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A STUDY TO ASSESS THE QUALITY OF LIFE OF STAFF NURSES WITH BACK PAIN IN SELECTED HOSPITAL, CHENNAI

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ABSTRACT:

Background: Back pain is a widespread occupational musculoskeletal disorder among healthcare workers globally. It is one of the most frequently reported musculoskeletal problems. Research consistently shows that medical practitioners experience LBP more frequently than other symptoms. **Aim:** The study aimed to assess the quality of life of staff nurses with back pain in selected hospital, Chennai. **Methods:** Cross section design was used for the study. The study was conducted among 124 staff nurses who are working in a selected hospital at Chennai. The samples were selected using a convenient sampling technique who fulfils inclusion criteria. **Finding:** The study revealed that 40% of the staff nurses reported a low quality of life, while the majority, 52%, experienced a moderate quality of life. Only 8% of the staff nurses indicated a high quality of life. This distribution highlights the significant impact of occupational factors on the overall well-being of healthcare professionals. **Conclusion:** The study concluded that pain severity and functionality scores indicate moderate levels of discomfort and difficulty in daily activities. Quality of life aspects reveal moderate to high limitations in various areas, with social interaction scoring notably high.

Keywords: low back pain, staff nurses, quality of life

1. INTRODUCTION

Back pain is a widespread occupational musculoskeletal disorder among healthcare workers globally. It is one of the most frequently reported musculoskeletal problems. Research consistently shows that medical practitioners experience LBP more frequently than other symptoms. [1] According to the World Health Organization (WHO), quality of life is defined by individuals' perceptions of their position in life, influenced by their culture, value systems, goals, expectations, standards, and priorities, all of which are highly personal. [2] According to the National Institutes of Health, approximately 50-80% of the global population has experienced low back pain at some point in their lives. If this pain becomes chronic, it can severely impact quality of life, leading to social, personal, economic, and psychological challenges. [3]

Healthcare workers are at increased risk for low back pain (LBP) due to the physical and emotional demands of their profession. Studies show that healthcare workers experience LBP more frequently than those in fields such as construction, mining, and manufacturing. This is largely due to repetitive manual patient handling tasks, including heavy lifting, transferring patients, repositioning them, and working in challenging postures.[4]

Long working hours, excessive workload, insufficient staffing and equipment, inadequate breaks, prolonged standing, improper working positions, disrupted sleep cycles, and irregular eating habits due to shift work are occupational risk factors that can contribute to low back pain (LBP) in healthcare workers. [5]

Aim of the Study

The study aimed to assess the quality of life of staff nurses with back pain in selected hospital, Chennai

2. METHODOLOGY

Study Design and Settings

Cross section design was used for the study. The study was conducted among 124 staff nurses who are working in a selected hospital at Chennai. The samples were selected using a convenient sampling technique who fulfils inclusion criteria.

Inclusion criteria:

- Staff nurses working in selected hospital
- Staff nurses who having low back pain

Exclusion criteria:

- Staff nurses who are not willing to participate in the study
- Staff nurses who are present during data collections.

Data Collection

Informed consent was obtained from the staff nurses. Data was collected using a demographic information, Low back pain and disability questionnaire and Health survey scale to assess the quality of life.

Statistical Analysis

The data was analyzed using SPSS version 26, employing both descriptive statistics and analytical tests. Frequencies and percentages were calculated, and the mean and standard deviation (SD) were used for data presentation.

3. RESULTS

Table 1 shows the age distribution shows 55.6% are 33-42 years old, the largest group, while only 3.2% are 53-62 years old. The sample is predominantly female (76.6%), with males

comprising 23.4%. Marital status indicates that 87.1% are married, 9.7% are single, and 3.2% are widowed or divorced. Educationally, 44.4% have a college degree or higher, whereas 55.6% have a high school diploma or less. Job positions are divided between 43.5% registered nurses and 56.5% licensed practical nurses. Income levels show 69.4% are in the medium category, 25.8% in the low category, and 4.8% in the high category. Finally, 32.3% have a history of sciatica, while 67.7% do not.

Table 1: Demographic variables of the Staff Nurses (N = 124)

Demographic variables	Percentage (%)	Number (N)
Age Groups		
23-32	22.6	28
33-42	55.6	69
43-52	18.5	23
53-62	3.2	4
Sex		
Male	23.4	29
Female	76.6	95
Marital Status		
Married	87.1	108
Single	9.7	12
Widowed/Divorced	3.2	4
Educational Level		
College Degree or Higher	44.4	55
High School Diploma or Less	55.6	69
Job Position		
Registered Nurse	43.5	54
Licensed Practical Nurse	56.5	70
Income Level		
High	4.8	6
Medium	69.4	86
Low	25.8	32
Sciatica History		
Yes	32.3	40
No	67.7	84

The Table 2 indicate that pain severity has a mean score of 2.80 ± 0.88 , which is 56.0% of the maximum possible score, reflecting a moderate level of pain intensity. The dimension of personal care, including activities such as bathing and dressing, shows a mean score of 3.00 ± 0.82 , representing 60.0% of the maximum score, indicating a significant impact on these daily functions. Lifting objects has a mean score of 2.85 ± 0.75 , or 57.0% of the maximum score, suggesting moderate difficulty in performing lifting tasks. Walking ability has a mean score of 2.78 ± 0.74 , or 55.6% of the maximum score, indicating moderate impact on mobility. Sitting comfort is notably compromised, with a mean score of 3.10 ± 0.78 , representing 62.0% of the maximum score. Similarly, standing duration shows a significant impact, with a mean score of 2.88 ± 0.84 , or 57.6% of the maximum score. Sleep quality is moderately affected, with a mean score of 2.75 ± 0.79 , representing 55.0% of the maximum score. Social activities have a mean score of 2.65 ± 0.78 , equating to 53.0% of the maximum score, showing a moderate impact on social engagement. Traveling comfort is similarly affected, with a mean score of 2.72 ± 0.76 , or 54.4% of the maximum score.

Table 2: Distribution of Low Back Pain Intensity among the staff nurses (N = 124)

Category	Mean \pm SD	% of Mean Score
Pain Severity	2.80 ± 0.88	56.0%
Personal Care (bathing, dressing, etc.)	3.00 ± 0.82	60.0%
Lifting Objects	2.85 ± 0.75	57.0%
Walking Ability	2.78 ± 0.74	55.6%
Sitting Comfort	3.10 ± 0.78	62.0%
Standing Duration	2.88 ± 0.84	57.6%
Sleep Quality	2.75 ± 0.79	55.0%
Social Activities	2.65 ± 0.78	53.0%
Traveling Comfort	2.72 ± 0.76	54.4%

Figure: 1 Distribution of staff nurse according to the quality-of-life score (N=124)

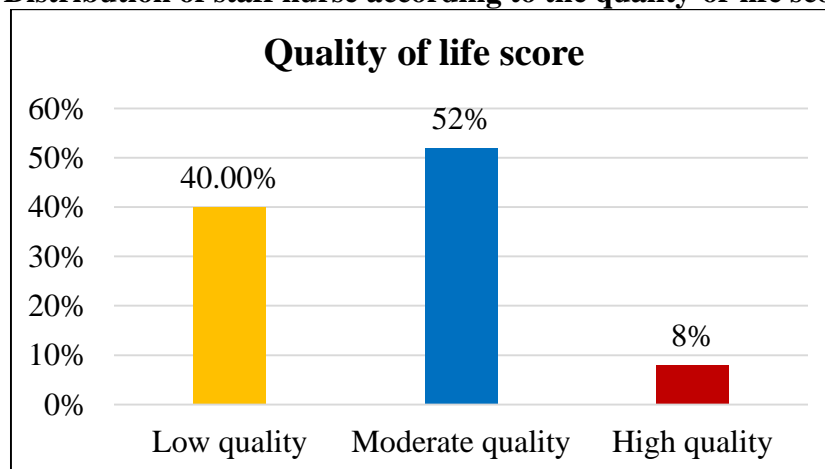


Table 3 shows the distribution according to aspects of quality of life. Physical abilities are measured with a mean score of 370.50 ± 330.25 , corresponding to 37.05%. Physical role limitations show a mean score of 210.50 ± 120.00 , reflecting 51.34%. Emotional role limitations have a mean score of 180.00 ± 100.50 , translating to 60.00%. The vitality and energy levels aspect is scored at 205.00 ± 80.50 , representing 50.98%. Emotional health has a mean score of 250.00 ± 160.00 , which is 50.00%. Social interaction scores notably high, with a mean of 145.00 ± 31.00 , equating to 74.36%. Pain levels are relatively low, with a mean score of 55.00 ± 31.00 , or 27.50%. Overall health perception is scored at 115.00 ± 85.00 , representing 22.98%. The cumulative quality of life score for the population stands at 1540.00 ± 405.00 , corresponding to 48.21% of the total possible score. This comprehensive analysis provides critical insights into the population's quality of life, identifying both strengths and areas requiring attention.

Table 3: Quality of Life Distribution of the staff nurses (N = 124)

Aspect	Mean \pm SD	Mean Score %
Physical Abilities	370.50 ± 330.25	37.05%
Physical Role Limitations	210.50 ± 120.00	51.34%
Emotional Role Limitations	180.00 ± 100.50	60.00%
Vitality/Energy Levels	205.00 ± 80.50	50.98%
Emotional Health	250.00 ± 160.00	50.00%
Social Interaction	145.00 ± 31.00	74.36%
Pain Levels	55.00 ± 31.00	27.50%
Overall, Health Perception	115.00 ± 85.00	22.98%
Total Quality of Life Score	1540.00 ± 405.00	48.21%

Table 4 showed the correlation analysis between the total quality of life score and total back pain, revealing a significant negative relationship. The correlation coefficient (r) was -0.620, indicating a moderate to strong inverse correlation. This suggested that as back pain increased, the quality of life decreased. The P value was less than 0.001, signifying that this result was highly statistically significant. This strong negative correlation underscored the substantial impact of back pain on staff nurse quality of life.

Table 4: Correlation between Total Quality of Life Score and Total Back Pain

Variables	Correlation Coefficient (r)	P value
Quality of Life	-0.620**	< 0.001**

4. DISCUSSION

The study was conducted to assess the quality of life of staff nurses with back pain in selected hospital, Chennai. The demographic distribution shows that 55.6% of participants are aged 33-42, with only 3.2% aged 53-62. The sample is predominantly female (76.6%), with 87.1% married, 44.4% having a college degree or higher, and job positions split between 43.5% registered nurses and 56.5% licensed practical nurses. Income levels indicate 69.4% are in the medium category, and 32.3% have a history of sciatica.

Pain severity has a mean score of 2.80 ± 0.88 , indicating moderate pain intensity. Personal care activities have a mean score of 3.00 ± 0.82 , lifting objects 2.85 ± 0.75 , walking ability 2.78 ± 0.74 , sitting comfort 3.10 ± 0.78 , standing duration 2.88 ± 0.84 , sleep quality 2.75 ± 0.79 , social activities 2.65 ± 0.78 , and traveling comfort 2.72 ± 0.76 .

Quality of life aspects include physical abilities with a mean score of 370.50 ± 330.25 (37.05%), physical role limitations 210.50 ± 120.00 (51.34%), emotional role limitations 180.00 ± 100.50 (60.00%), vitality and energy levels 205.00 ± 80.50 (50.98%), emotional health 250.00 ± 160.00 (50.00%), social interaction 145.00 ± 31.00 (74.36%), pain levels 55.00 ± 31.00 (27.50%), and overall health perception 115.00 ± 85.00 (22.98%). The cumulative quality of life score is 1540.00 ± 405.00 (48.21%). Correlation analysis reveals a significant negative relationship between total quality of life score and back pain ($r = -0.620$, $P < 0.001$), highlighting the substantial impact of back pain on the quality of life of staff nurses.

Similar study conducted with 122 nurses at the Clinical Practice and Research Hospital examined the impact of low back pain on quality of life and functional impairment among these nurses. The findings revealed that nurses experiencing higher pain intensity had significantly worse scores in functional disability, general health, physical function, role physical, social function, and bodily pain domains of the SF-36, compared to those with lower pain intensity.[6]

5. CONCLUSION

The study concluded that pain severity and functionality scores indicate moderate levels of discomfort and difficulty in daily activities. Quality of life aspects reveal moderate to high limitations in various areas, with social interaction scoring notably high. The strong negative correlation between back pain and quality of life underscores the profound impact of back pain on the well-being of healthcare workers, emphasizing the need for targeted interventions to address this issue.

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