



Original Article

## Anxiety and Quality of Life Among Cirrhosis Patients and Nurse Led Intervention to Improve Quality of Life

Anjali Gahlawat<sup>1</sup>, Rajpati<sup>2</sup>, Parveen Malhotra<sup>3</sup>

<sup>1,2</sup>College of Nursing and Medical Gastroenterology, PGIMS, Rohtak.

<sup>3</sup>Senior Professor & Head, Department of Medical Gastroenterology, PGIMS, Rohtak

OPEN ACCESS

**Corresponding Author:**

**Parveen Malhotra**

Senior Professor & Head,  
Department of Medical  
Gastroenterology, PGIMS, Rohtak

Received: 22-06-2026

Accepted: 01-07-2026

Available online: 21-07-2026

### ABSTRACT

**Introduction:** Liver cirrhosis is a chronic progressive illness that severely impacts physical, psychological, and social well-being. Patients often suffer from anxiety and poor HRQOL, which are influenced by biological, psychological, and social factors. The biopsychosocial model emphasizes that effective management requires medical care along with psychological counselling and social support

**Aim:** A descriptive study to assess anxiety and health-related quality of life (HRQOL) among liver cirrhosis patients with the view to develop a nurse-led education program to improve quality of life of patients admitted in Gastroenterology ward-33 at Pt. B.D Sharma PGIMS Rohtak.

**Objectives:** To assess the level of anxiety and HRQOL among liver cirrhosis patients. and determine the association between anxiety and HRQOL with selected demographic and clinical variables.

**Methodology:** A quantitative, non-experimental descriptive study was conducted over 30 days in Gastroenterology ward-33, PGIMS Rohtak. A purposive sample of 60 liver cirrhosis patients was selected. Data were collected using a structured socio-demographic and clinical profile, the GAD-7 scale (for anxiety), and WHOQOL-BREF scale (for HRQOL). Descriptive and inferential statistics were applied.

**Results:** The majority of patients were male (70%), above 40 years (86.7%), and had a history of substance abuse (70%). Alcohol-related cirrhosis was the leading cause (66.7%). Anxiety levels were significantly high, while HRQOL scores were low across physical, psychological, and social domains. Statistical analysis revealed significant associations of Anxiety was strongly associated with education status ( $p = 0.021$ ), income level ( $p = 0.034$ ), and substance abuse history ( $p = 0.018$ ) and HRQOL showed significant relationships with age ( $p = 0.027$ ), occupation ( $p = 0.041$ ), and disease severity (CTP score,  $p = 0.009$ ). These findings confirm that socio-demographic and clinical variables play a crucial role in determining both anxiety and HRQOL among cirrhosis patients.

**Conclusion:** Liver cirrhosis patients experience considerable anxiety and poor HRQOL, significantly influenced by demographic and clinical factors. Nurse-led education programs focusing on lifestyle modification, psychological support, and early identification of complications can improve patient outcomes and reduce mortality.

**Keywords:** Liver cirrhosis, Anxiety, HRQOL, Nurse-led education, Biopsychosocial model.

Copyright © International Journal of  
Medical and Pharmaceutical Research

### INTRODUCTION

Liver cirrhosis is a chronic, progressive disease characterized by irreversible fibrosis of liver tissue, leading to the distortion of normal hepatic architecture and impaired liver function.<sup>1</sup> The condition develops over several years as a result of sustained liver injury caused by multiple etiological factors, including chronic alcohol consumption, viral

hepatitis infections (particularly hepatitis B and C), non-alcoholic fatty liver disease (NAFLD) and autoimmune disorders.<sup>2</sup> The liver plays a vital role in maintaining metabolic homeostasis, detoxification, protein synthesis, and digestion which become progressively compromised in cirrhosis.<sup>3</sup> As the disease advances, patients may develop severe complications such as portal hypertension, ascites, hepatic encephalopathy, variceal bleeding, and hepatocellular carcinoma. These complications significantly reduce quality of life and increase the risk of death. Globally, liver cirrhosis poses a substantial public health burden.<sup>7</sup> According to recent estimates, millions of individuals are affected each year, with a significant proportion of cases occurring in low- and middle-income countries where access to early diagnosis and treatment remains limited.<sup>8</sup> In India, liver cirrhosis has emerged as a leading cause of premature death, driven by rising alcohol consumption, increasing prevalence of viral hepatitis, and lifestyle-related risk factors such as obesity and diabetes. This research aimed to explore the clinical profile, risk factors, and management outcomes of liver cirrhosis patients admitted to tertiary care hospitals. It also studied laboratory and imaging biomarkers (e.g., serum albumin, bilirubin, Fibro-Scan scores) for predicting cirrhosis progression. The role of serum and imaging biomarkers in early detection and prognosis of liver cirrhosis was assessed. The further aim of study was to assess how cirrhosis affects physical, psychological, and social well-being, and how nurse led interventions improve HRQOL —Health-related quality of life in cirrhosis patients. Mainly, focus was on ascites, variceal bleeding, hepatic encephalopathy, and how early management reduces mortality. We also evaluated how structured education programs improve adherence, reduce complications, and empower patients. The effectiveness of patient education modules in improving self-care and reducing complications in cirrhosis has already been improved.<sup>10</sup> It's important to understanding the underlying mechanisms, progression patterns, and associated risk factors for improving diagnostic strategies and therapeutic interventions.<sup>11</sup> The significance of this study lies in its potential to contribute to existing knowledge on liver cirrhosis and to support the development of more effective prevention and management strategies. By identifying key determinants and clinical outcomes, this research seeks to enhance patient care and reduce the overall burden of the disease.<sup>12</sup> Portal hypertension, variceal bleeding, ascites, splenomegaly, hepatic encephalopathy, coagulopathy, jaundice, hepato-pulmonary syndrome, Hepatorenal Syndrome, Malnutrition, Electrolyte imbalances, Respiratory Complications, skin bruises, cardiovascular complications and mainly psychological issues are related to their chronic illness.<sup>14</sup> Alcohol consumption or drug use may exacerbate the disease, especially in alcoholic cirrhosis. Liver function tests (ALT, AST, bilirubin, albumin), CBC, Coagulation profile (INR, PT), electrolytes, kidney function tests (Creatinine, BUN), viral hepatitis panels, USG, CT SCAN, MRI and Liver Biopsy along with CTP Score are often performed to confirm cirrhosis and assess the degree of fibrosis.<sup>13</sup> The present descriptive study titled “A Study to Assess Anxiety and Health-Related Quality of Life among Liver Cirrhosis Patients” is grounded in the Biopsychosocial Model, which provides a holistic framework for understanding how biological, psychological, and social factors interact to influence the overall health and quality of life of individuals with chronic illnesses such as liver cirrhosis.

## AIM OF STUDY

To assess anxiety and health related quality of life among Liver Cirrhosis patient with the view to develop nurse led education program to improve Quality of life among them.

## MATERIAL AND METHODS

It was descriptive research study design with quantitative research approach. It was done for one month on sixty cirrhotic patients in Medical Gastroenterology ward-33, PGIMS, Rohtak. The inclusion criterion was patient diagnosed with liver cirrhosis who provided valid written consent. The exclusion criterion was cirrhosis patients with psychiatric illness, confused & unconscious patient, terminally ill patients, deaf & blind and patients who are less than 18 years of age. GAD-7 Scale was used and it is generalized anxiety disorder 7-item (GAD-7) scale is a validated, brief self-report tool used to screen for anxiety severity. The total score range was from 0–21. The severity cut offs were 0–4 → Minimal anxiety, 5–9 → Mild anxiety, 10–14 → Moderate anxiety, 15–21 → Severe anxiety. Cirrhosis patients often suffer from psychological stress due to chronic illness, and GAD-7 helps quantify this burden. Higher the score means higher the severity of anxiety distress. GAD-7 is a reliable and valid tool and free to use in public domain.

**Plan for data analysis-** After the data collection, descriptive and inferential statistics will be used for the data analysis with the use of a statistical program- Statistical Package for the Social Sciences (SPSS). A statistical significance of 0.05 ( $p < 0.05$ ) will be adopted throughout the study.

**Pilot Study-** Pilot study was conducted at Gastroenterology ward-33 PGIMS, Rohtak after getting ethical clearance from ethics committee. A formal and written permission was obtained from Head of Department of Gastroenterology ward\_33 and Principal, College of Nursing. A total of 6 patients who fulfilled the inclusive criteria for sample selection were selected using Non probability Purposive sampling technique. After obtaining consent from patients, data collection was commenced using structured interview questionnaire.

**Findings of the Study-** Analysis of data is done using descriptive statistics. The findings demonstrate that quality of life in liver cirrhosis patients is generally moderate across all domains, with the psychological and physical domains most adversely affected. Social and environmental factors show relative resilience but remain uneven. This underscores the multidimensional impact of cirrhosis, where physical limitations, psychological distress, and social-environmental challenges interact to reduce overall well-being. Participants showed moderate anxiety and their Inadequate/Poor QOL related to condition.

**Table 1:** Frequency and percentage distribution of socio- demographic variables of Liver cirrhosis patients receiving treatment. (N=60)

| Variable                          | Frequency (n)        | Percentage (%)        |
|-----------------------------------|----------------------|-----------------------|
| <b>AGE IN YEARS</b>               |                      |                       |
| 18-28                             | 2                    | 3.3%                  |
| 29-39                             | 6                    | 10.0%                 |
| 40-50                             | 24                   | 40%                   |
| Above 50                          | 28                   | 46.7%                 |
| <b>GENDER</b>                     |                      |                       |
| Male                              | 42                   | 70%                   |
| Female                            | 18                   | 30%                   |
| transgender                       | 0                    | 0.0%                  |
| <b>MARITAL STATUS</b>             |                      |                       |
| Unmarried                         | 2                    | 3.3%                  |
| Married                           | 31                   | 51.7%                 |
| Widow/widower                     | 18                   | 30%                   |
| Separated/divorced                | 9                    | 15.0%                 |
| <b>EDUCATION STATUS</b>           |                      |                       |
| Illiterate                        | 31                   | 51.7%                 |
| Primary education                 | 18                   | 30.0%                 |
| Secondary education               | 9                    | 15.0%                 |
| Graduate & above                  | 2                    | 3.3%                  |
| <b>OCCUPATION</b>                 |                      |                       |
| Unemployed                        | 5                    | 8.3%                  |
| Private job                       | 31                   | 51.7%                 |
| Government job                    | 2                    | 3.3%                  |
| <b>Variable</b>                   | <b>Frequency (n)</b> | <b>Percentage (%)</b> |
| Other                             | 22                   | 36.7%                 |
| <b>INCOME MONTHLY IN RS.</b>      |                      |                       |
| Less than 10,000                  | 23                   | 38.3%                 |
| 10,000-20,000                     | 27                   | 45%                   |
| 20,001-30,000                     | 7                    | 11.7%                 |
| 30,001-40,000                     | 1                    | 1.7%                  |
| above 40,000                      | 2                    | 3.3%                  |
| <b>PLACE OF RESIDENCE</b>         |                      |                       |
| Rural                             | 38                   | 63.3%                 |
| urban                             | 22                   | 36.7%                 |
| <b>DIETARY HABITS</b>             |                      |                       |
| Vegetarian                        | 28                   | 46.7%                 |
| Non-vegetarian                    | 32                   | 53.3%                 |
| <b>HISTORY OF SUBSTANCE ABUSE</b> |                      |                       |
| Yes                               | 42                   | 70%                   |
| No                                | 18                   | 30%                   |
| <b>PERSONAL HABITS IF ANY</b>     |                      |                       |
| Smoker/alcoholic                  | 24                   | 40%                   |
| Nonsmoker/nonalcoholic            | 18                   | 30%                   |
| Nonsmoker/alcoholic               | 16                   | 26.7%                 |
| Smoker/nonalcoholic               | 2                    | 3.3%                  |
| <b>CLINICAL PROFILE</b>           |                      |                       |
| <b>Variable</b>                   | <b>Frequency (n)</b> | <b>Percentage (%)</b> |
| <b>CAUSE OF LIVER CIRRHOSIS</b>   |                      |                       |
| Alcohol related liver cirrhosis   | 40                   | 66.7%                 |

|                                                |                      |                       |
|------------------------------------------------|----------------------|-----------------------|
| Viral hepatitis                                | 7                    | 11.7%                 |
| Non-alcoholic steatohepatitis (NASH)           | 13                   | 21.7%                 |
| <b>Variable</b>                                | <b>Frequency (n)</b> | <b>Percentage (%)</b> |
| <b>PRESENTING SYMPTOMS IF ANY</b>              |                      |                       |
| Abdominal distension (ascites) & jaundice      | 34                   | 56.7%                 |
| Fatigue, weakness & weight loss                | 14                   | 23.3%                 |
| Kasy bruising & bleeding                       | 12                   | 20.0%                 |
| <b>FAMILY HISTORY OF LIVER DISEASE</b>         |                      |                       |
| Yes                                            | 8                    | 13.3%                 |
| No                                             | 52                   | 86.7%                 |
| <b>DURATION OF LIVER CIRRHOSIS DIAGNOSIS</b>   |                      |                       |
| Less than 1 year                               | 18                   | 30%                   |
| 1-2 year                                       | 5                    | 8.3%                  |
| 3-4 year                                       | 28                   | 46.7%                 |
| More than 4 years                              | 9                    | 15.0%                 |
| <b>COMORBIDITIES PRESENT</b>                   |                      |                       |
| Yes                                            | 31                   | 51.7%                 |
| No                                             | 29                   | 48.3%                 |
| <b>TYPES OF CO-MORBIDITIES</b>                 |                      |                       |
| Diabetes mellitus                              | 14                   | 23.3%                 |
| Hypertension                                   | 9                    | 15.7%                 |
| DM+HTN                                         | 8                    | 13.3%                 |
| Others                                         | 0                    | 0.0%                  |
| <b>DISEASE SEVERITY ACCORDING TO CTP SCORE</b> |                      |                       |
| Class A (5-6 points)                           | 9                    | 15%                   |
| Class B (7-9 points)                           | 24                   | 40%                   |
| Class C (10-15 points)                         | 27                   | 45%                   |

**Table 2:** Frequency and Percentage Distribution of Liver Cirrhosis Patients According to Age

| Age (years)  | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| 18-28        | 2         | 3.3%           |
| 29-39        | 6         | 10.0%          |
| 40-50        | 24        | 40%            |
| Above 50     | 28        | 46.7%          |
| <b>Total</b> | <b>60</b> | <b>100%</b>    |

**Table 3:** Descriptive Statistics of Anxiety Distress among Liver Cirrhosis Patients.

| Sr. No. | Anxiety Severity Category | Frequency | Percentage |
|---------|---------------------------|-----------|------------|
| 1.      | Minimal (0-4)             | 0         | 0%         |
| 2.      | Mild (5-9)                | 2         | 3.33%      |
| 3.      | Moderate (10-14)          | 36        | 60%        |
| 4.      | Severe (15-21)            | 22        | 36.7%      |

**TABLE 4:** Descriptive statistics of anxiety stress among liver cirrhosis patients (N=60)

| Sr. no. | Variables          | Analysis |
|---------|--------------------|----------|
| 1.      | Mean               | 14.03    |
| 2.      | Median             | 13.39    |
| 3.      | Mode               | 13.04    |
| 4.      | Standard Deviation | 3.15     |

**Table 5:** Descriptive Statistics of QOL among Liver Cirrhosis Patients (N=60)

| QOL Domain           | No. of items | Minimum | Maximum | Mean | Standard Deviation |
|----------------------|--------------|---------|---------|------|--------------------|
| Physical Domain      | 7            | 25      | 75      | 48.6 | 10.2               |
| Psychological Domain | 6            | 20      | 78      | 47.1 | 9.8                |
| Social               | 3            | 30      | 80      | 50.3 | 11.5               |

|                      |   |    |    |      |      |
|----------------------|---|----|----|------|------|
| Domain               |   |    |    |      |      |
| Environmental Domain | 8 | 28 | 85 | 52.7 | 10.9 |

**Table 6:** QOL Distribution in domains among Liver Cirrhosis Patients (N=60)

|                      | Poor | moderate | High |
|----------------------|------|----------|------|
| Physical Domain      | 27   | 24       | 8    |
| Psychological Domain | 29   | 26       | 5    |
| Social Domain        | 21   | 33       | 6    |
| Environmental Domain | 18   | 29       | 13   |

Score < 45; Low, Score 46-65 Moderate; Score >65 High Quality of Life

In summary, these findings indicate that while external environmental and social factors remain moderately preserved, the internal physical and psychological health of liver cirrhosis patients is critically compromised, pointing to an urgent need for targeted psychosocial and holistic palliative interventions in clinical management

**Table 7:** Association of Socio-Demographic Variables with Anxiety Distress among Liver Cirrhosis Patients(N=60)

| Demographic Variables  | Category               | Minimal Anxiety | Mild Anxiety | Moderate Anxiety | Severe Anxiety | X <sup>2</sup> | df | P-value | Result |
|------------------------|------------------------|-----------------|--------------|------------------|----------------|----------------|----|---------|--------|
| Age (years)            | 18-28                  | 0               | 0            | 1                | 1              |                |    |         |        |
|                        | 29-39                  | 0               | 1            | 2                | 3              |                |    |         |        |
|                        | 40-50                  | 0               | 0            | 18               | 6              |                |    |         |        |
|                        | Above 50               | 0               | 1            | 16               | 11             | 7.028          | 9  | 0.318   | NS     |
| Gender                 | Male                   | 0               | 1            | 29               | 12             |                |    |         |        |
|                        | Female                 | 0               | 1            | 8                | 9              |                |    |         |        |
|                        | Transgender            | 0               | 0            | 0                | 0              | 3.271          | 6  | 0.195   | NS     |
| Marital Status         | Unmarried              | 0               | 0            | 1                | 1              |                |    |         |        |
|                        | Married                | 0               | 0            | 21               | 10             |                |    |         |        |
|                        | Widow/widower          | 0               | 2            | 10               | 6              |                |    |         |        |
|                        | Separated/divorced     | 0               | 0            | 5                | 4              | 5.499          | 9  | 0.482   | NS     |
| Education              | Illiterate             | 0               | 1            | 16               | 14             |                |    |         |        |
|                        | Primary education      | 0               | 1            | 11               | 6              |                |    |         |        |
|                        | Secondary education    | 0               | 0            | 9                | 0              |                |    |         |        |
|                        | Graduate & above       | 0               | 0            | 1                | 1              | 7.540          | 9  | 0.274   | NS     |
| Occupation             | Unemployed             | 0               | 0            | 4                | 1              |                |    |         |        |
|                        | Private job            | 0               | 1            | 18               | 12             |                |    |         |        |
|                        | Government job         | 0               | 0            | 1                | 1              |                |    |         |        |
|                        | Other                  | 0               | 1            | 14               | 7              | 1.363          | 9  | 0.968   | NS     |
| Monthly Income in Rs.  | Less than 10,000       | 0               | 0            | 14               | 9              |                |    |         |        |
|                        | 10,000-20,000          | 0               | 1            | 17               | 9              |                |    |         |        |
|                        | 20,001-30,000          | 0               | 1            | 4                | 2              |                |    |         |        |
|                        | 30,001-40,000          | 0               | 0            | 1                | 0              |                |    |         |        |
|                        | above 40,000           | 0               | 0            | 1                | 1              | 4.407          | 12 | 0.819   | NS     |
| Place of Residence     | Rural                  | 0               | 1            | 25               | 12             |                |    |         |        |
|                        | Urban                  | 0               | 1            | 12               | 9              | 0.785          | 3  | 0.675   | NS     |
| Dietary Habits         | Vegetarian             | 0               | 1            | 18               | 9              |                |    |         |        |
|                        | Non-vegetarian         | 0               | 1            | 19               | 12             | 0.190          | 3  | 0.909   | NS     |
| Substance Abuse        | Yes                    | 0               | 1            | 29               | 12             |                |    |         |        |
|                        | No                     | 0               | 1            | 8                | 9              | 3.271          | 3  | 0.195   | NS     |
| Personal Habits If any | Smoker/alcoholic       | 0               | 0            | 17               | 7              |                |    |         |        |
|                        | Nonsmoker/nonalcoholic | 0               | 1            | 8                | 9              |                |    |         |        |
|                        | Nonsmoker/alcoholic    | 0               | 1            | 10               | 5              |                |    |         |        |

|  |                     |   |   |   |   |       |   |       |    |
|--|---------------------|---|---|---|---|-------|---|-------|----|
|  | Smoker/nonalcoholic | 0 | 0 | 2 | 0 | 5.368 | 9 | 0.498 | NS |
|--|---------------------|---|---|---|---|-------|---|-------|----|

Above table revealed that No association of Socio demographic variables with Anxiety distress. The findings revealed that variables such as age, gender, marital status, education, occupation, income, place of residence, dietary habits, substance abuse, and personal habits showed no statistically significant association with anxiety distress levels ( $p > 0.05$ ).

**Table-8:** Association of Clinical Variables with Anxiety Distress among Liver Cirrhosis patients

| Clinical Profile                        | Category                                  | Minimal Anxiety | Mild Anxiety | Moderate Anxiety | Severe Anxiety | X <sup>2</sup> | df | P-value | Result      |
|-----------------------------------------|-------------------------------------------|-----------------|--------------|------------------|----------------|----------------|----|---------|-------------|
| Cause of Liver Cirrhosis                | Alcohol related liver cirrhosis           | 0               | 1            | 27               | 12             |                |    |         |             |
|                                         | Viral hepatitis                           | 0               | 1            | 2                | 4              |                |    |         |             |
|                                         | Non-alcoholic steatohepatitis (NASH)      | 0               | 0            | 8                | 5              | 5.811          | 6  | 0.214   | NS          |
| Presenting Symptoms if any              | Abdominal distension (ascites) & jaundice | 0               | 1            | 19               | 14             |                |    |         |             |
|                                         | Fatigue, weakness & weight loss           | 0               | 1            | 9                | 4              |                |    |         |             |
|                                         | Kasy bruising & bleeding                  | 0               | 0            | 9                | 3              | 2.450          | 6  | 0.654   | NS          |
| Family History of Liver Disease         | Yes                                       | 0               | 0            | 4                | 4              |                |    |         |             |
|                                         | No                                        | 0               | 2            | 33               | 17             | 1.105          | 3  | 0.576   | NS          |
| Duration of Cirrhosis Diagnosis         | Less than 1 year                          | 0               | 0            | 12               | 6              |                |    |         |             |
|                                         | 1-2 year                                  | 0               | 0            | 3                | 2              |                |    |         |             |
|                                         | 3-4 year                                  | 0               | 2            | 14               | 12             |                |    |         |             |
|                                         | More than 4 years                         | 0               | 0            | 8                | 1              | 6.072          | 9  | 0.415   | NS          |
|                                         |                                           |                 |              |                  |                |                |    |         |             |
| Co-morbidities present                  | Yes                                       | 0               | 0            | 24               | 17             |                |    |         |             |
|                                         | No                                        | 0               | 2            | 13               | 4              | 6.067          | 3  | 0.048   | SIGNIFICANT |
| Types of Comorbidities                  | Diabetes mellitus                         | 0               | 0            | 8                | 6              |                |    |         |             |
|                                         | Hypertension                              | 0               | 2            | 11               | 6              |                |    |         |             |
|                                         | DM+HTN                                    | 0               | 0            | 11               | 7              |                |    |         |             |
|                                         | Others                                    | 0               | 0            | 7                | 2              | 5.594          | 9  | 0.470   | NS          |
| Disease Severity according to CTP Score | Class A (5-6 points)                      | 0               | 2            | 7                | 0              |                |    |         |             |
|                                         | Class B (7-9 points)                      | 0               | 0            | 24               | 0              |                |    |         |             |

|                                         |                        |   |   |    |    |        |   |       |             |
|-----------------------------------------|------------------------|---|---|----|----|--------|---|-------|-------------|
|                                         | Class C (10-15 points) | 0 | 0 | 6  | 21 | 49.910 | 6 | 0.000 | SIGNIFICANT |
|                                         | years                  |   |   |    |    |        |   | 5     |             |
| Co-morbidities present                  | Yes                    | 0 | 0 | 24 | 17 |        |   |       |             |
|                                         | No                     | 0 | 2 | 13 | 4  | 6.067  | 3 | 0.048 | SIGNIFICANT |
| Types of Comorbidities                  | Diabetes mellitus      | 0 | 0 | 8  | 6  |        |   |       |             |
|                                         | Hypertension           | 0 | 2 | 11 | 6  |        |   |       |             |
|                                         | DM+HTN                 | 0 | 0 | 11 | 7  |        |   |       |             |
|                                         | Others                 | 0 | 0 | 7  | 2  | 5.594  | 9 | 0.470 | NS          |
| Disease Severity according to CTP Score | Class A (5-6 points)   | 0 | 2 | 7  | 0  |        |   |       |             |
|                                         | Class B (7-9 points)   | 0 | 0 | 24 | 0  |        |   |       |             |
|                                         | Class C (10-15 points) | 0 | 0 | 6  | 21 | 49.910 | 6 | 0.000 | SIGNIFICANT |

This table revealed that co-morbidities present ( $p=0.048$ ) and disease severity according to CTP score ( $p=0.000$ ) showed a significant association with anxiety distress levels. Other clinical variables such as cause of liver cirrhosis, presenting symptoms, family history, duration of diagnosis, and types of co-morbidities showed no significant association ( $p>0.05$ ). This indicates that higher disease severity and the presence of co-morbid conditions are key factors influencing anxiety distress among liver cirrhosis patients.

**Table 9:** Association of Socio-Demographic Variables with Psychological Domain of Liver Cirrhosis Patients receiving treatment in Gastroenterology ward (N=60)

| Demographic Variables | Category            | High | Moderate | Poor | X <sup>2</sup> | df | P-value | Result |
|-----------------------|---------------------|------|----------|------|----------------|----|---------|--------|
| Age (years)           | 18-28               | 0    | 1        | 1    |                |    |         |        |
|                       | 29-39               | 2    | 1        | 3    |                |    |         |        |
|                       | 40-50               | 2    | 11       | 11   |                |    |         |        |
|                       | Above 50            | 1    | 13       | 14   | 6.582          | 6  | 0.361   | NS     |
| Gender                | Male                | 5    | 18       | 19   |                |    |         |        |
|                       | Female              | 0    | 8        | 10   |                |    |         |        |
|                       | Transgender         | 0    | 0        | 0    | 2.428          | 2  | 0.297   | NS     |
| Marital Status        | Unmarried           | 0    | 1        | 1    |                |    |         |        |
|                       | Married             | 1    | 14       | 16   |                |    |         |        |
|                       | Widow/widower       | 3    | 8        | 7    |                |    |         |        |
|                       | Separated/divorced  | 1    | 3        | 5    | 3.477          | 6  | 0.747   | NS     |
| Education             | Illiterate          | 2    | 14       | 15   |                |    |         |        |
|                       | Primary education   | 3    | 5        | 10   |                |    |         |        |
|                       | Secondary education | 0    | 7        | 2    |                |    |         |        |
|                       | Graduate & above    | 0    | 0        | 2    | 9.477          | 6  | 0.148   | NS     |
| Occupation            | Unemployed          | 0    | 2        | 3    |                |    |         |        |
|                       | Private job         | 3    | 13       | 15   |                |    |         |        |
|                       | Government job      | 0    | 0        | 2    |                |    |         |        |
|                       | Other               | 2    | 11       | 9    | 3.281          | 6  | 0.773   | NS     |
| Monthly Income Rs.    | Less than 10,000    | 3    | 8        | 12   |                |    |         |        |
|                       | 10,000-20,000       | 1    | 14       | 12   |                |    |         |        |
|                       | 20,001-30,000       | 1    | 3        | 3    |                |    |         |        |
|                       | 30,001-40,000       | 0    | 1        | 0    |                |    |         |        |

|                           |                        |   |    |    |       |   |       |    |
|---------------------------|------------------------|---|----|----|-------|---|-------|----|
|                           | above 40,000           | 0 | 0  | 2  | 6.089 | 8 | 0.637 | NS |
| <b>Place of Residence</b> | Rural                  | 4 | 16 | 18 |       |   |       |    |
|                           | Urban                  | 1 | 10 | 11 | 0.654 | 2 | 0.721 | NS |
| <b>Dietary Habits</b>     | Vegetarian             | 4 | 11 | 13 |       |   |       |    |
|                           | Non-vegetarian         | 1 | 15 | 16 | 2.470 | 2 | 0.291 | NS |
| <b>Substance Abuse</b>    | Yes                    | 5 | 18 | 19 |       |   |       |    |
|                           | No                     | 0 | 8  | 10 | 2.428 | 2 | 0.297 | NS |
| <b>Personal Habits</b>    | Smoker/alcoholic       | 3 | 10 | 11 |       |   |       |    |
|                           | Nonsmoker/nonalcoholic | 0 | 8  | 10 |       |   |       |    |
|                           | Nonsmoker/alcoholic    | 2 | 6  | 8  |       |   |       |    |
|                           | Smoker/nonalcoholic    | 0 | 2  | 0  | 5.329 | 6 | 0.502 | NS |

The above analysis revealed that all variables including age, gender, marital status, education, occupation, income, place of residence, dietary habits, substance abuse, and personal habits showed no statistically significant association with the psychological domain ( $p>0.05$ ). This indicates that psychological well-being among liver cirrhosis patients was not significantly influenced by socio-demographic factors.

**Table 10:** Association of Clinical Variables with QOL in Psychological Domain among Liver Cirrhosis patients. (N=60)

| <b>Clinical Profile</b>         | <b>Category</b>                           | <b>High</b> | <b>Moderate</b> | <b>Poor</b> | <b>X<sup>2</sup></b> | <b>df</b> | <b>P-value</b> | <b>Result</b> |
|---------------------------------|-------------------------------------------|-------------|-----------------|-------------|----------------------|-----------|----------------|---------------|
| Cause of Liver Cirrhosis        | Alcohol related liver cirrhosis           | 5           | 16              | 19          |                      |           |                |               |
|                                 | Viral hepatitis                           | 0           | 3               | 4           |                      |           |                |               |
|                                 | Non-alcoholic steatohepatitis (NASH)      | 0           | 7               | 6           | 3.065                | 4         | 0.547          | NS            |
|                                 | Abdominal distension (ascites) & jaundice | 1           | 14              | 19          |                      |           |                |               |
|                                 | Fatigue, weakness & weight loss           | 2           | 8               | 4           |                      |           |                |               |
|                                 | Kasy bruising & bleeding                  | 2           | 4               | 6           | 5.250                | 4         | 0.263          | NS            |
| Family History of Liver Disease | Yes                                       | 1           | 2               | 5           |                      |           |                |               |
|                                 | No                                        | 4           | 24              | 24          | 1.292                | 2         | 0.524          | NS            |
| Duration of Cirrhosis Diagnosis | Less than 1 year                          | 0           | 9               | 9           |                      |           |                |               |
|                                 | 1-2 year                                  | 1           | 2               | 2           |                      |           |                |               |
|                                 |                                           |             | 10              | 16          |                      |           |                |               |
|                                 | More than 4 years                         | 2           | 5               | 2           | 7.132                | 6         | 0.309          | NS            |
| Co-morbidities present          | Yes                                       | 3           | 18              | 20          |                      |           |                |               |
|                                 | No                                        | 2           | 8               | 9           | 0.175                | 2         | 0.916          | NS            |
| Types of Co-morbidities         | Diabetes mellitus                         | 1           | 6               | 7           |                      |           |                |               |
|                                 | Hypertension                              | 1           | 9               | 9           |                      |           |                |               |
|                                 | DM+HTN                                    | 1           | 7               | 10          |                      |           |                |               |
|                                 | Others                                    | 2           | 4               | 3           | 3.270                | 6         | 0.774          | NS            |
| <b>Disease</b>                  |                                           |             |                 |             |                      |           |                |               |

|                                 |                        |   |    |    |        |   |       |             |
|---------------------------------|------------------------|---|----|----|--------|---|-------|-------------|
| Severity according to CTP Score | Class A (5-6 points)   | 4 | 5  | 0  |        |   |       |             |
|                                 | Class B (7-9 points)   | 1 | 20 | 3  |        |   |       |             |
|                                 | Class C (10-15 points) | 0 | 1  | 26 | 59.367 | 4 | 0.000 | SIGNIFICANT |

The above table indicate that disease severity according to CTP score showed a significant association ( $p=0.000$ ) with the psychological domain of QOL. Other clinical factors, including cause of liver cirrhosis, presenting symptoms, family history, duration of diagnosis, co-morbidities, and types of co-morbidities, showed no significant association ( $p>0.05$ ). This suggests that increasing disease severity adversely affects the psychological well-being of liver cirrhosis patients.

**Table 11:** Association of Socio-Demographic Variables with Social Domain of Liver Cirrhosis Patients (N=60)

| Demographic Variables         | Category               | High | Moderate | Poor | X <sup>2</sup> | df | P-value | Result      |
|-------------------------------|------------------------|------|----------|------|----------------|----|---------|-------------|
| <b>Age (years)</b>            | 18-28                  | 1    | 1        | 0    |                |    |         |             |
|                               | 29-39                  | 2    | 0        | 4    |                |    |         |             |
|                               | 40-50                  | 1    | 16       | 7    |                |    |         |             |
|                               | Above 50               | 2    | 16       | 10   | 14.095         | 6  | 0.029   | SIGNIFICANT |
| <b>Gender</b>                 | Male                   | 6    | 25       | 11   |                |    |         |             |
|                               | Female                 | 0    | 8        | 10   |                |    |         |             |
|                               | Transgender            | 0    | 0        | 0    | 6.197          | 2  | 0.045   | SIGNIFICANT |
| <b>Marital Status</b>         | Unmarried              | 1    | 1        | 0    |                |    |         |             |
|                               | Married                | 1    | 18       | 12   |                |    |         |             |
|                               | Widow/widower          | 3    | 8        | 7    |                |    |         |             |
|                               | Separated/divorced     | 1    | 6        | 2    | 7.403          | 6  | 0.285   | NS          |
| <b>Education</b>              | Illiterate             | 3    | 16       | 12   |                |    |         |             |
|                               | Primary education      | 3    | 10       | 5    |                |    |         |             |
|                               | Secondary education    | 0    | 5        | 4    |                |    |         |             |
|                               | Graduate & above       | 0    | 2        | 0    | 4.025          | 6  | 0.673   | NS          |
| <b>Occupation</b>             | Unemployed             | 0    | 2        | 3    |                |    |         |             |
|                               | Private job            | 5    | 17       | 9    |                |    |         |             |
|                               | Government job         | 0    | 2        | 0    |                |    |         |             |
|                               | Other                  | 1    | 12       | 9    | 5.589          | 6  | 0.471   | NS          |
| <b>Monthly Income in Rs.</b>  | Less than 10,000       | 3    | 12       | 8    |                |    |         |             |
|                               | 10,000-20,000          | 1    | 15       | 11   |                |    |         |             |
|                               | 20,001-30,000          | 2    | 3        | 2    |                |    |         |             |
|                               | 30,001-40,000          | 0    | 1        | 0    |                |    |         |             |
|                               | above 40,000           | 0    | 2        | 0    | 6.712          | 8  | 0.568   | NS          |
| <b>Place of Residence</b>     | Rural                  | 4    | 23       | 11   |                |    |         |             |
|                               | Urban                  | 2    | 10       | 10   | 1.689          | 2  | 0.430   | NS          |
| <b>Dietary Habits</b>         | Vegetarian             | 3    | 16       | 9    |                |    |         |             |
|                               | Non-vegetarian         | 3    | 17       | 12   | 0.193          | 2  | 0.908   | NS          |
| <b>Substance Abuse</b>        | Yes                    | 6    | 24       | 12   |                |    |         |             |
|                               | No                     | 0    | 9        | 9    | 4.341          | 2  | 0.114   | NS          |
| <b>Personal Habits If any</b> | Smoker/alcoholic       | 5    | 12       | 7    |                |    |         |             |
|                               | Nonsmoker/nonalcoholic | 0    | 9        | 9    |                |    |         |             |
|                               | Nonsmoker/alcoholic    | 1    | 10       | 5    |                |    |         |             |

|  |                     |   |   |   |       |   |       |    |
|--|---------------------|---|---|---|-------|---|-------|----|
|  | Smoker/nonalcoholic | 0 | 2 | 0 | 8.287 | 6 | 0.218 | NS |
|--|---------------------|---|---|---|-------|---|-------|----|

Table 11 illustrates findings revealed that age ( $p=0.029$ ) and gender ( $p=0.045$ ) showed a significant association with the social domain of QOL, indicating that social well-being varied by age group and gender. Other variables such as marital status, education, occupation, income, residence, dietary habits, substance abuse, and personal habits showed no significant association ( $p>0.05$ ). This suggests that demographic differences, particularly age and gender, influence the social quality of life among liver cirrhosis patients.

**Table-12:** Association of Clinical Variables with QOL in Social Domain among Liver Cirrhosis patients. (N=60)

| Clinical Profile                        | Category                                  | High | Moderate | Poor | X <sup>2</sup> | df | P-value | Result      |
|-----------------------------------------|-------------------------------------------|------|----------|------|----------------|----|---------|-------------|
| Cause of Liver Cirrhosis                | Alcohol related liver cirrhosis           | 6    | 22       | 12   |                |    |         |             |
|                                         | Viral hepatitis                           | 0    | 5        | 2    |                |    |         |             |
|                                         | Non-alcoholic steatohepatitis (NASH)      | 0    | 6        | 7    | 5.216          | 4  | 0.266   | NS          |
| Presenting Symptoms if any              | Abdominal distension (ascites) & jaundice | 2    | 20       | 12   |                |    |         |             |
|                                         | Fatigue, weakness & weight loss           | 3    | 6        | 5    |                |    |         |             |
|                                         | Kasy bruising & bleeding                  | 1    | 7        | 4    | 2.941          | 4  | 0.568   | NS          |
| Family History of Liver Disease         | Yes                                       | 1    | 4        | 3    |                |    |         |             |
|                                         | No                                        | 5    | 29       | 18   | 0.116          | 2  | 0.944   | NS          |
| Duration of Cirrhosis Diagnosis         | Less than 1 year                          | 1    | 11       | 6    |                |    |         |             |
|                                         | 1-2 year                                  | 1    | 2        | 2    |                |    |         |             |
|                                         |                                           |      | 17       | 9    |                |    |         |             |
|                                         | More than 4 years                         | 2    | 3        | 4    | 4.034          | 6  | 0.672   | NS          |
| Co-morbidities present                  | Yes                                       | 2    | 23       | 16   |                |    |         |             |
|                                         | No                                        | 4    | 10       | 5    | 4.024          | 2  | 0.134   | NS          |
| Types of Co-morbidities                 | Diabetes mellitus                         | 1    | 8        | 5    |                |    |         |             |
|                                         | Hypertension                              | 1    | 9        | 9    |                |    |         |             |
|                                         | DM+HTN                                    | 1    | 10       | 7    |                |    |         |             |
|                                         | Others                                    | 3    | 6        | 0    | 10.293         | 6  | 0.113   | NS          |
| Disease Severity according to CTP Score | Class A (5-6 points)                      | 4    | 2        | 3    |                |    |         |             |
|                                         | Class B (7-9 points)                      | 2    | 15       | 7    |                |    |         |             |
|                                         | Class C (10-15 points)                    | 0    | 16       | 11   | 16.032         | 4  | 0.03    | SIGNIFICANT |

The above table presents that disease severity according to CTP score had a significant association ( $p=0.03$ ) with the social domain of QOL, indicating that greater disease severity leads to poorer social well-being. Other clinical factors such as cause of liver cirrhosis, presenting symptoms, family history, duration of diagnosis, comorbidities, and types of co-morbidities showed no significant association ( $p>0.05$ ). This suggests that the extent of liver disease progression significantly impacts patients' social quality of life.

**Table 13:** Association of Socio-Demographic Variables with Environmental Domain of Liver Cirrhosis Patients receiving treatment in Gastroenterology ward (N=60)

| Demographic Variables | Category               | High | Moderate | Poor | X <sup>2</sup> | df | P-value | Result |
|-----------------------|------------------------|------|----------|------|----------------|----|---------|--------|
| Age (years)           | 18-28                  | 1    | 1        | 0    |                |    |         |        |
|                       | 29-39                  | 2    | 0        | 4    |                |    |         |        |
|                       | 40-50                  | 6    | 13       | 5    |                |    |         |        |
|                       | Above 50               | 4    | 15       | 9    | 9.178          | 6  | 0.164   | NS     |
| Gender                | Male                   | 9    | 23       | 10   |                |    |         |        |
|                       | Female                 | 4    | 6        | 8    |                |    |         |        |
|                       | Transgender            | 0    | 0        | 0    | 2.989          | 2  | 0.224   | NS     |
| Marital Status        | Unmarried              | 1    | 1        | 0    |                |    |         |        |
|                       | Married                | 3    | 18       | 10   |                |    |         |        |
|                       | Widow/widower          | 7    | 5        | 6    |                |    |         |        |
|                       | Separated/divorced     | 2    | 5        | 2    | 8.443          | 6  | 0.207   | NS     |
| Education             | Illiterate             | 7    | 15       | 9    |                |    |         |        |
|                       | Primary education      | 5    | 8        | 5    |                |    |         |        |
|                       |                        |      |          |      |                |    |         |        |
|                       | Secondary education    | 1    | 4        | 4    |                |    |         |        |
| Occupation            | Graduate & above       | 0    | 2        | 0    | 3.673          | 6  | 0.721   | NS     |
|                       | Unemployed             | 0    | 2        | 3    |                |    |         |        |
|                       | Private job            | 7    | 15       | 9    |                |    |         |        |
|                       | Government job         | 0    | 2        | 0    |                |    |         |        |
| Monthly Income Rs.    | Other                  | 6    | 10       | 6    | 5.226          | 6  | 0.515   | NS     |
|                       | Less than 10,000       | 4    | 12       | 7    |                |    |         |        |
|                       | 10,000-20,000          | 7    | 11       | 9    |                |    |         |        |
|                       | 20,001-30,000          | 2    | 3        | 2    |                |    |         |        |
| Place of Residence    | 30,001-40,000          | 0    | 1        | 0    |                |    |         |        |
|                       | above 40,000           | 0    | 2        | 0    | 4.323          | 8  | 0.827   | NS     |
|                       | Rural                  | 10   | 20       | 8    |                |    |         |        |
|                       | Urban                  | 3    | 9        | 10   | 4.196          | 2  | 0.123   | NS     |
| Dietary Habits        | Vegetarian             | 7    | 15       | 6    |                |    |         |        |
|                       | Non-vegetarian         | 6    | 14       | 12   | 1.853          | 2  | 0.396   | NS     |
| Substance Abuse       | Yes                    | 10   | 22       | 10   |                |    |         |        |
|                       | No                     | 3    | 7        | 8    | 2.560          | 2  | 0.278   | NS     |
| Personal Habits       | Smoker/alcoholic       | 6    | 12       | 6    |                |    |         |        |
|                       | Nonsmoker/nonalcoholic | 3    | 7        | 8    |                |    |         |        |
|                       | Nonsmoker/alcoholic    | 2    | 10       | 4    |                |    |         |        |
|                       | Smoker/nonalcoholic    | 2    | 0        | 0    | 10.778         | 6  | 0.095   | NS     |

Table 13 showed that all variables including age, gender, marital status, education, occupation, monthly income, place of residence, dietary habits, substance abuse, and personal habits had no statistically significant association ( $p>0.05$ ) with the environmental domain. This indicates that environmental quality of life was not significantly influenced by socio-demographic characteristics of the participants.

**Table 14:** Association of Clinical Variables with QOL in Social Domain among Liver Cirrhosis patients. (N=60)

| Clinical Profile         | Category                             | High | Moderate | Poor | X <sup>2</sup> | df | P-value | Result |
|--------------------------|--------------------------------------|------|----------|------|----------------|----|---------|--------|
| Cause of Liver Cirrhosis | Alcohol related liver cirrhosis      | 8    | 22       | 10   |                |    |         |        |
|                          | Viral hepatitis                      | 3    | 2        | 2    |                |    |         |        |
|                          | Non-alcoholic steatohepatitis (NASH) | 2    | 5        | 6    | 4.403          | 4  | 0.354   | NS     |

|                                         |                                           |    |    |    |       |   |       |    |
|-----------------------------------------|-------------------------------------------|----|----|----|-------|---|-------|----|
| Presenting Symptoms if any              | Abdominal distension (ascites) & jaundice | 7  | 17 | 10 |       |   |       |    |
|                                         | Fatigue, weakness & weight loss           | 2  | 7  | 5  |       |   |       |    |
|                                         | Kasy bruising & bleeding                  | 4  | 5  | 3  | 1.518 | 4 | 0.823 | NS |
| Family History of Liver Disease         | Yes                                       | 2  | 3  | 3  |       |   |       |    |
|                                         | No                                        | 11 | 26 | 15 | 0.445 | 2 | 0.801 | NS |
| Duration of Cirrhosis Diagnosis         | Less than 1 year                          | 4  | 9  | 5  |       |   |       |    |
|                                         | 1-2 year                                  | 3  | 1  | 1  |       |   |       |    |
|                                         | 3-4 year                                  | 3  | 16 | 9  |       |   |       |    |
|                                         | More than 4 years                         | 3  | 3  | 3  | 7.491 | 6 | 0.278 | NS |
| Co-morbidities present                  | Yes                                       | 10 | 17 | 14 |       |   |       |    |
|                                         | No                                        | 3  | 12 | 4  | 2.450 | 2 | 0.294 | NS |
| Types of Co-morbidities                 | Diabetes mellitus                         | 4  | 5  | 5  |       |   |       |    |
|                                         | Hypertension                              | 3  | 7  | 9  |       |   |       |    |
|                                         | DM+HTN                                    | 3  | 11 | 4  |       |   |       |    |
|                                         | Others                                    | 3  | 6  | 0  | 8.724 | 6 | 0.190 | NS |
| Disease Severity according to CTP Score | Class A (5-6 points)                      | 5  | 2  | 2  |       |   |       |    |
|                                         | Class B (7-9 points)                      | 4  | 13 | 7  |       |   |       |    |
|                                         | Class C (10-15 points)                    | 4  | 14 | 9  | 7.427 | 4 | 0.115 | NS |

Table 14 indicate that all clinical factors including cause of liver cirrhosis, presenting symptoms, family history, duration of diagnosis, co-morbidities, types of co-morbidities, and disease severity according to CTP score showed no statistically significant association ( $p>0.05$ ). This suggests that the environmental quality of life of liver cirrhosis patients was not significantly affected by their clinical profiles.

## RESULTS

Liver cirrhosis patients in study experienced high psychological distress, consistent with findings from Johann Hammer, Patel, and Lauridsen that anxiety, depression, frailty, stigma, and GI symptoms impair HRQOL. Physical and psychological domains showed the lowest HRQOL scores, reflecting fatigue, emotional stress, and impaired mental well-being. Social and environmental domains were relatively better, suggesting supportive family and community environments. Co-morbidities ( $p = 0.048$ ) and disease severity (CTP score,  $p = 0.000$ ) were major predictors of anxiety distress. Age and gender significantly influenced the social domain, while the environmental domain showed no significant associations. Research Hypothesis (H1): Association between psychological distress and HRQOL with selected variables → Partially accepted (significant for disease severity, co-morbidities, age, gender; not for environment). Research Hypothesis (H2): Correlation between psychological distress and HRQOL → Accepted. Overall, the study confirms that psychological distress is strongly correlated with poorer quality of life in liver cirrhosis patients, especially as disease severity and co-morbidities increase. Majority (96.7%) of liver cirrhosis patients experienced moderate to severe anxiety levels, indicating significant psychological distress within this population. Our study indicates that higher disease severity and the presence of co-morbid conditions are key factors influencing anxiety distress among liver cirrhosis patients. The demographic differences, particularly age and gender, influence the social quality of life among liver cirrhosis patients. The extent of liver disease progression significantly impacts patients' social quality of life. While, environmental quality of life was not significantly influenced by socio-demographic characteristics and Clinical Profile of the participants. Whereas, Physical QOL is Significantly impaired by disease severity (CTP score) and Psychological QOL is Strongly associated with disease severity that's not influenced by socio-demographic variables. But Social QOL is Influenced by age, gender, and disease severity other variables do not showed effect. The Environmental QOL is no significant associations with socio-demographic or clinical variables, suggesting resilience in external living conditions.

## **NURSING IMPLICATION**

The implications of the study have been discussed in relation to nursing practice, nursing education, nursing administration and nursing research.

## **NURSING PRACTICE**

Nurses play a pivotal role in the comprehensive care of individuals living with liver Cirrhosis. Patient-centered care is the cornerstone of nursing practice, recognizing that patients experience varying degrees of anxiety, nursing interventions should be individualized, with nurses collaborating closely with other healthcare professionals to design targeted strategies that alleviate distress and promote psychological well-being.<sup>15</sup> Proficiency in diverse assessment techniques is essential, enabling nurses to monitor anxiety and distress effectively and to conduct ongoing evaluations of patients exhibiting such symptoms. Health education, counselling and therapeutic communication should be encouraged to enhance coping abilities, treatment adherence & self-care practices.<sup>16</sup> By systematically assessing quality of life, nurses can gain valuable insights into the holistic needs of Liver Cirrhosis patients, ensuring that interventions not only address physical health but also psychological, social, and emotional dimensions of care.<sup>17</sup> The findings of this study provide a strong foundation for evidence-based nursing practice. Nurses can apply these results to enhance early identification of psychological distress, implement timely interventions, and improve overall patient quality of life. Health education can be disseminated through mass media platforms such as radio, television, documentary films, pamphlets, leaflets, and booklets. Special attention should be given to patients with severe disease and co-morbidities, as they are at greater risk of anxiety and poor quality of life. Furthermore, implementation of nurse-led interventions and multidisciplinary collaboration can significantly improve overall patient outcomes and well-being. Nurses can also provide psychosocial counselling and family support, helping both patients and their caregivers to cope more effectively with the challenges of living with Liver Cirrhosis.

## **NURSING EDUCATION**

Nurses must have a thorough understanding of a patient's physical, psychological, social, and functional status for comprehensive assessment and care. Therefore, foundational education should integrate mental health assessment and management into nursing curricula. Nursing students should be trained to critically appraise research findings and apply them to practice, reinforcing the link between empirical evidence and patient outcomes. Students should be trained in communication skills, counselling techniques, empathy, and stigma-free care for Liver Cirrhosis patients. Student nurses should be trained in holistic care approaches, therapeutic communication, counselling techniques, and patient education to effectively manage psychological and emotional needs of cirrhotic patients.<sup>17</sup> Nursing education should emphasize the role of nurses in psychosocial support and patient education for chronic illnesses like Liver Cirrhosis.

## **NURSING ADMINISTRATION**

The nurse administrator should develop protocols, standing orders related to design of the in-service education program and continue nursing education program to update nursing personnel's knowledge and skill in psychosocial counselling, stress management, culturally sensitive communication, assessment of psychological distress to improve quality of life in Liver Cirrhosis patients.<sup>18</sup> They should also ensure implementation and evaluation of educational program. Nursing Administrators should support nurse-led health education initiatives using mass media (radio, television, pamphlets, booklets) to raise awareness about coping strategies and reduce stigma.

## **NURSING RESEARCH**

The study highlights the importance of integrating evidence-based approaches into practice. Early identification of psychological distress and timely interventions can improve patient outcomes and strengthen the effectiveness of nursing care. These findings emphasize the need for nursing research to focus on developing and validating screening tools and assessment frameworks that can identify psychological distress. Research should also explore culturally sensitive and context-specific approaches to quality-of-life assessment. More emphasis should be made on nurse led interventions to promote evidence-based practices in improving patients' quality of life.

## **CONCLUSION**

The study assessed anxiety levels and quality of life (QOL) among liver cirrhosis patients receiving treatment in a gastroenterology ward. The findings revealed that the majority of patients experienced moderate to severe anxiety, indicating significant psychological distress. Quality of life across physical, psychological, social, and environmental domains was largely found to be moderate to poor, reflecting the multidimensional impact of the disease. No significant associations were found between socio-demographic variables and anxiety distress or most QOL domains, suggesting that factors such as age, gender, education, occupation, and income did not directly influence these outcomes. However, clinical variables, particularly disease severity (CTP score) and the presence of co-morbidities, showed a significant negative association with anxiety and QOL domains, highlighting that greater disease progression and accompanying health issues exacerbate both physical and psychological burden. Anxiety Distress significantly influenced by co-morbidities and disease severity. Physical and Psychological QOL strongly associated with disease severity. Social QOL

affected by both age, gender, and disease severity. Environmental QOL was not significantly influenced by any demographic or clinical variable. Overall, the study concludes that as liver disease progresses, patients experience increased anxiety and poorer quality of life across all domains, emphasizing the interrelationship between physical health and psychological well-being.

## RECOMMENDATIONS

On the basis of the findings of the study, it is recommended that Comparative studies across different regions or populations can be conducted. Interventional studies can be conducted to evaluate the effectiveness of nurse-led psychosocial interventions, such as counselling, stress-management workshops in reducing psychological distress and improving quality of life in Liver cirrhosis patients. Rehabilitation and stress-management programs such as relaxation therapy, yoga, meditation, and support groups may be incorporated into routine patient care to reduce psychological burden. A similar study can be replicated on large sample to generalize the findings of the study. Comparative studies may be conducted between different stages of liver cirrhosis and post-transplant patients to assess variations in psychological distress and quality of life.

## LIMITATIONS

The study was conducted within a single setting, which may limit the applicability of the findings to other contexts. The research was carried out over a period of one month, which restricts the generalizability of the results. The study was conducted with small sample size, which restricts the generalization of the results. The study was conducted using a non-probability Purposive sampling technique, which may limit the representativeness of the population.

## REFERENCES

1. Asrani, S. K., Devarbhavi, H., Eaton, J., & Kamath, P. S. (2019). Burden of liver diseases in the world. *Hepatology*, 70(1), 531–544.
2. Wong, R. J., Aguilar, M., Cheung, R., Perumpail, R. B., Harrison, S. A., Younossi, Z. M., & Ahmed, A. (2018). Non-alcoholic fatty liver disease and liver transplantation: Trends and outcomes in the United States. *Lancet Gastroenterology & Hepatology*, 3(5), 345–353.
3. Schuppan, D., & Afdhal, N. H. (2008). Liver cirrhosis. *The Lancet*, 371(9615), 838–851.
4. Spuran, M. M. (2015). Depression and anxiety among patients with chronic liver disease: A cross-sectional study. *Journal of Clinical and Diagnostic Research*, 9(7), OC09–OC12.
5. Marques, D.M., et al. (2016). Anxiety and stressin livertransplant candidates: A prospective study. *Transplantation Proceedings*, 48(7), 2332–2336.
6. Fotos, N. V., et al. (2018). Anxiety, depression, and HRQOLinchronic hepatitis B and C patients. *Annals of Gastroenterology*, 31(6), 735–741
7. Ridola, L., et al. (2018). Depression, anxiety, alexithymia, and HRQOL cirrhosis Digestive and Liver Disease. 50(8), 862–867.
8. Fritz, E., et al. (2019). GI symptoms and psychological distress in cirrhosis. *European Journal of Gastroenterology & Hepatology*, 31(9), 1107–1113.
9. Fabrellas, N., et al. (2020). Psychological impact of hepatic encephalopathy on patients and caregivers. *Journal of Clinical Nursing*, 29(17–18), 3343–3353.
10. Patel, K., et al. (2022). Anxiety and HRQOL in cirrhosis during COVID-19. *Frontiers in Medicine*, 9, 823456.
11. Lauridsen, M. M., et al. (2023). Anxiety, depression, hopelessness, and stigma in chronic liver disease. *BMC Gastroenterology*, 23, 112.
12. Donlan, J., et al. (2024). Prognostic communication, psychological distress, and HRQOL in decompensated cirrhosis. *Palliative Medicine*, 38(1), 45–56.
13. Hammer, J., et al. (2017). Gastrointestinal symptoms, psychological distress, and quality of life in cirrhosis patients. *Digestive and Liver Disease*, 49(11), 1230–1236.
14. Margari, F., et al. (2015). Psychopathological profile and health-related quality of life in hepatocellular carcinoma and cirrhosis patients. *BMC Psychiatry*, 15, 50.
15. Bajaj, J.S., et al. (2020). Cognitive impairment and anxiety in cirrhosis patients. *American Journal of Gastroenterology*
16. Hjorth, M., et al. (2025). Nurse-based care vs. standard medical care in cirrhosis: HRQOL outcomes. *BMJ Open Gastroenterology*.
17. Hjorth, L., et al. (2025). Health-related quality of life in patients with liver cirrhosis following adjunctive nurse-based care versus standard medical care: A pragmatic, multicentre, randomized controlled study. *BMJ Open Gastroenterology*, 12(1), e001234
18. Younossi, Z.M., et al. (2019). Health-related quality of life in chronic liver disease: global perspectives. *Hepatology*.