

Quality of Life in Women with Different Intensity of Low Back Pain

* *SS Tavafian*^{1,4}, *H Eftekhari*¹, *K Mohammad*², *AR Jamshidi*³, *A Montazeri*⁴, *D Shojaeezadeh*¹
*F Ghofranipour*⁵

¹*Dept. of Health Services, School of Public Health, Tehran University of Medical Sciences, Iran*

²*Dept. of Biostatistics and Epidemiology, School of Public Health, Tehran University of Medical Sciences, Iran*

³*Research Center of Rheumatology, Shariati Hospital, Tehran University of Medical Science, Iran*

⁴*Iranian Institute for Health Science Research, Tehran, Iran*

⁵*Dept. of Health Education, School of Medicine, Tarbiat Modarres University Tehran, Iran*

(Received 30 Aug 2004; revised 14 Dec 2004; accepted 25 Dec 2004)

Abstract

It is widely believed that pain has a profound effect on health related quality of life. This study was conducted to assess quality of life in patients suffering from different density of chronic low back pain. The sample consisted of 101 patients with chronic low back pain attending to the Rheumatology Research Center of Tehran University of Medical Sciences between July and September 2003. All patients were female, married, aged 18 years or over and underwent rheumatologic clinical examination. Data were collected by face-to-face interviews using the Iranian version of the Short Form Health Survey (SF-36). Relative to mean score of bodily pain, patients were divided into 2 groups: severe pain group (group 1) and mild pain group (group 2). Then, quality of life scores was compared between these two groups. Independent sample t-test was applied and the results showed that there were significant differences between quality of life scores among people with different intensity of low back pain in all dimensions but the role emotional and social functioning scales. The findings from this study confirm that quality of life in patients with low back pain depending on its intensity may vary.

Keywords: *Low back pain, Quality of life, SF-36 questionnaire, Iran*

Introduction

Low back pain (LBP) is a widespread and costly problem in many countries (1). It is a common condition that affects an estimated 70% to 80% of adults at some points during their life times (2). In the UK the number of days of invalidity benefit attributable to spinal disorders raised three fold over the 1980s (3). Thus, many researchers report recurrent episodes of low back pain with variable length and severity (4). It is widely believed that pain has a profound effect on a person's quality of life but many of measures designed for using in health care, only assess pain not quality of life. Nowadays the quality of life questionnaires are the

most important contemporary measures in health care and are more responsive to changes in clinical condition than pain measures themselves (5). Studies have shown that lumbar spine disease can negatively affects the quality of life and it can have a major impact on daily functions such as dressing oneself, standing, sitting, walking, and lifting which can severely interfere with a wide range of life's activities (6,7). In fact, pain and the degree, to which the patients believe that they are disabled by it, is a powerful factor in the extent of their quality of life impairments (8). Despite many studies in different countries however, little is known about the quality of life and its relationship to

LBP in Iranian patients. This study aimed to investigate on quality of life in LBP patients and examine whether there was any difference in quality of life in patients with different LBP intensity.

Materials and Methods

This was a cross-sectional study of quality of life in LBP patients attending the Rheumatologic Research Center (RRC) of Tehran University of Medical Sciences (TUMS) Iran. The RRC is a referral center and patients with LBP come to the center from all over of the country. Data were collected between July and September 2003 with intention to interview all eligible chronic LBP patients. Inclusion criteria for eligibility were: being female, aged 18 years or over, undergoing rheumatologic clinical examination and suffering from LBP for 3 months or more. Quality of life was assessed using a standard generic health related quality of life measure that was the Short Form Health Survey, SF-36 (9). There is evidence that it is a valid measure and is responsive to changes for people with LBP in primary care settings (3). The questionnaire consists of 8 dimensions and on each dimension scores range from 0 to 100 where 0 scores represents the worst condition and 100 represents the best. The reliability and validity of the Iranian version of the questionnaire is well documented (10). Relative to mean score

on bodily pain scale patients were divided into 2 groups; patients with scores lower than mean entered into the group 1 or the mild pain group and patients who had scores above mean entered into the group 2 or the severe pain group. Then, quality of life was compared in these two groups. To comply ethical consideration, permission was obtained from ethics committee of TUMS and the patients. Descriptive statistics, Chi-squared test, and independent sample *t*-test were used to analyze data.

Results

All patients (n=101) were married women and the mean age of the respondents was 43.8 years (SD=11.0) ranging from 18 to 74. Most patients were unemployed and had secondary education. Relative to mean score of the bodily pain scale on the SF-36 questionnaire 51 patients reported that experiencing mild pain (group 1), and the remaining 50 patients reported that suffering from severe pain (group 2). The characteristics of all patients and 2 groups are shown in Table 1. With regards to variables studied there were no significant differences between two groups. Comparing the SF-36 mean scores between two groups indicated that there were significant differences between patients with mild and severe LBP except for role emotional and social functioning. The results are shown in Table 2.

Table 1: The characteristics of women with different intensity of low back pain

	All patients (n = 101) No. (%)	Mild pain group (n = 51) No. (%)	Sever pain group (n = 50) No. (%)	P value
Age				
Mean (SD)	43.8 (11.0)	42.9 (10.1)	44.8 (11.5)	>0.36
Weight				
Mean (SD)	68.9 (11.0)	69.8 (10.7)	68.0 (12.3)	>0.44
Educational level				
Primary	25 (24.5)	13 (25.5)	11 (22.0)	
Secondary	63 (61.8)	29 (56.9)	34 (68.0)	
Higher	13 (13.7)	9 (17.6)	5 (10.0)	
				>0.42

Cont. Table 1: The characteristics of women with different intensity of low back pain

Employment status			
Employed	19 (18.8)	11 (21.6)	8 (16.0)
Unemployed	82 (81.2)	40 (78.4)	42 (84.0)
			>0.60
Income			
High	43 (42.6)	24 (47.1)	19 (38.0)
Intermediate	48 (47.5)	21 (41.2)	27 (54.0)
Low	10 (9.9)	6 (11.8)	4 (8.0)
			>0.42
Taking exercise			
Always	13 (12.9)	4 (7.8)	9 (18.0)
Occasionally	47 (46.5)	23 (45.1)	24 (48.0)
Never	41 (40.6)	24 (47.1)	17 (34.0)
			>0.20

Table 2: Quality of life scores in women with different intensity of low back pain.

	Mild pain group Mean (SD)	Severe pain group Mean (SD)	P value
Physical Functioning (PF)	42.6 (21.4)	60.6 (20.2)	< 0.0001
Role Physical (RP)	19.4 (23.1)	37.7 (34.4)	0.002
Bodily Pain (BP)	24.1 (16.3)	56.2 (15.9)	< 0.0001
Vitality (VT)	40.7 (23.1)	53.4 (20.8)	0.005
Mental Health (MH)	39.4 (25.1)	56.2 (24.0)	< 0.001
Role Emotional (RE)	26.6 (37.3)	38.6 (42.5)	0.13
Social Functioning (SF)	54.7 (32.9)	65.7 (26.1)	0.06
General Health (GH)	34.4 (21.9)	46.5 (23.1)	0.008

Discussion

In this study the focus was on the relationship between quality of life and LBP. The findings indicated that there were significant differences between patients with different LBP intensity. It seems that these discrepancies emerged from LBP that affected quality of life. The study results are very similar to the findings by Wang et al. (11) where they demonstrated that all SF-36 sub-scales scores significantly correlated with the intensity and frequency of pain among headache patients.

The present study did not reveal any significant differences between two groups in relation to the role emotional and the social functioning scores. Perhaps this might be due to the cultural

and social characteristics of Iranian women who in spite of having pain still keep their relationships and spiritual status.

The findings showed that there were strong differences between two groups with regard to the physical functioning. This indicates that low back pain can cause disability and many limitations for patients who suffer from severe LBP. Also there were remarkable differences between two groups in other dimensions of quality of life such as role physical, vitality, mental health and general health. Perhaps this means that LBP can significantly affect these dimensions of quality of life.

This was a descriptive study and had certain limitations in its objectives. To have a better

understanding of the relationship between quality of life and LBP there is need to carry out studies that examine this relationship while considering patients' characteristics and health behaviors. However, the findings from this study confirm that quality of life is different in patients with different intensity of LBP.

Acknowledgments

The authors would like to thank all colleagues in the Iranian Institute for Health Sciences Research, especially Mariam Vahdaninia for her help in data analysis. Thanks also go to the colleagues in the Rheumatologic Research Center of TUMS.

References

1. Mainiadaakis N, Gray A (2000). The economic burden of back pain in the UK. *Pain*, 84: 95-108.
2. Frymoyer JW (1988). Back pain and sciatica. *N Engl Med J*, 318: 291-300.
3. UK BEAM (UK back pain exercise and manipulation) (2003). National randomized trial of physical treatment for back pain in primary care: objective, design and interventions. *BMC Health Services Research*, 3: 16.
4. Yoshiaki T, Shinn-ichi K, Koji O et al. (2003). Correlation of low back pain with, functional status, general health perception, social participation, subjective happiness and patient satisfaction. *Spine*, 28: 1461-1466.
5. Skevington SM (1998). Investigation the relationship between pain and discomfort and quality of life using the WHO-QOL. *Pain*, 76: 305-306.
6. Clariborn N, Vandeburgh H, Krause TM, Leung P (2002). Measuring quality of life changes in individual with low back pain conditions: a back education program evaluation. *Evaluation and Program Planning*, 25: 61-70.
7. Liddle SD, Baxter GD, Gracey JH (2004). Exercise and chronic low back pain, what work? *Pain*, 107: 176-190.
8. Turner JA, Jensen MP, Romano JM (2000). Do beliefs, coping, and catastrophizing independently predict functioning in patients with chronic pain. *Pain*, 85: 115-25.
9. Ware JE, Sherburne CD (1992). The MOS 36- item short form health survey (SF-36) conceptual framework and item selection. *Med Care*, 30: 437-83.
10. Montazeri A, Goshtasebi A, Vahdaninia M, Gandek B (2004). The Short Form Health Survey (SF-36): translation and validation study of the Iranian version. *Quality of Life Research*, in press.
11. Wang SJ, Fuh JF, Lu SR, Juang KD (2001). Quality of life differs among headache diagnosis: analysis of SF-36 survey in 901 headache patients. *Pain*, 89:285-92.