	5	1	2.00
Total		70	65	45.00

The results further indicated that 75 teaching staff and 85 administrative staff under study were highly stressed (Total 53.33%). 42 respondents of Teaching Staff and 42 Administrative Staff under study were moderately stressed (Total 28%), whereas only 33 Teaching Staff and 23 Administrative Staff (Total 18.67%) were having the low level of stress. Table No.3 shows the level of job stress with chronic back pain in 300 respondents.

**Table No.03**  
**Descriptive Statistics**

		Teaching Staff	Admin: Staff	
		Frequency	Frequency	Overall %
Highly Stressed				
Male		39	48	29.00%
Female		36	37	24.33%
Total		75	85	53.33%
Moderately Stressed				
Male		23	24	15.67%
Female		19	18	12.33%
Total		42	42	28.00%
Low Level of Stress				
Male		18	13	10.33%
Female		15	10	8.33%
Total		33	23	18.67%
Grand Total		150	150	100%

From the results of the study, it is clear that the administrative staff is highly stressed with chronic back pain rather than teaching staff. This study disclosed the prevalence of chronic back pain and its correlated risk factors among teaching and administrative staff. The prevalence of chronic back pain among teachers was 45% and among administrative staff, it was 55% during their job profession.

In the present study, the prevalence of job stress with chronic back pain was higher in administrative staff aged between 30-55 years. The relationship of stress with chronic back pain is more common in developing countries, and that job stress was more common in male rather than female. In this study, male workers showed a significantly higher prevalence of chronic back pain (55%) than female (45%). Results further indicated that due to job stress and continuously working in office, back pain gradually develops in both categories of staff, however, due to ignorance, the Back Pain leads to chronic Back Pain with other severe complications. The result of the Present study is consistent with the study conducted by

Steven James Linton [19] as Steven in his study has reported that there is a solid association between psychological variables and back pain. His results indicated that there is strong evidence that stress, work relations, job satisfaction are related to future back pain.

Chronic back pain has an effect on an enormous percentage of the respondents and is not easy to investigate. Identification of etiological and risk factors, cause for back pain and type of job and organization protective trial, with therapy may escort to a significant decline the prevalence of chronic back pain. Prolonged sitting seems to be an important factor of chronic back pain with job stress [20].

The results of the present study verified that the relationship of the prevalence of chronic back pain with prolonged sitting habits. More in depth studies should be needed to find out further solutions. The results also indicated that the teaching staff has lesser back pain while the administrative staff suffers from back pain as they have to work in the office regularly. It was also observed that the employees who exercise regularly have lesser back-pain while the employees who do not exercise regularly faces back pain. Hence the job stress is associated with chronic pain, and regular physical workout can reduce chronic back pain.

#### V. RECOMMENDATIONS

Based on the findings of the study, following are the recommendations:

- Practice healthy habits
- Exercise regularly
- Be realistic
- Meditate
- Use systematic relaxation
- Simplify your life – Delegate
- Develop and use planning skills
- Avoid unnecessary competition
- Take one thing at a time
- Develop social support networks
- Recognize and accept personal limits
- Focus on enjoying what you do
- Take time off
- Go easy with criticism

#### VI. LIMITATION OF THE STUDY

Job satisfaction is a very vital concern in every field so that the enormous area can be studied for such type of research. The present study is limited to a limited population which can be extended to overall province/country.

#### REFERENCES

- [1] Hagberg M, Silverstein B, Wells R, et al. In: Kuorinka I, Forcier L, eds. Work-related musculoskeletal disorders (WMSDs): a reference book for prevention. London: Taylor and Francis, 1995.
- [2] Choi BC, Tennessee LM, Eijkemans GJ (2001) Developing regional workplace health and hazard surveillance in the Americas. *Rev Panam Salud Publica* 10:376-381.
- [3] Frank JW, Kerr MS, Brooker A, DeMaio SE, Maetzel A, Shannon HS, Sullivan TJ, Norman RW, Wells RP. 1996. Disability resulting from occupational low back pain: Part I: What do we know about primary prevention? A review of the scienti@c evidence on prevention before disability begins. *Spine* 21:2908±2917
- [4] Mäkelä M, Heliövaara M, Impivaara O, et al. Prevalence, determinants, and consequences of chronic neck pain in Finland. *Am J Epidemiol* 1991;134:1356–67.
- [5] Tola S, Riihimäki H, Videman T, et al. Neck and shoulder symptoms among men in machine operating, dynamic physical work and sedentary work. *Scand J Work Environ Health* 1988;14:299–305.
- [6] Brage S, Bjerkedal T. Musculoskeletal pain and smoking in Norway. *J Epidemiol Community Health* 1996;50:166–9.
- [7] Buckle P. Upper limb disorders and work: the importance of physical and psychosocial factors. *J Psychosom Res* 1997;43:17–25.
- [8] Lu, L. (1997). The Process of Work Stress: A Dialogue between Theory and Research. *Chinese Journal of Mental Health*, 10, 19-51.
- [9] George, J. M. & Jones, J. R. (1996). Understanding and Managing Organizational Behavior. New York: Addison-Wesley Publishing Co. Inc
- [10] Newell, S. (2002). Creating the Healthy Organization: Well-Being, Diversity & Ethics at Work. London: Thomson Learning.
- [11] Luthans, F. (1992). Organizational Behavior. New York: McGraw-Hill.
- [12] Millward, L. (2005). Understanding Occupational and Organizational Psychology. Thousand Oaks, California: Sage Publications.
- [13] Raeissi, P. & Tavakoli, G. H. (2002). The Impact of Occupational Stress on Mental Health and Job Performance in Hospital Managers and Matrons. *Hakim*, 4(5), 247-254.
- [14] Cooper, C. L. & Marshal, J. (1976). Occupational Sources of Stress: A Review of the Literature Relating to Coronary Heart Disease and Mental Health. *Journal of Occupational Psychology*, 49, 11-28.
- [15] Olaleye, B. A. (2002). Psycho-Social Effects of Job Stress and Burn-out Syndrome among Nurses in State- Owned Hospitals in Oyo State. *M.S.W. Project, University of Ibadan, Nigeria*.
- [16] Holms, S. (2001). Work-Related Stress: A Brief Review. *The Journal of the Royal Society for the Promotion of Health*, 121(4), 230-235.
- [17] Kelly, T. & Barrett, M. (2012). The Leading Causes and Potential Consequences of Occupational Stress: A Study of Irish Trainee Accountants. *IAR2012.indb*.
- [18] National Institute for Occupational Safety and Health. Musculoskeletal disorders and workplace factors. A critical review of epidemiological evidence for work-related musculoskeletal disorders of the neck, upper extremity, and low back. Cincinnati, OH: NIOSH, 1997.
- [19] Steven James Linton (2001), *Occupational Psychological Factors Increase the Risk for Back Pain: A Systematic Review, Journal of Occupational Rehabilitation*, Vol. 11, No. 1, 2001
- [20] Haldorsen EMH, Indahl A, Ursin H. 1998. Patients with low back pain are not returning to work: A 12-month follow-up study. *Spine* 23:1202± 1208.

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