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HEALTH RELATED QUALITY OF LIFE AMONG INDIVIDUALS RECEIVING OUTPATIENTS CARE FOR CHRONIC LIVER DISEASE AT MAYO HOSPITAL LAHORE

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Abstract

Background: *Chronic liver disease (CLD) refers to a long-term pathological proc*
of continuous destruction of liver parenchyma and its gradual substitution with fibr
tissue, which eventually brings about Liver Cirrhosis related with a deadly resu
CLDs have been long recognized and associated with depression

Objectives*: To assess the health-related quality of life among individuals receiv*
outpatient care for chronic liver disease.

Method: *A descriptive cross-sectional study conducted in in mayo hospital Laho*
Data is calculated from the 156 patients diagnosed with chronic liver disease w
help of questionnaire. This data was analyzed by the help of frequency, percentage a
chi square test with a significance less than 0.05.

Results: *Showed that 64.7% were females, with the majority 43.6% falling betwe*
26 and 35 years, most 76.9% were married and resided in urban areas 50.6
Educationally, a significant portion were able to read and write (35.3%). M
participants had an average quality of life score (55.8%), followed by those with go
quality of life (42.3%) and a small percentage with poor quality of life (1.9%). Fam
income distribution showed that the majority50% fall within the range of 25,000
50,000 rupees.

Conclusion: *The findings indicated that the majority of patients experiencing an average quality of life were predominantly female and married. This study recommends the development of interventions customized to cater to the unique requirements of various demographic segments, including initiatives aimed at enhancing the quality of life for married individuals and addressing educational discrepancies among participants.*

INTRODUCTION

Chronic liver disease (CLD) refers to a long-term pathological process of continuous destruction of liver parenchyma and its gradual substitution with fibrous tissue, which eventually brings about Liver Cirrhosis related with a deadly result. Risk factors of CLD incorporate viral (Hepatitis B and C), non-alcoholic steatohepatitis (NASH), stoutness, diabetes mellitus, and the utilization of natural and dietary enhancements, immune system hepatitis, and Wilson infection Despite hepatitis and steatosis are asymptomatic, they can progress to CLD (1). Hepatitis, a liver inflammation, may lead to cell damage and/or destruction. Repeated cycles of inflammation;(fibrosis), necrosis, and hepatocellular regeneration contribute to advanced liver cirrhosis (2).

Chronic liver disease (CLD) is one of the most common diseases in the world. The World's older peoples continue to grow; the number of older persons aged 60 years or over and it is expecting to increase from 962 million in 2017 to 1.4 billion in 2030, with the populace aged 60 or above were developing at a rate of about 3% per 12 months (3). In the United States, 60 000 deaths occur annually due to LC. Furthermore, the hospitalization time of these patients has increased.3 In the United Kingdom, at least 7000 new Liver Cirrhosis cases are detected every year(4). Available data suggest that 29 million people in Europe are currently affected by CLDs, with an estimated burden of 170,000 deaths per year attributed to CLDs (5). Egypt's total population was 100,995.147 million in the mid of October 2019, while the 65 years and over represent 5.95 % (Wolny-Abouelwafa, 2020). In Korea, CLD is one of the most prevalent diseases. It is linked to diabetes and hypertension and causes 13.3% of all deaths; it was ranked the eighth cause of death in 2016.(6, 7). In Pakistan the prevalence of CLD people with chronic viral hepatitis patients (31.9%), followed by patients with cirrhosis (30.5%), hepatocellular carcinoma (HCC) (22.7%), or non-viral liver disease patients (14.9%) (8).

Globally, Chronic Liver Diseases (CLDs) is a significant health burden to the community. And it is assessed to be the fifth most regular reason for death after coronary illness, stroke, lung sickness, and malignancy. Also around 500 million people have CLD with a viral etiology (9). Chronic liver diseases (CLDs) adversely affect the Quality of life since patients frequently have asthenia, incapacitation, pain in various body parts, a sleeping disorder, lack of appetite, insomnia, and complications related to liver cirrhosis, such as, ascites, varicella seeping in the stomach and throat, and hepatic encephalopathy. Additionally, CLDs connected to job loss, debilitated working, disposition swings, nervousness, low confidence, wretchedness, and other passionate issues that seriously impact on patients' QOL and (10)

Moreover, CLDs are linked to job loss, impaired functioning, and low self-esteem (11). The HRQOL is a broad concept which reflects the perception of patients on how the effects of disease and treatment impact on their mental well-being, physical health, functional status, social relationships, personal beliefs' and overall (12) With the recent therapeutic advances, the long-term survival in CLDs has improved; therefore, many individuals, even those who undergo liver transplantation, may live a significant proportion of their life with advanced CLD (13). Thus, HRQOL has become, beyond more traditional clinical endpoints like mortality rates, biochemistry results and incidence of complications an increasingly important outcome in this patient population. Given the increased burden of CLDs, as well as the increased awareness of patient reported outcomes, a robust assessment of HRQOL and possible related variables could help healthcare professionals to provide services taking into account clinical and patient-related actors in a more balanced way, in order to better tailor CLD treatments and to identify targets for new therapies. (12). At the same time, CLDs have been long recognized and associated with depression with an occurrence reported in up to 15% of patients waiting for a liver transplant and in up to 57% of patients with cirrhosis. Depressive symptoms have been associated with reduced HRQOL and worsened cognitive function. CLDs severity is normally considered by physicians an important prognostic factor, and previous studies found that CLDs severity has an impact on patient's HRQOL, affecting both physical and psycho-social aspects (14). However, to the best of our knowledge, few studies have been conducted, especially in the Italian context, on how CLDs severity influences both physical and psycho-social aspects of HRQOL, such as self-care, daily life activities, and depression (15).

Moreover, considering the ongoing advances in CLD treatment and its effect on HRQOL, further studies looking at HRQOL and depressive symptoms in patients with CLDs, are needed (16). Therefore, the aim of the present study was to evaluate if CLD severity may influence the HRQOL and lead to the development of depressive symptoms. We expect that the severity of disease may be related to a reduced perception of HRQOL and to an increased incidence of depressive symptoms. The results of this study could be used to develop interventions and policies aiming to improve quality of life for CLD subjects.

Material and Methods

A cross-sectional study was conducted, anticipated to be completed within four months from the start of data collection. This research focused on outpatients diagnosed with chronic liver disease (CLD) at Mayo Hospital Lahore, with a sample size of 156 patients calculated using a statistical formula and selected through convenience sampling. The inclusion criteria encompassed patients aged 18 and above who were diagnosed with CLD, with varying etiologies such as hepatitis B, hepatitis C, non-alcoholic fatty liver disease, and autoimmune liver disease. Participants of all genders, ethnicities, socioeconomic statuses, and different levels of disease severity were included. Exclusion criteria ruled out individuals under 18, those receiving inpatient care, patients with acute liver disease, significant comorbidities unrelated to CLD that could impact health-related quality of life (HRQOL), cognitive impairments, language barriers, and severe psychiatric disorders.

Outpatients meeting the criteria were selected, and data collection was carried out using a structured questionnaire, which included 22 questions to assess knowledge of CLD quality of life and a Likert-scale section with 22 items rating responses from “very dissatisfied” to “very satisfied.” Ethical approval was obtained from Mayo Hospital’s committee, and participants were recruited based on the outlined criteria. Each participant provided written consent before completing the questionnaire in approximately 25 minutes. Completed questionnaires were then digitized for further analysis, with participants assured that their data would remain confidential.

Data analysis was performed using SPSS Version 21 and MS Excel. Descriptive statistics, including frequencies and percentages, were presented in tables and graphs, while inferential statistics were used to test for associations. Data normality was checked using the Kolmogorov-Smirnov and Shapiro-Wilk tests ($p > 0.05$), and significant associations were examined using the Chi-square test with a threshold of $p < 0.05$.

Results

Table 1: Demographic Variable of the study participants

Variables		Frequency	Percent
Gender	Male	55	35.3
	Female	101	64.7
Age	18-25	11	7.1
	26-35	68	43.6
	36-45	31	19.9
	46-60	46	29.5
Marital Status	Single	20	12.8
	Married	120	76.9
	Divorced	11	7.1
	Widowed	5	3.2
Residency	Urban Area	79	50.6
	Rural Area	77	49.4
	Total	156	100.0

Descriptive statistics analyzed by frequency ‘n’ and percentage ‘%’

Table 1 analysis reveals that 35.3% of participants were male and 64.7% female. Age distribution shows 7.1% were 18-25 years, 43.6% were 26-35 years, 19.9% were 36-45 years, and 29.5% were 46-60 years. Regarding marital status, 12.8% were single, 76.9% married, 7.1% divorced, and 3.2% widowed.

Residency data indicates that 50.6% lived in urban areas and 49.4% in rural areas. The findings highlight that most participants were female (64.7%), predominantly aged 26-35 years (43.6%), mainly married (76.9%), and slightly more from urban areas (50.6%).

Table 2: Demographic Variable of the study participants

Variables		Frequency	Percent
Education status	Unable to Read and Write	34	21.8
	Able to Read & Write	55	35.3
	Certificate	17	10.9
	Diploma	32	20.5
	Degree & above	18	11.5
Occupation	Housewife	53	34.0
	Student	6	3.8
	Employed	68	43.6
	Nonemployee	25	16.0
	Businessman	4	2.6
	Total	156	100.0

Descriptive statistics analyzed by frequency 'n' and percentage '%'

Table 2 presents the demographic details of study participants, highlighting education and occupation. In terms of education, 21.8% were illiterate, 35.3% could read and write, 10.9% held a certificate, 20.5% had a diploma, and 11.5% had a degree or higher. Regarding occupation, 34.0% were housewives, 3.8% students, 43.6% employed, 16.0% unemployed, and 2.6% were businessmen. Among the 156 participants, the majority were literate (35.3%) and primarily employed (43.6%). Descriptive statistics were calculated using frequency and percentage.

Table 3: Quality of life with CLD

Quality of life score	Frequency	Percent	$\bar{x}$	S.D
Poor 22 to 50	3	1.9	77.53	14.020
Average 51 to 79	87	55.8		
Good 80 to 110	66	42.3		
Total	156	100.0		

Analyzed by frequency and mean (X), standard deviation (SD)

Table 3 shows that the majority of participants (55.8%) had an average quality of life, 42.3% reported a good quality of life, and 1.9% had a poor quality of life. The mean quality of life score was 77.53, with a standard deviation of 14.02.

Figure 1: Family monthly income in Pakistani Rupees

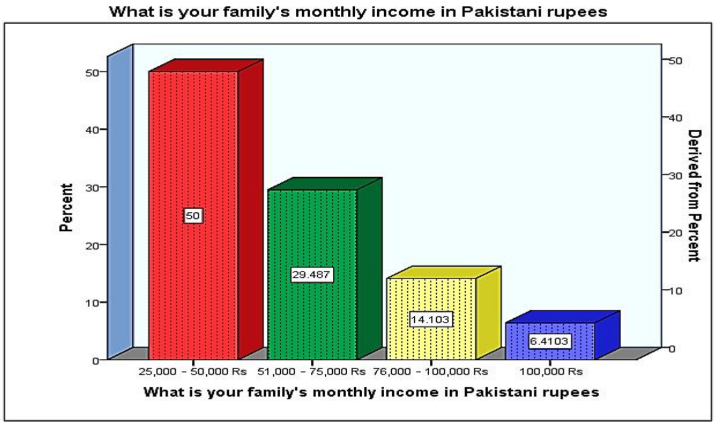

Figure 1 illustrates the family income distribution among study participants: 50% had a low income between 25,000 and 50,000 rupees, 29.5% had incomes between 51,000 and 75,000, 14.1% fell within the 76,000 to 100,000 range, and 6.4% had incomes above 100,000 rupees.

Discussion: This study showed that according to participant's gender 35.3% participants, were male, while 64.7%, female. Regarding age, 7.1% fall within the age range of 18-25 years, 43.6% aged between 26-35 years, 19.9% fall within 36-45 years, and 29.5% were between 46-60 years old. Marital status indicates that 12.8% were single and 76.9% married, 7.1% divorced, and 3.2% widowed. In terms of residency, 50.6% reside in urban areas, while 49.4% lived in rural areas. Descriptive statistics were analyzed using frequency (n) and percentage (%). This basically represent that most were female 64.7%, 43.6% fall in the age of 26 and 35 years, 76.9% married and 50.6% from urban area.

Similarly, the repot of Asad and colleague study showed that mean age of liver transplant recipients was 45±11 years, body mass index (BMI) was 24.2±4.2 kg/m2 and 28/32 (87.5%) patients were males. Good health was reported by 96.9% after liver transplantation in contrast to 81.2% patients before liver transplantation (p=0.0001). Vigorous exercise capability was 40.6% after liver transplantation in contrast to 28.1% before liver transplantation (P=0.43) (17).

This study basically represents the demographic variable of the study participants; in terms of education status, 21.8% were unable to read and write, while 35.3% were able to read and write. Additionally, 10.9% hold a certificate, 20.5% had a diploma, and 11.5% possess a degree or higher qualification. Regarding occupation, 34.0% were housewives, 3.8% students, 43.6% employed, 16.0% non-employees, and 2.6% businessmen.

According to the report of Gazineo and colleague study two hundred and fifty-four patients were included. Mean age was 62.84 years and 57.9% were male. Most participants were affected by compensated cirrhosis (140.2%) and chronic hepatitis (40.2%), with a disease duration ≥5 years (69.3%). Regarding the Model for End-Stage Liver Disease score, 67.7% of patients belonged to Class I, 29.9% to Class II, and 2.4% to Class III. There were not patients belonging to the Classes IV and V (12).

This study concluded that most 55.8% of the study participant's fall in average quality of life score, 42.3 percent with a good quality of life and 1.9 percent with poor quality of life; with a mean quality of life score 77.53 and standard deviation 14.020. Similarly, the study of Chugh and colleague study found that chronic hepatitis and compensated cirrhosis patients had mean Euro QoL five-dimension questionnaire scores of 0.639 ± 0.062 and 0.562 ± 0.048, respectively. Patients admitted to the ICU or HDU had a significantly lower score of 0.295 ± 0.031, which improved to 0.445 ± 0.055 at discharge (P < 0.001). Lower literacy level (P = 0.018) and treatment in outpatient settings (P < 0.001) were associated with better quality of life. Health-related quality of life is compromised in liver disorder patients, particularly those in the ICU. Further research is needed to understand the impact of various factors and treatment costs on quality of life (18).

According to kook and colleague study, individuals with cirrhosis endure a diminished quality of life. This quality of life is linked to higher mortality rates and unplanned hospital admissions among cirrhosis patients. Using a quality of life assessment as a prognostic tool could be simple for patients to complete while waiting for their appointment (19).

In the same context the study of Adhikari in 2018 revealed that the general quality of life for individuals with chronic liver disease falls below the standard norm (cutoff point 50). The highest scores were seen in the social relationship domain, while the lowest scores were found in the physical domain. There were notable mean differences between the physical health domain and factors like age, psychological health, environmental domain, and occupation. Additionally, significant mean differences were noted across all quality of life domains based on alcohol consumption status, while differences were only significant in the environmental domain concerning tobacco consumption status (20).The demographic characteristics of the study participants reveal a predominance of females, individuals aged between 26 and 35 years, married individuals, and those residing in urban areas. Educational backgrounds varied, with a notable percentage having completed some form of formal education. Housewives and employed individuals were the most common occupations among participants.

Findings indicate that liver disease significantly impacts quality of life, with factors such as literacy level, treatment setting, and lifestyle habits playing crucial roles. Further research is warranted to explore interventions aimed at improving the quality of life for individuals with liver disorders.

Conclusion:

The demographic analysis of participants revealed a predominance of females (64.7%) across various age groups, with the majority falling between 26 and 35 years (43.6%). Most were married (76.9%) and resided in urban areas (50.6%). Educationally, a significant portion were able to read and write (35.3%), while various levels of formal education were also represented. Employment-wise, a substantial percentage were employed (43.6%), followed by housewives (34.0%). The study comprised 156 participants, with descriptive statistics indicating that most participants had an average quality of life score (55.8%), followed by those with good quality of life (42.3%) and a small percentage with poor quality of life (1.9%). Family income distribution showed that the majority fell within the range of 25,000 to 50,000 rupees (50%), followed by income brackets of 51,000 to 75,000 rupees (29.487%), 76,000 to 100,000 rupees (14.103%), and above 100,000 rupees (6.4103%).

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