

# IMPACT OF CHRONIC LOW BACK PAIN ON HEALTH RELATED QUALITY OF LIFE IN FEMALES

Maria Khan, DPT, MS-OMPT, 200 C Madina block Awan Town Multan Road Lahore

Masooma Gull, BSPT, Tdpt, MS-NMPT, Senior Lecturer/Physiotherapist, Shalamar Medical and Dental College Lahore

Date of Received: 09/03/2018

Date of Acceptance: 14/05/2018

## ABSTRACT

**Introduction:** Low back pain (LBP) is defined as pain, discomfort, stiffness or muscle tension in the posterior region of back below the costal margin and above the gluteal folds with or without referred leg pain depending upon the cause. Low back pain (LBP) is common health problem that affects 70-80% people of all ages at any time in their life. It is most common cause for medical consultations and sickness-related work absence. **Objective:** The objective of this study was to determine the impact of chronic low back pain on health related quality of life in females in Lahore. **Study design:** The study design used was Observational Cross-Sectional Survey. **Setting:** The study was conducted in Jinnah Hospital, Lahore. **Period:** August, 2016 to February, 2017. **Material and Method:** An observational cross sectional survey was conducted on population age 18 to 60 years and 66 people were selected via non probability convenience sampling. Short form of health survey (SF-36) and Visual Analogue Scale (VAS) were used. All interviews were conducted face to face by researcher. **Result:** The main result showed that mean age of 66 patients was 40.13 years, mean of General Health was 37.90, mean of physical functioning was 60.75, mean of role limitations due to Physical health was 52.65, mean of role limitations due to Emotional problems was 58.58, mean of social Functioning was 56.06, mean of pain was 42.08, mean of energy/ fatigue level was 40.07, mean of Emotional Well being was 56.62. **Conclusion:** So, study concluded that there was negative impact of low back pain on general health, physical functioning, emotional and social functioning, energy level and emotional well being in females. With the increase in intensity of pain, the quality of life was declined.

**Key words:** Low back pain, Short Form of Health Survey (SF-36), Visual Analogue Scale, Health related Quality of Life.

## Correspondence Address

**Masooma Gull,**  
BSPT, Tdpt, MS-NMPT  
(Neuromuscular physical  
therapy) Senior Lecturer/  
Physiotherapist,  
Shalamar Medical and Dental  
College Lahore.  
masoomagull2@gmail.com

**Article Citation:** Khan M, Gull M. Impact Of Chronic Low Back Pain On Health Related Quality Of Life In Females. *IJAHS*, Apr-Jun 2018;02(04-06):110-115.

## INTRODUCTION

Low back pain (LBP) is defined as pain, discomfort, stiffness or muscle tension in the posterior region of back below the costal margin and above the gluteal folds with or without referred leg pain depending upon the cause. Pain may be sharp, dull, aching or burning and mild to severe in intensity, aggravated by activity like lifting or bending and relieved by rest or medications. Low back pain may be specific (having serious pathology or cause for example infection, tumor, osteoporosis, ankylosing spondylitis, fracture etc) or nonspecific or mechanical (not having any serious) pathology.<sup>2</sup> There are many classifications of low back pain

depending upon its cause, duration and sign and symptoms. On the basis of cause it is classified as Mechanical (nonspecific having no serious pathology) and Non Mechanical (serious pathology or cause). Depending upon duration it is acute (<6weeks), subacute (6-12 weeks) and chronic (>12 weeks). Sign and symptoms divide it in diffuse (localized) and radicular pain (radiating).

Many Causes and Risk Factors contribute to the low back pain. Some common causes are Muscle Strain, Traumatic injuries, Degenerative Disc or Joint Disease, Vertebral fracture, Spondylolysis, herniated disc, spinal stenosis, rheumatoid

arthritis and ankylosing spondylitis. Risk factors include age, weight, pregnancy, occupation, posture, genetics, lifestyle and long term use of some medications.

Chronic low back pain disturbs health related quality of life including physical, social, psychological aspects of life. Health related quality of life (HRQOL) is related to the multifaceted views of physical, mental, emotional and social functioning. As a patient oriented outcome, health related quality of life is very important in rehabilitation and health services research.<sup>9</sup>

Low back pain is major health issue throughout the world. Its prevalence was found 22-65% in one year globally (5-13) Its prevalence in Latin America was found 16.7%-65% from low risk group to high risk group.<sup>6</sup> Different studies showed 6.5% to 44.1% prevalence of low back pain in Pakistan.<sup>7</sup>

## LITERATURE REVIEW

A cross sectional survey on predictors of Health-related Quality of Life in patients with non-specific low back pain was conducted. Study included 220 participants. Short form of health survey (SF-36), Oswestry disability questionnaire, quadruple visual analogue scale were used to measure quality of life, disability and pain intensity. Increasing age, level of disability affected the health related quality of life in patients with low back pain.<sup>11</sup>

A study on Health-related quality of life in multiple musculoskeletal conditions was conducted. Salaffi F, De Angelis R, Stancati A, Grassi W, took sample of 576 individuals with different musculoskeletal conditions including low back pain. Health related quality of life was assessed with short form health survey (SF-36) and EQ-5D. Results were same as in above study that musculoskeletal conditions have adverse effects on health related quality of life.<sup>14</sup>

Cook DJ, Guyatt GH, Adachi JD, Clifton J, Griffith LE and Epstein RS conducted a cross sectional survey on females patients with persistent back pain due to osteoporosis. Study included females with vertebral fractures due to osteoporosis and evaluated quality of life with Andrews-withey quality of life scale. Results suggested that pain has high impact on different aspects of individual's life including physical, social and emotional limitations.<sup>18</sup>

A randomized control trial applied back school programmer in 102 patients with chronic low back pain with questionnaire short form of health survey (SF-36). Results showed that by improving life style and functional status quality of life can be improved in patients with chronic low back pain.<sup>20</sup>

## MATERIAL AND METHOD

### STUDY DESIGN

The study design used was Observational Cross-Sectional Survey.

### SAMPLING TECHNIQUE

Non-probability Convenience Sampling was used as the technique of sampling.

### STUDY SETTING

The study was conducted in Physiotherapy department, Jinnah Hospital, Lahore.

### SAMPLE SIZE

A total of 66 patients were enrolled in the Survey from Jinnah Hospital.

- To estimate a mean
- Confidence level = 95%
- Acceptable difference = 5
- Assumed S.D. = 20.2
- REQUIRED SAMPLE SIZE = 66

sample size (n) required for estimating a mean is  $n = s^2 \cdot t^2 / d^2$  (Zar's formula 7.7) where t = the two-tailed critical value of Student's t with n-1 degrees of freedom d = half the width of the desired confidence interval

**DURATION OF STUDY**

The study was conducted over a time period of 6 months after the approval of synopsis from August, 2016 to February, 2017.

**Operational Definition:**

Quality of life general health physical working, emotional and social functioning energy level and emotional well being.

**SAMPLE SELECTION**

**Inclusion Criteria**

- Females
- Age 18-60 years
- Having chronic low back pain more than 90 days or 12 weeks
- Nonspecific low back pain
- Specific low back pain including degenerative disc disease, arthritis, osteoporosis

**Exclusion Criteria**

- Males
- Low back pain due to malignancy and infection
- Any recent surgery in last 3 months
- Having any psychiatric illness

**DATA COLLECTION**

Data was collected from female patients having age 18-60 years diagnosed with chronic low back pain from Orthopedic and Physiotherapy Department Outdoors, Jinnah hospital Lahore. Short Form of Health Survey 36 (SF-36) was used. All interviews were conducted face to face by researcher herself.

**WORKING PROCEDURE**

Following steps were adopted to collect the data,

- With the help of research supervisor and senior teachers, SHORT FORM OF HEALTH SURVEY (SF-36) QUESTIONNAIRE was used to measure quality of life and VISUAL ANALOGUE SCALE for pain intensity.
- Before visiting the specific department researcher got permission from concerned authorities.

- The data was collected from 66 patients by direct personal approach method.

**STATISTICAL ANALYSIS**

Using SPSS version 16, the data was managed and analyzed. The categorical variable was expressed in the form of frequency table and percentages. Appropriate graphs were used to display the data.

**RESULTS**

**Socioeconomic Status**

Social Class		Frequency	Percent	Valid Percent	Cumulative Percent
	Low Class	6	9.1	9.1	9.1
Valid	Middle Class	60	90.9	90.9	90.9
	Total	66	100.0	100.0	100.0

Table of Socioeconomic status shows that out of 66 patients 6 (9.1%) belong to low class and remaining 60 (90.9%) belong to middle class.

**Duration of Pain in months**

Duration of pain in months				
Valid Duration	Frequency	Percent	Valid Percent	Cumulative Percent
Within Six Months	21	31.8	31.8	31.8
Up to Twelve Months	10	15.2	15.2	47.0
More than twelve months	6	9.1	9.1	56.1
Within Twenty Four Months	7	10.6	10.6	66.7
More than Twenty Four Months	22	33.3	33.3	
Total	66	100.0	100.0	100.0

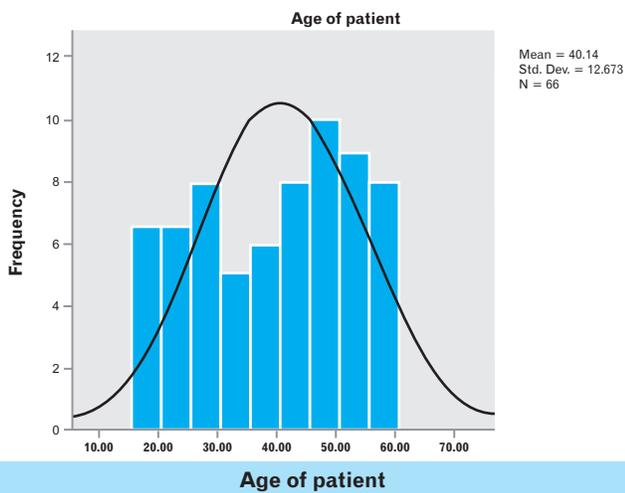
Table of Duration of pain in months shows that out of 66 patient 21 (31.8%) patients fall in first category which is within six months, 10(15.2%) patients fall in category up to twelve months, 6(9.1%) patients fall in category more than twelve months, 7 (10.6%) are within twenty four months and 22 (33.3%) had pain for more than twenty four months.

Descriptive Statistics			
	Mean	Std. Deviation	N
Intensity of Pain	6.0606	1.81344	66
Total Score Quality of Life	461.3705	144.88447	66

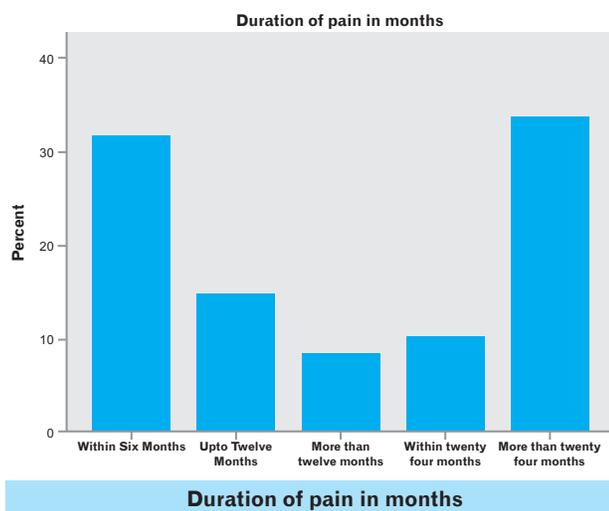
Descriptive statistics shows that mean intensity of pain of 66 patients is 6.06 and mean of total score of quality of life is 461.37.

Correlations			
		Intensity of Pain	Total Score Quality of Life
Intensity of Pain	Pearson Correlation	1	-.224
	Sig. (2-tailed)		.071
	N	66	66
Total Score Quality of Life	Pearson Correlation	-.224	1
	Sig. (2-tailed)	.071	
	N	66	66

Histograms

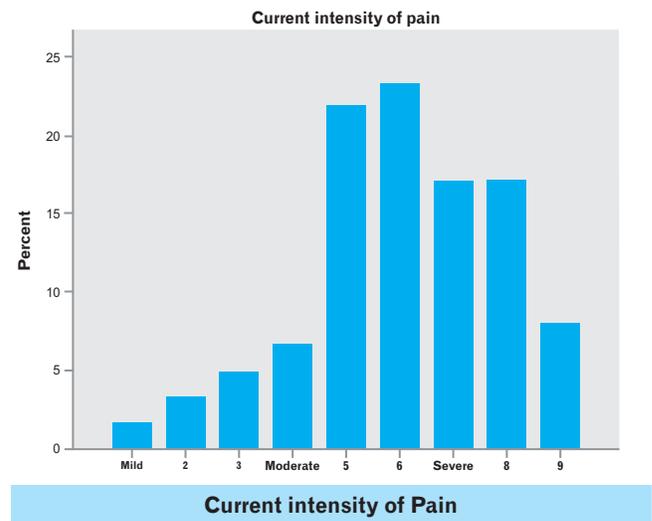


Histogram with normal curve regarding age of patients showed mean score of 40.14 SD±12.673, while the curve was normally distributed.

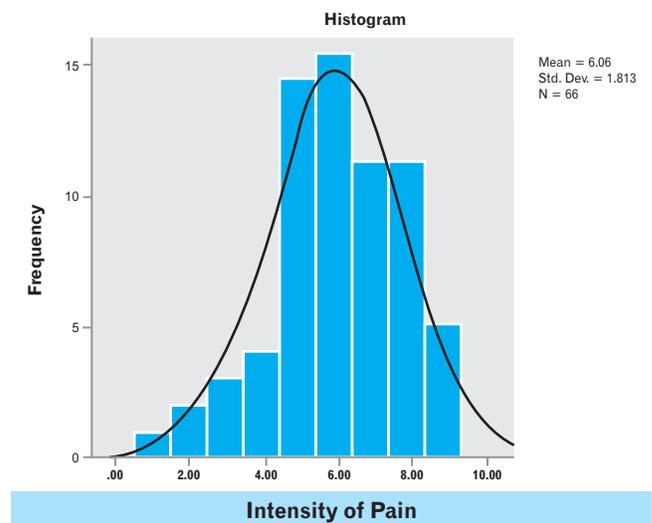


Duration of pain in months shows that out of 66 patient 21 (31.8%) patients fall in first category which is within six months, 10(31.8%) patients fall in category up to twelve months, 6(9.1%) patients fall in category more than twelve months, 7 (10.6%) are within twenty four months and 22 (33.3%) had pain for more than twenty four months.

Visual Analogue Scale



Mean intensity of pain of 66 patients is 6.06.



Histogram with normal curve regarding intensity of pain showed mean score of 6.06 SD±1.813, while the curve was normally distributed.

## STATISTICS

Statistics	N		Mean	Std. Deviation	Range
	Valid	Missing			
Age of patient	66	0	40.1364	12.67327	42.00
General Health of Patient	66	0	37.9033	15.85283	54.13
Physical Functioning of Patient	66	0	60.7576	26.18341	85.00
Role Limitations due to physical health	66	0	52.6515	36.46093	100.00
Social_Functioning	66	0	58.5808	42.19173	100.00
Role Limitations due to Emotional problems	66	0	56.0606	30.40136	100.00
Pain	66	0	42.0833	19.03733	80.00
Energy/Fatigue	66	0	40.0758	15.22883	65.00
Emotional well being	66	0	56.6288	17.44404	72.00

Statistics shows that mean age of 66 patients is 40.13 years, mean of general health is 37.90, mean of physical functioning is 60.75, mean of role limitations due to physical health is 52.65, mean of role limitations due to emotional problems is 58.58, mean of social functioning is 56.06, mean of pain is 42.08, mean of energy/fatigue level is 40.07, mean of emotional well being is 56.62.

## DISCUSSION

In this study, impact of chronic low back pain on health related quality of life was studied in females. Low back pain has been associated with a number of factors which consequently affect the daily routine of the individual. This study especially focused the females and a number of considerations appeared to be found.

Furthermore, chronic low back pain has great impact on health related quality of life. Quality of life is shown to be decreased with the chronic low back pain. With severity, chronicity and long duration of low back pain, the quality of life declines and doesn't let the person perform daily routine work properly or well like before. This has great emotional stress on individual because independence in all areas of life is the utmost need and desire of an individual human being. Same is the case with physical independence, the need of individual. Any

compromise is not accepted at first and emotional chain of denial, depression and anger with further dependence ensues. This makes human more and more functionally poor and health related quality of life becomes poorer

A lot of researches have already been done on this which helped me out for my research work. I took the data of fifty patients and evaluated different variables to justify the topic of research.

## CONCLUSION

So, study concludes that there is negative impact of low back pain on general health, physical functioning, emotional and social functioning, energy level and emotional well being in females. With the increase in intensity of pain, quality of life declines.

## REFERENCES

1. Tavafian S, Eftekhari H, Mohammad K, Jamshidi A, Montazeri A, Shojaezadeh D, et al. Quality of life in women with different intensity of low back pain. *Iranian Journal of Public Health*. 2005;34(2):36-9.
2. Duthey B. Background Paper 6.24 Low back pain. 2013.
3. Cohen SP, Argoff CE, Carragee EJ. CLINICAL REVIEW Management of low back pain. *Bmj*. 2009;338:100-6.
4. Naser SSA, AlDahdooh RM. Lower Back Pain Expert System Diagnosis And Treatment.
5. Hoy D, Bain C, Williams G, March L, Brooks P, Blyth F, et al. A systematic review of the global prevalence of low back pain. *Arthritis & Rheumatism*. 2012;64(6):2028-37.
6. do Maranhão SL, de Oncologia M, Garcia JB. Prevalence of low back pain in Latin America: a systematic literature review. *Pain physician*. 2014;17:379-91.
7. Hussain A, Bashir S, Aslam H, Rehan N. Low Back Pain: Not a Segmental Pathology.
8. ABUSE POS. Programme on mental health. 1996.

9. Schaller A, Dejonghe L, Haastert B, Froboese I. Physical activity and health-related quality of life in chronic low back pain patients: a cross-sectional study. *BMC musculoskeletal disorders*. 2015;16(1):1.

10. Hunfeld JA, Perquin CW, Duivenvoorden HJ, Hazebroek-Kampschreur AA, Passchier J, van Suijlekom-Smit LW, et al. Chronic pain and its impact on quality of life in adolescents and their families. *Journal of Pediatric Psychology*. 2001;26(3):145-53.

11. Ogunlana M, Odunaiya N, Dairo M, Ihekuna O. Predictors of Health-related Quality of Life in Patients with Non-specific Low Back Pain. *African Journal of Physiotherapy and Rehabilitation Sciences*.4(1-2):15-22.

12. Last AR, Hulbert K. Chronic low back pain: evaluation and management. *American family physician*. 2009;79(12):1067-74.

13. Brucker A. Combined Physiotherapy and Education is Efficacious for Chronic Low Back Pain. *manuelletherapie*. 2004;8(04):167-8.

14. Salaffi F, De Angelis R, Stancati A, Grassi W, Pain M. Health-related quality of life in multiple musculoskeletal conditions: a cross-sectional population based epidemiological study. II. The MAPPING study. *Clinical and experimental rheumatology*. 2005;23(6):829.

15. Rodrigues-De-Souza DP, Fernández-De-Las-Peñas C, Martín-Vallejo FJ, Blanco-Blanco JF, Moro-Gutiérrez L, Alburquerque-Sendín F. Differences in pain perception, health-related quality of life, disability, mood, and sleep between Brazilian and Spanish people with chronic non-specific low back pain. *Brazilian Journal of Physical Therapy*. 2016;20(5):412-21.

16. Roux CH, Guillemin F, Boini S, Longuetaud F, Arnault N, Hercberg S, et al. Impact of musculoskeletal disorders on quality of life: an inception cohort study. *Annals of the rheumatic diseases*. 2005;64(4):606-11.

17. Pellisé F, Balagué F, Rajmil L, Cedraschi C, Aguirre M, Fontecha CG, et al. Prevalence of low back pain and its effect on health-related quality of life in adolescents. *Archives of pediatrics & adolescent medicine*. 2009;163(1):65-71.

18. Cook DJ, Guyatt GH, Adachi JD, Clifton J, Griffith LE, Epstein RS, et al. Quality of life issues in women with vertebral fractures due to osteoporosis. *Arthritis & Rheumatism*. 1993;36(6):750-6.

19. Paananen M, Taimela S, Auvinen J, Tammelin T, Zitting P, Karppinen J. Impact of self-reported musculoskeletal pain on health-related quality of life among young adults. *Pain Medicine*. 2011;12(1):9-17.

20. Ware Jr JE. SF-36 health survey update. *Spine*. 2000;25(24):3130-9

**AUTHORSHIP AND CONTRIBUTION DECLARATION**

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Maria Khan	Writing /data collection/data analysis	
2	Masooma Gull	Co- author	