

THE IMPACT OF CHRONIC LOW BACK PAIN ON QUALITY OF LIFE AMONG WOMEN WITH VARIOUS OCCUPATIONS IN MIRPUR CITY AJK

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ABSTRACT

Background: Chronic Low Back Pain (CLBP) is one of the most prevalent musculoskeletal disorders globally, significantly impacting quality of life (QoL). Despite its high occurrence, there is limited research on its effect on working women in semi-urban regions like Mirpur, AJK. **Objective:** To determine the impact of CLBP on work-related quality of life (WRQoL) among women employed in different occupational sectors in Mirpur. **Method:** Descriptive cross-sectional study was implemented among 228 working women (nurses, teachers, bankers) aged 25-40 having 6 months or more of CLBP in the period of 6 months in Mirpur City. Functional disability was measured using the ODI and the WRQoL scale was used to measure the functional disability. Approval was obtained ethically and data analyzed via SPSS, which involved descriptive statistics, Spearman correlation and simple linear regression. **Result:** The study found a high burden of CLBP, with 45.6% weak, 32% moderate, and 11% severe cases, while 45.6% had moderate disability and 12.7% severe disability affecting daily activities. Despite this, most participants reported moderate (63.2%) or high (30.7%) WRQoL, though many faced pressure (31.1%), stress (38.2%), and long work hours (70.6%). A small but positive correlation ($r = 0.124$, $p = 0.061$) was observed between disability and WRQoL. **Conclusion:** CLBP significantly affects the physical, emotional, and social QoL of working women in Mirpur, though employment value may help buffer its impact. These findings align with global trends, highlighting the need for targeted prevention and intervention measures.

Keywords: Chronic Low Back Pain, ODI, WRQoL, Women's Health.

INTRODUCTION

Chronic low back pain (CLBP) is a widespread and impairing diagnosis shown by the legacy of bottom back pain that goes on not least 12 weeks without a structural or as opposed, a basic cause of origin. In contrast to acute pain that is resolved after a rest period or medical

care, CLBP is hard to get rid of and relapses, influencing physical functions of a person, their emotional state, and the quality of life. Quality of Work Life (QWL) refers to the combination of workplace strategies, processes, and environment that foster

employee satisfaction. It is closely linked to the conditions within the workplace, which can influence how content and engaged employees are in their roles. A satisfied employee is more likely to participate actively and contribute productively. According to Wikipedia, QWL encompasses an individual's broader employment experience, shaped by both motivating factors that enhance job satisfaction and hygiene factors which, if absent, can lead to dissatisfaction. Therefore, QWL is influenced not only by the work itself but also by personality, overall wellbeing, and home life. It extends beyond simple measures of job satisfaction or stress, representing a more comprehensive view of the employee.

The impact of CLBP is not limited to bodily pains; it has emotional strains and occupational limitations. The issue is that many individuals with CLBP have persistent pain and immobility, considering that they were marked by ruined sleep, anxiousness, despondency, and withholding due to isolation.

Chronic low back pain is mostly caused by occupational unknowns, particularly in vulnerable jobs like office workers, teachers, and nurses. Since women participate in both formal and informal labor in Mirpur City, the type of environment they work in, which may be responsible for CLBP quality, needs to be determined.

Chronic low back pain (CLBP) is a major public health concern with millions of people worldwide being challenged by it, but there is an under-researched exploration of how it affects the quality of life of women, especially in various work patterns that exist in developing countries. Women are no longer excluded from the formal and informal job sectors in Mirpur city, AJK, and they often must work under physically taxing or ergonomically unpleasant conditions. Notwithstanding this, very little empirical work has been conducted exploring the impact that CLBP has on their day-to-day functionalities, emotional stability, and employment yield. The local level mining is lacking in the local data on semi-urban centers such as Mirpur, and the most available reports are in urban centers (labour force survey 2020, 2021). In the absence of this information,

health policies might not address the occupational and socio-cultural factors particular to this region regarding female health issues. This paper seeks to fill this gap by looking into how CLBP is affecting the quality of life of working women in Mirpur, thus providing a basis for making more effective and contextual policy decisions and interventions relating to health.

Methodology:

A descriptive cross-sectional study was conducted over six months in Mirpur City, AJK. Non-probability convenience sampling was used to recruit 228 women aged 25–40 years, employed as nurses, teachers, or bankers, with CLBP lasting six months or more.

Participants working at least six hours per day for over one year were included, while pregnant women and those with recent surgery or neurological conditions were excluded.

This was done in an ethical manner through systematic data collection in the assurance of the accuracy and reliability of data. Before the study was initiated, ethics clearance was taken with approval of the Institutional Review Committee of Mohi-ud-Din institute of Rehabilitation Sciences (MIRS), Mirpur, AJ&K.

Participant Recruitment Population Target: Female workers 25-40 years old primarily working in hospitals, schools, colleges and in banks in the city of Mirpur. **Work Criteria:** They need a minimum of 1 year's work experience with a duty time of 6-8 hrs per day. Participants were identified by the technique of non-probability convenient sampling as they needed to fit in with the inclusion and exclusion criteria. **Informed Consent and Ethical Issues** The rationale of the research, the research objective and the benefits of the research were elaborated in plain language. The participants were guaranteed confidentiality and voluntary participation. All participants signed a written informed consent before the collection of data. Data collection instruments and Process A common questionnaire was employed in the form of a single questionnaire in which, to determine the degree of disability caused by chronic low back pain (CLBP), ODI was used,

to assess the effect of CLBP on the work-related quality of life, Work-Related Quality of Life (WRQoL) Scale was used. The combined one was issued face-to-face to the venues of participants among the eligible subjects. The questionnaires were left with the respondents long enough to fill in the form and any doubts answered immediately. The information contained in the first part of the form (demographic data: age, occupation, and work experience were captured on the form. All the data that was collected were thoroughly verified to be complete, coded and kept safely to proceed with further analysis. The data have been entered, cleaned, and coded in Statistical Package for the Social Sciences (SPSS) version 26.0 on which they have been analyzed. The demographic data were all subjected to descriptive statistics with frequency distribution and percentages of categorical variable (e.g. occupation, marital status, pain intensity) and means with standard deviation of continuous variable (e.g. age, work experience, ODI and WRQoL scores). Continuous outcome variables (ODI total score and WRQoL total score) were tested to determine their normality by means of Kolmogorov-Smirnov and Shapiro-Wilk test. Both tests showed a lot of divergence towards non-normal distribution ($p < 0.05$); thus, non-parametric considerations were used where considered. To investigate the association between disability and work-related quality of life, a bivariate analysis was done. The strengths and direction of the relationship between the scores of ODI and WRQoL represented the Pearson correlation coefficient. A simple linear regression model was used afterwards to establish the predictive character of the ODI scores on the WRQoL scores. The p value of 0.05 was fixed in all the inferential analyses. The results are reported with the respective effects sizes, their two-sided confidence intervals, as well as the p -values in a clear manner. All cruces were performed within assumptions of the employed tests of the statistics. The interpretation of the data was done both based on statistical results and clinical understandings concerning the effects of chronic low back pain on the work-based

quality life within the confines of the AJK women working in Mirpur.

Results:

A total of 228 working women aged 25–40 years participated in the study. The largest age group was 25–30 years (58.3%), followed by 36–40 years (21.1%) and 31–35 years (20.6%). In terms of occupation, teachers constituted the largest proportion (39.5%), followed by nurses (31.1%) and bankers (29.4%). Almost all participants (94.7%) had more than one year of work experience, with the majority working six to eight hours per day.

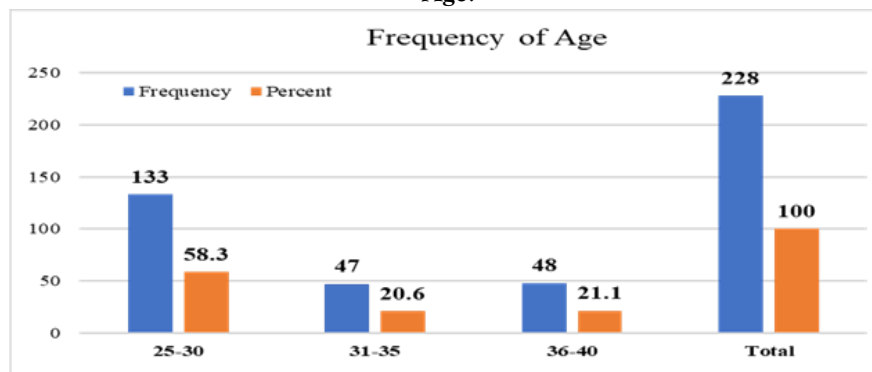
Functional disability measured by the Oswestry Disability Index (ODI) showed that 40.4% of participants had minimal disability, 45.6% moderate disability, and 12.7% severe disability, while a very small proportion were categorised as crippled or bedridden. Despite these limitations, the Work-Related Quality of Life (WRQoL) scores revealed that most women reported moderate (63.2%) or high (30.7%) quality of work life, with only 6.1% indicating low scores.

Correlation analysis indicated a weak positive relationship between ODI and WRQoL scores ($r = 0.124$, $p = 0.061$), suggesting that higher disability levels were very slightly associated with higher WRQoL, though this relationship was not statistically significant.

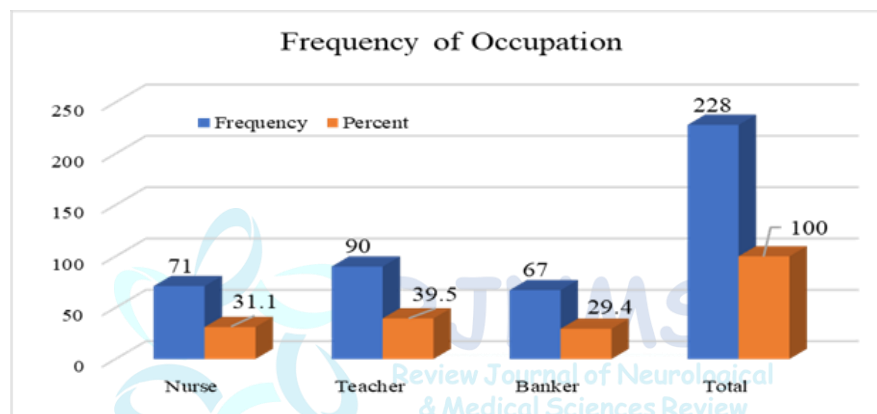
Regression analysis further demonstrated that ODI scores significantly predicted WRQoL scores ($p = 0.048$). Although the effect size was small, the model was statistically significant, confirming that functional disability due to chronic low back pain had a measurable impact on work-related quality of life among the participants.

Overall, these findings highlight the considerable burden of chronic low back pain on the daily functioning of working women in Mirpur. Nonetheless, the majority of women maintained moderate to high levels of work-related quality of life, possibly reflecting coping strategies, financial independence, and the value attributed to continued employment.

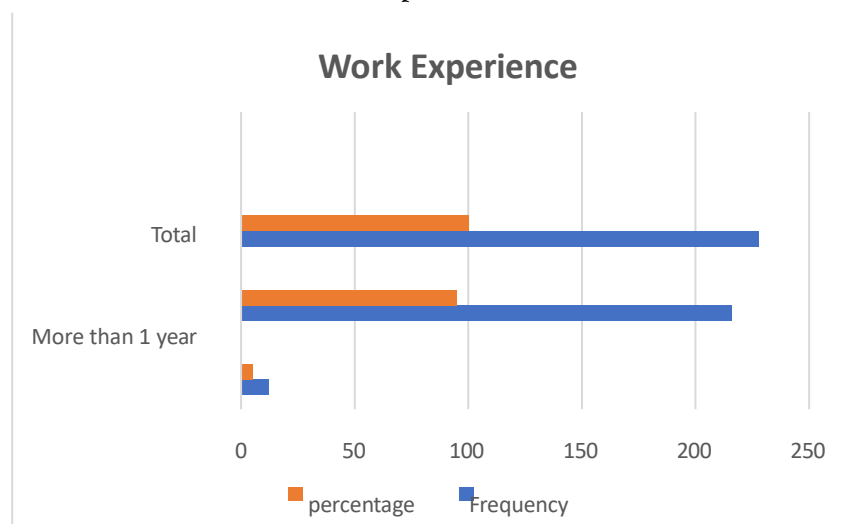
Age:



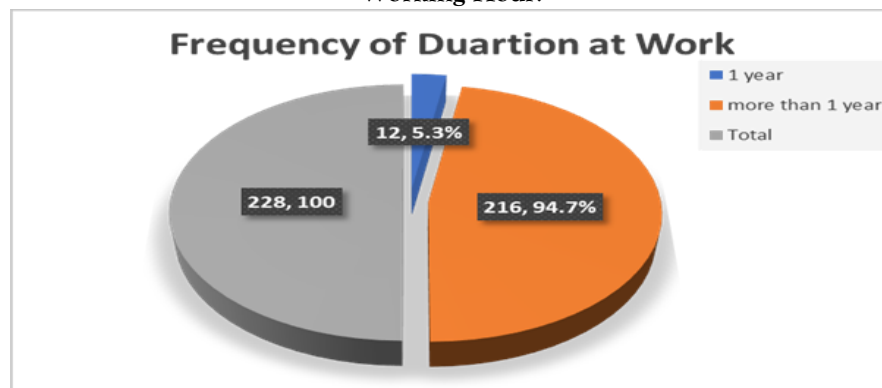
Occupation:



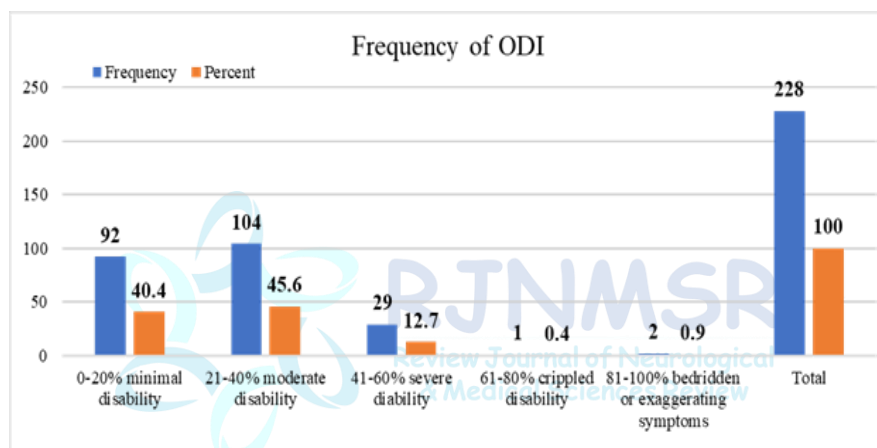
Work Experience:



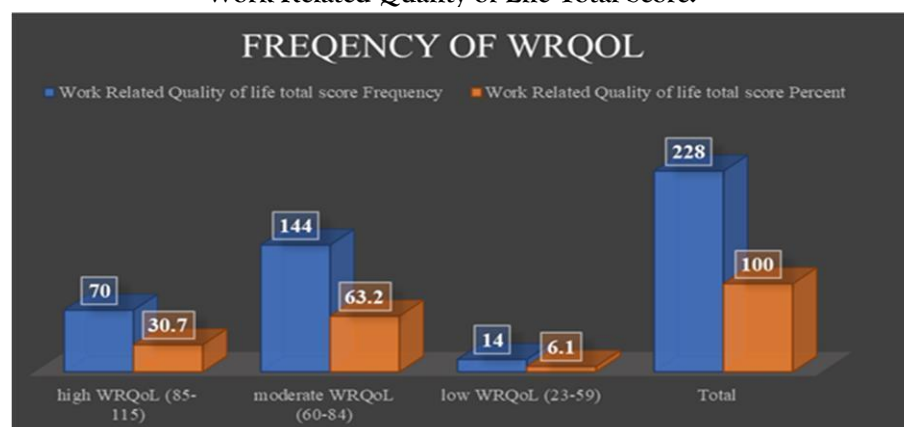
Working Hour:



Oswestry Disability index total score:



Work Related Quality of Life Total Score:



Correlations:

Correlations			
		ODI	WRQoL
Oswestry Disability index total score	r	1.000	.124 [*]
	P value		.061
Work Related Quality of life total score	r	.124 [*]	1.000
	P value	.061	
*. Correlation is significant at the 0.05 level (2-tailed).			

Regression:

ANOVA ^a	
Model	Sig.
Regression	.048 ^b
a. Dependent Variable: Work Related Quality of life total score	
b. Predictors: (Constant), Oswestry Disability index total score	

DISCUSSION:

The findings of this study align with broader global trends that show CLBP's impact on QoL. The study by Zahra et al. (2020) among health workers in Saudi Arabia similarly found that a high percentage of respondents had functional disability and a low quality of life due to CLBP. This study, however, is more insightful due to its focus on a specific, under-researched region and a diverse range of female occupations, necessitating context-specific interventions.

The study's finding that CLBP significantly impacts the physical, emotional, and social quality of life of working women is consistent with broader research. The provided references by Khurshid et al. and Khan et al., which explore the impact of CLBP on functional disability in Balochistan, support the conclusion that CLBP is a major cause of reduced quality of life. The challenges faced by participants, such as work-related stress and long hours, are well documented risk factors for musculoskeletal disorders, as noted in studies by Vicente-Herrero et al. on workers and Akram and Tahir on female teachers. This suggests that the occupational environments

of nurses, teachers, and bankers in Mirpur City likely mirror similar working conditions found in other regions, contributing to the development and persistence of CLBP.

One of the most intriguing findings of this study is the small but significant positive correlation between disability and work-related quality of life (WRQoL). This suggests that as a woman's disability due to CLBP increases, her WRQoL also tends to be slightly higher. This result appears counterintuitive but can be explained by several factors, including psychological coping mechanisms and the perceived value of employment. It is possible that for this population, the financial stability, personal satisfaction, and social interaction provided by their jobs serve as a protective factor, helping to mitigate the negative effects of their pain. The act of maintaining employment despite increasing disability may be a form of resilient behavior, where the psychological and social benefits of work outweigh the physical discomfort. This finding offers a unique perspective that warrants further investigation and could inform the development of more holistic, patient-centered care models that address both physical pain and the socio-

economic benefits of work.

CONCLUSION:

This study provides evidence that chronic low back pain significantly impacts the physical, emotional, and social quality of life of working women in Mirpur, AJK. The results indicate a substantial burden of CLBP and associated disability within this population.

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