

FREQUENCY OF LOW BACK PAIN IN HEALTH CARE PROFESSIONALS OF REHMAN MEDICAL INSTITUTE PESHAWAR: A CROSS SECTIONAL SURVEY

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ABSTRACT:

BACKGROUND: Non-specific Low back pain (LBP) is one of the most common cause of musculoskeletal disorder related to work status and condition. Low back pain is a complex condition with several factors contributing to its occurrence.

METHODOLOGY: All the subjects were selected in accordance with the inclusion and exclusion criteria. A total of 150 subjects were selected, including 118 males and 32 females. Diagnosis was made after initial assessment by a physical therapist, pain was recorded on Visual Analogue Scale (VAS) and disability was recorded on the self-reported questionnaire. Data was analyzed using SPSS to calculate the frequency and percentage of age, history of nonspecific low back pain and disability score with graphical presentation.

RESULTS: Non-specific low back pain is very common in the subjects having age from 21 to 30 which is 72.2%. Nonspecific low back pain was observed in young adult patients, males being affected more with a percentage of about 78.7% and females with a percentage of 21.3%. Seventy three patients i.e. 48.7% were reported having backache history of 2 years whereas, 18 (12%) patients reported backache history of 5 years and 10 patients having backache history of 10 years with percentage of 6.7% were also reported. Remaining 49 subjects (32.7%) lacked any kind of back pain complaint. About 18.7% of the patients presented with minimum pain intensity, 35.5% with mild pain intensity, 11.3% with moderate pain intensity and 2% of patients with severe pain intensity. Majority i.e. 82% subjects showed mild disability with the disability score below 57, 15.3% showed moderate disability with the score of 71 and 2.7% of the subjects showed severe disability with the disability score of 85.

CONCLUSIONS: It is concluded from the above findings that the nonspecific low back pain is common among age group 21 to 30 with specifically male being more affected. Greater number of Patients was observed having backache history of two years and those who had more intense back pain at baseline, presenting with moderate and severe disability at baseline being more likely to experience worsening disability over the passage of time. Work load and posture related complications are associated with worsening of low back pain and disability among young adult subjects.

KEY WORDS: Non Specific Low Back Pain, Health Care Professional, Postural Awareness.

INTRODUCTION

Low back pain is neither a disease nor a diagnostic entity of any sort. The term refers to pain of variable duration in an area of the anatomy afflicted so often that it has become a paradigm of responses to external and internal stimuli¹. It is one of the most common causes of musculoskeletal disorders related to work status and condition². It

occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations³. In Europe, 30% of the general worker population suffers from LBP and it remains the leading cause of disability in persons younger than 45 years old⁴. More than one-quarter of the working population is affected by LBP each year⁵ with a lifetime prevalence of

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60–80% and a large percentage of LBP claims for long durations (more than 90 workdays lost)⁶.

Low back pain is a complex condition with several factors contributing to its occurrence. Most knowledge on risk factors of LBP stems from cross sectional studies which cannot evaluate the temporal sequence between a risk factor and the occurrence of pain⁷. Three different groups of potential risk factors have been identified: (a) individual factors such as body weight and age, (b) biomechanical factors such as heavy physical load, lifting, twisted postures, and vibration, and (c) psychosocial factors such as job control and job satisfaction. The increased risk for bricklayers has been attributed to inclined work postures and repetitive lifting of bricks which weigh 5–24 kg, depending on the type and size⁸.

The use of health care services for chronic LBP has been increased substantially over the past 2 decades. Multiple studies using national and insurance claims data have identified greater use of spinal injections, surgery and opioid medications treatments to be most likely used by individuals with chronic LBP. Studies have also documented increase in medication prescription and visits to physicians, physical therapists, and chiropractors because individuals with chronic LBP are more likely to seek care and to use more health care services relative to individuals with acute LBP also increase in health care use are likely driven more by chronic than acute cases⁹. Persons with acute or sub-acute back pain appear to vary in the levels of physical activity independent of disability while Persons with chronic back pain with high levels of disability will likely have low levels of physical activity¹⁰. Inconsistent results were found for leisure time physical

activities, sports and physical exercise. Studies focusing on daily habitual physical activities (e.g. domestic activities and commuting) in association with LBP are lacking. In conclusion, the occurrence of LBP is related to the nature and intensity of the undertaken physical activities. However, physical activities can be subdivided into separate types and intensities and the ultimate physical load is the sum of all these activities. This makes it difficult to designate one particular activity as the cause of LBP¹¹. He also added that Low back pain and neck pain are critical public health problems. Our study supports the idea of a multidimensional approach in examining low back and neck problems and suggests the need for further research to address potentially modifiable psychological factors and health behaviors in these populations¹². December 2005 to August 2006 and analyzed using Chi square and multivariate logistic regression techniques to describes the prevalence and risk factors for low back pain amongst a variety of Turkish hospital workers including nurses, physicians, physical therapists, technicians, secretaries and hospital aides where they drew the conclusion that most respondents (65.8%) had experienced low back pain, with 61.3% reporting an occurrence within the last 12 months and the highest prevalence was reported by nurses (77.1%) and the lowest amongst secretaries (54.1%) and hospital aides (53.5%)¹³.

A study concluded that an association exists between work stress, manual lifting and low back pain prevalence. The main route to prevention of low back pain among nurses is likely to lie in improved

ergonomics and psychological health in their work place. Good posture and correct transferring techniques in ward settings should be reinforced with hands-on practice performed on nurses' common types of clients¹⁴.The symptoms may start soon after the movements or upon waking up the following morning. The description of the symptoms may range from tenderness at a particular point to diffuse pain. It may or may not worsen with certain movements, such as raising a leg, or positions, such as sitting or standing. Pain radiating down the legs may be present. The first experience of acute low back pain is typically between the ages of 20 and 40. This is often a person's first reason to see a medical professional as an adult. Recurrent 10 episodes occur in more than half of people with the repeated episodes being generally more painful than the first¹⁵.

Most information about non-specific low back pain in adults is found in Western countries, especially in the European population. As far as we know only a few studies have been conducted in the non- Western countries. Among the non-Western countries PGP and/or LBP has only been studied in Hong Kong, Nigeria, South Africa, Iran, China and India. Currently, in Pakistan, no information is worth obtaini after searching the data bases such as Pub Med, Cochrane, and Google scholar regarding the prevalence and potential risk factors for non-specific low back pain. This gives rise to determine the frequency and risk factors of non-specific low back pain in adult population.

With this study, people and other health professional (Orthopedic Surgeons, Physical Therapist and other

health professionals) would understand the importance of correct postures and ergonomics in their clinical practice.

METHODOLOGY

A Cross-sectional survey was conducted in which the Professionals working in Rahman Medical Institute Peshawar, having nonspecific low back pain were included. All the subjects were selected according to the inclusion and exclusion criteria. Total 150 subjects were selected, including 118 males and 32 females. All the subjects were assessed for the history of nonspecific low back pain and disability. Diagnosis was made after initial assessment by physical therapist, pain was recorded on VAS Scale and disability was recorded on the self-reported questionnaire.

Data was analyzed using SPSS in order to calculate the frequency and percentage of age, history of nonspecific low back pain and disability score with graphical presentation.

RESULTS

Correlation of variables and study data was analyzed and interpreted through SPSS version 19 to properly identify the frequency of non-specific low back pain in health care professionals in Rahman Medical Institute (Peshawar).

Statistical analyses of study variables (Gender, Age, Back Pain History, Pain Score, Disability Score, Pathology Status) were properly described and illustrated in the Tables 1, 2, 3, 4, 5, 6 and Graphical presentations.

Descriptive statistic Table I shows study mean was greater than standard deviation which shows that the data was realistic for further research processes.

Table I: Descriptive Statistics

		gender	age	Back pain history	Pain score	Disability score	Pathology Status
N	Valid	150	150	150	150	150	150
	Missing	0	0	0	0	0	0
Mean		1.2133	1.3400	.9267	26.2667	35.1667	1.3267
Std. Error of Mean		.03356	.05079	.06893	1.80615	2.33498	.03842
Median		1.0000	1.0000	1.0000	20.0000	42.0000	1.0000
Mode		1.00	1.00	1.00	40.00	.00	1.00
Std. Deviation		.41103	.62208	.84422	22.12068	28.59751	.47057
Range		1.00	3.00	3.00	80.00	85.00	1.00

Table 2: Gender Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	118	78.7	78.7	78.7
	Female	32	21.3	21.3	100.0
	Total	150	100.0	100.0	

Table 3: Age Boundaries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21 to 30	109	72.7	72.7	72.7
	31 to 40	33	22.0	22.0	94.7
	41 to 50	6	4.0	4.0	98.7
	51 to 60	2	1.3	1.3	100.0
	Total	150	100.0	100.0	

Non-specific low back pain was found out to be common among subjects belonging to age group 21 to 30 with percentage of 72.2. Non-specific low back pain was observed in young adult patients, with males being more affected with a percentage of about 78.7 and females with a percentage of 21.3 as illustrated in Table 3.

Table 4: Back pain history

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	49	32.7	32.7	32.7
	2years	73	48.7	48.7	81.3
	5years	18	12.0	12.0	93.3
	10years	10	6.7	6.7	100.0
	Total	150	100.0	100.0	

In Table 4 shows that 73 patients had backache history of 2 years with percentage of 48.7%, 18 patients had backache history of 5 years with percentage 12%, 10 patients had backache history of 10 years with percentage of 6.7% and the remaining 49 subjects did not reported any kind of back pain with a percentage of 32.7%.

Table 5: Pain score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	49	32.7	32.7	32.7
	20	28	18.7	18.7	51.3
	40	53	35.3	35.3	86.7
	60	17	11.3	11.3	98.0
	80	3	2.0	2.0	100.0
	Total	150	100.0	100.0	

Table 5 shows 18.7% patients with minimum pain intensity, 35.5% with mild pain intensity, 11.3% with moderate pain intensity and 2% patients with severe pain intensity.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	50	33.3	33.3	33.3
	14	6	4.0	4.0	37.3
	28	7	4.7	4.7	42.0
	29	1	.7	.7	42.7
	42	24	16.0	16.0	58.7
	47	1	.7	.7	59.3
	57	34	22.7	22.7	82.0
	71	23	15.3	15.3	97.3
	85	4	2.7	2.7	100.0
	Total	150	100.0	100.0	

Table 6 shows that 2.7% of subjects having had severe disability score isof 85, moderate disabilityscore as 71 in 15.3% of subjects, and remaining 82% of subjects having had mild disability with disability score below 57.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Back pain present	101	67.3	67.3	67.3
	Back pain absent	49	32.7	32.7	100.0
	Total	150	100.0	100.0	

DISCUSSION

Our data confirmed the high prevalence of low back pain and associated disability in the general population. Symptoms were more common in men with manual occupations than in those with non-manual jobs, but in women there was no clear trend in relation to social class. Geographical differences in prevalence were small, but the threshold for reporting symptoms in general practitioners varied markedly from place to place.

Back pain is not itself life-threatening; it does threaten quality of life. In the absence of diagnosis and effective treatment, complex enmeshment and interactions can ensue between non-specific LBP, identity, and social roles, having a diverse and pervasive impact of the condition with life-changing psychological and social consequences. There is little in the data to suggest that individual characteristics, country, or study setting are associated with differences in described impact of

LBP. The back-specific core sets of outcome measures recommended by Deyo *et al.* in 1998, and later updated by Bombardier *et al.* in 2000, recommend measurement in the domains of pain, function, well-being, disability, and work disability^{16,17}. WHO made back-specific recommendations to measure pain, disability, and depression¹⁸.

Furthermore the association that we found in men between low back pain and age, gender, history of LBP is probably explained by differences in physical activity at work. The absence of a similar relation in women argues against an effect of nutrition or some aspect of the home environment. Moreover, analysis of occupational histories from our subjects indicates a clear association between the incidence of non-specific low back pain and heavy lifting at work¹⁹.

CONCLUSIONS

It is concluded from the above findings that the nonspecific low back pain is common among age group 21 to 30 with specifically male being more affected.

Greater number of Patients was observed having backache history of two years and who had more intense back pain at baseline, presenting with moderate and severe disability at baseline and were more likely to experience worsening disability over the passage of time. Work load and posture related complications are associated with worsening of low back pain and disability in young adult subjects. Nonspecific low back pain was an important factor in reducing the quality of life of elderly with work load and poor posture and awareness of these findings alerts the practitioner to the risk of nonspecific low back pain. The physical therapist should be very cautious about the management of nonspecific low back pain when an elderly patient comes with complains of pain and disability in the lumbar region.

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