

Quality of Life Among Chronic Liver Disease Patients: An Exploratory Cross Sectional Survey

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Abstract

Background: QOL is the general well-being of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, religious beliefs, finance and the environment.¹ Quality of life has an important status in patient management suffering from chronic liver disease.

Objectives: The present study was done to assess the quality of life among patients suffering from Chronic Liver Diseases.

Material and Methods: A descriptive explorative cross-sectional research design was used. Data was collected from 165 patients using purposive sampling technique. The quality of life Scale (QOLS) was used to assess the quality of life among chronic liver diseases patient admitted at Institute of Liver and Biliary Sciences. MELD and CTP score was used to assess the mortality and survival rate among chronic liver diseases patient. The study participants and their care givers were informed that the study is harmless; all the gathered data was treated confidentially and used for research purpose only.

Results: The results of the study revealed that 0.6 percent of the patients have poor, in 35.2 percent of the people have moderate whereas 64.2 percent of the people have good quality of life. In terms of physical wellbeing of patient 11.52 percent of the people have poor, 73.93 percent have moderate while only 14.55 percent have good quality of life. In relation with social wellbeing of the patient 0.61 percent of the people have poor, 27.88 percent have moderate while only 17.51 percent have good quality of life. As per emotional wellbeing of the patient 3.03 percent of the people have poor, 87.88 percent have moderate while only 9.09 percent have good quality of life. In terms of functional wellbeing of patient 3.03 percent of the people have poor, 60 percent have moderate while only 36.97 percent have good quality of life. The quality of life in terms of cost showed that 11.52 percent of the patient had poor, 73.93 percent had moderate, and 14.55 percent of the patient has good quality of life. The quality of life in terms of limitation due to signs and symptoms showed that 1.21 percent of the patient have poor, 81.82 percent have moderate whereas 16.97 percent of the patient had good quality of life. The weak positive correlation ($r=0.48$) was found between MELD and CTP score.

Conclusion: The study concluded that only 35.2 percent of the patient have moderate quality of life, more than half (64.2%) of the patient have good quality of life. So, the effective steps need to be taken to improve the quality of life among patients with Chronic Liver Diseases.

Key words: *Quality of life, Chronic Liver disease*

Introduction

Quality of life (QOL) was first used in world war II to describe the effect of material welfare on individuals'

lives. QOL is the general well-being of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth,

religious beliefs, finance and the environment.¹ QOL has a wide range of contexts, including the fields of international development, healthcare, politics and employment. It is important not to mix up the concept of QOL with a more recent growing area of health related QOL (HRQOL).² Quality of life should not be confused with the concept of standard of living, which is based primarily on income. Health-related QOL focuses on the effects of a disease or health conditions on the daily functioning of individuals with special attention for their physical and mental health.³

Recently quality of life (QOL) has become the principal goal of medical care because of the increasing emphasis on the patients as focal point of health care, patients functioning preservation and wellbeing hence forth measurement of patients quality is receiving attention in medical research.⁴ Quality of life (QOL) is a subjective multidimensional concept which includes functional status, emotional and social wellbeing as well as general health.⁵ Quality of life has an important status in patient management suffering from chronic liver disease.⁶

Recently health related quality of life has gained importance as an outcome measure in clinical and epidemiological studies and has become a key component in the evaluation of therapeutic interventions in hepatology.⁷

Chronic means of long duration” Liver means “the large gland situated in the right upper area of abdominal cavity” which chief function is bile secretion, maintain blood composition and regulate metabolic process.⁸ Whereas disease means “any departure from normal functions of liver” so chronic liver disease is long duration illness of large gland in which liver function is disturbed. In many patients, long term heavy drinking leads to chronic liver disease, liver failure and even death.⁹ Globally cirrhosis/chronic liver disease caused by many entities, is responsible for major mortality and morbidity. Chronic liver disease is one of the common conditions for which individual are hospitalized.⁵ Symptoms may be extremely variable in advanced disease, whereas compensated patients may be asymptomatic for years or decades. However, the impact of the disease on patients’ functioning and well-being may be enormous. Patients may experience anxiety

because of chronic viral infection, or emotional problems associated with alcoholism. Complications (ascites, encephalopathy, hemorrhage) and/or extrahepatic manifestations of advanced disease may affect QOL, not to mention therapeutic interventions, such as therapy with fast-acting loop diuretics, limiting outdoor activities, or interferon treatment, causing malaise and illness awareness.¹⁰

However, the research was taken up with a rationale to describe and assess the QOL of liver disease patients in India, in order to have baseline literature & empirical evidence to further have development of intervention to enhance the QOL of liver disease patients in India.

Methodology

Study Design

Descriptive exploratory cross section research design was used to assess the quality of life among Chronic Liver Diseases Patient.

Research Setting and Population

The study was conducted at selected Institute of Liver and Biliary Sciences, New Delhi. Data was collected from the various department like IPD and OPD. The patient who were present at the time of data collection and who were ready to participate were included in the study. The patients who were hemodynamically unstable and with hepatic encephalopathy were excluded from the study.

Sample Size

Sample size was not determined as all the patient visiting to the hospital were taken for the study. 165 patients were selected using purposive sampling technique from selected Institute of Liver and Biliary Sciences.

Data Collection Tool and Technique

It comprised of three sections:

Section A: It consists of sociodemographic variables which include age, gender, chronicity & occupation.

Section B: Two standardized scale i.e. MELD (Model of end stage liver diseases) and CTP (Child Turcotte- Pugh) score was used. MELD score was

checked to assess the mortality whereas CTP score was used to assess the survival rate among chronic liver diseases patients. The online calculators were used to calculate the score. The parameters of the MELD score were creatinine, bilirubin level, INR and sodium level of the patient. The score of 1 to 9 indicates poor prognosis, 10 to 19 indicates 6 percent mortality, 20-29 indicates 20 percent mortality, 30 to 39 indicates 52.6 percent mortality, the score of 40 indicates 71.3 percent mortality.

The next score is CTP score. The components of CTP score were encephalopathy, ascites, bilirubin level and PT or INR. The total score is 15. The score between 5 to 6 indicates 100 percent survival rate, 7 to 9 indicates 81 percent survival rate, 10 to 15 indicates 45 percent survival rate.

Section B: The structured questionnaire was used to assess the quality of life among chronic liver disease patient. The tool was validated by five experts from the field of the Nursing, and Hepatology. The tool has seven components which includes physical, social/ family, emotional, functional, spiritual wellbeing of the patient, and also cost and limitations due to signs and symptoms. The score of 0 to 50 indicates poor, 51 -100 indicates moderate, and score of 101 to 150 indicates good quality of life. In physical wellbeing the total score is 18. The score from 0 to 9 indicates poor, 10 to 14 indicate moderate, whereas 15 to 18 indicates good quality of life. The total score of emotional domains is 15. Where

score between 0 to 7 indicates poor quality of life, score of 8 to 12 indicates moderate quality of life and score of 13 to 15 indicates good quality of life. Next domain of the scale is functional wellbeing. The total score is 36. The score of 0 to 17 indicates poor, 18 to 27 indicates moderate and 28 to 36 indicates good quality of life. The total score of the domain cost is 18. The score from 0 to 9 indicates poor, 10 to 14 indicate moderate, whereas 15 to 18 indicates good quality of life. The last domain of the scale is limitation due to signs and symptoms. The last component of the tool is limitations due to sign and symptoms. The total score is 30. The score of 0 to 14 indicates poor quality of life. The score of 15 to 22 indicates average quality of life and 23 to 30 indicates good quality of life.

Data Collection Procedure

Data was collected using interview techniques. Tool was developed in three sections. One dealt with the identification data & demographic variable like Age, Gender, Occupation and Chronicity of disease. The second one is MELD and CTP score. The third part was structured three-point scale where participants would opt for the best suitable life experience & activities. Official ethical clearance & permission was obtained from the institute ethical committee. Verbal informed consent was taken prior to data collection from study participants.

Data Analysis

Table 1: Frequency and Percentage Distribution of the Socio Demographic Variables

N=165

Sociodemographic Variables	Frequency (%)
Age in years	47.15±10.86
Gender	
Male	137 (83)
Female	28 (17)
Chronicity	

Cont... Table 1: Frequency and Percentage Distribution of the Socio Demographic Variables**N=165**

·	<6 months	53 (32)
·	1-3 years	75(46)
·	3-5 years	37(22)
Occupation		
·	Salaried	60 (36)
·	Self employed	73 (44)
·	Housewife/Retired	32 (20)

Table 1 illustrates that frequency and percentage of the sociodemographic variables like age, gender, chronicity and occupation. The mean age group of the patients was 47.15 ± 10.86 . The majority (83%) of the patient were male, whereas only 17 percent of the patient were female. In terms of the chronicity of the diseases, the duration of the illness was less than six months in 32 percent of the patients, 1-3 years in 46 percent of the patients while 3 to 5 years in 22 percent of the patients. Further in relation to occupation, 36 percent of the patients were salaried, 44 percent of the patients were self-employed and rest 20 percent of the patients were housewife or retired.

Table 2. Overall perception of quality of life among chronic liver diseases patient

N=165

Quality of life	f (%)
Poor	01(0.6)
Moderate	58(35.2)
Good	106 (64.2)

Table 2 is showing the overall perception of quality of life among chronic liver disease patient. It can be observed in the table that only (0.6%) of the patients were have poor, 35.2 percent of the patient have moderate, more than half (64.2%) of the patient were have good quality of life.

Table 3. Perception of quality of life in various domains among Chronic liver diseases patient**N=165**

Various aspects of life	Poor f (%)	Moderate f (%)	Good f (%)
Physical Well being	19 (11)	122(74)	24 (15)
Social well being	01 (01)	46(28)	118(71)
Emotional well being	05 (03)	145 (87)	15 (10)
Functional well being	05(03)	99 (60)	61(37)
Spiritual well being	03(02)	148 (90)	14 (08)
Cost	13 (11)	113 (74)	39(15)
Limitation due to signs and symptoms	02 (01)	135 (82)	28(17)

Table 3 is showing the frequency and percentage of quality of life in terms of various aspects of life. In terms of physical wellbeing only 15 percent of the patient were having good quality of life, 74 percent were having moderate quality of life, whereas 11 percent of the patients were having poor quality of life.

Further in relations with social wellbeing more than half (71%) of the patient were having good quality of life, 28 percent were having moderate quality while only 1 percent of the patient were having poor quality of life. In view of emotional wellbeing 10 percent patients were having good, 87 percent were having moderate and 3 percent of patients have poor quality of life.

The quality of life in terms of functional wellbeing of the patient revealed that 37 percent of the patients were

having good, 60 percent of the patient having moderate whereas only 3 percent of the patients have poor quality of life. Next in terms of spiritual wellbeing, 2 percent of the patient have poor, 90 percent of the patient have moderate and only 8 percent of the patient have good quality of life.

In context to the cost, it was found that only 15 percent of the patient have good, more than half (74%) have moderate and 11 percent of the patients have poor quality of life. Further the quality of life in relation with limitation due to sign and symptoms showed that 17 percent of the patient had good, 82 percent of the patients had moderate and 1 percent of the patient had poor quality of life.

Table 4. Frequency and percentage of the MELD and CTP score of the patient

N= 165

MELD Score	f (%)
Poor Prognosis	15 (10)
6 % mortality	74 (45)
20% mortality	53(32)
52.6 % mortality	18 (11)
71.3% mortality	05 (03)
CTP Score	
100 % (5-6)	17 (10)
81% (7-9)	110 (67)
45% (10-15)	38 (23)

Table 4 represents the frequency and percentage of the MELD score among chronic liver diseases patients. MELD score was used to predict the mortality among chronic liver diseases patients. It can be observed from the table that 10 percent of the patients were having the poor prognosis, 45 percent of the patients have 6 % mortality, 32 percent of the patients were having the 20% mortality, 11 percent of the patients have 52.6 %

mortality and 3 percent of the patients have the 71.3% mortality. CTP score is used to predict the survival rate among chronic liver diseases patient. The above table showed that 10 percent of the patients have 100 percent survival rate, 67 percent of the patient have 81 percent survival rate while 23 percent of the patient have 45 percent survival rate.

Table 5. Correlation between MELD and CTP

Scores	MELD Score (Mean ±SD)	CTP Score (Mean ±SD)	R
	19.92±8.4	8.29±1.73	0.48

P<0.05

Table 5 depicts the correlation between MELD and CTP score. Pearson correlation was computed to see the correlation between MELD and CTP score. Correlation between CTP & MELD was assessed and weak positive correlation of 0.48 was found. Hence it can be concluded that the MELD Score can predict the prognosis or survival rate exactly.

Association of sociodemographic variables with quality of life among chronic liver disease patient was also computed using Chi Square. But there was no significant association found between the sociodemographic variables and quality of life among chronic liver disease patients.

Discussion

The chronic liver diseases are the serious illness which affects the quality of life of the patients. So, assessment of quality life among chronic liver diseases patient is important. Thus, the present study aimed at assessing the quality of life of chronic liver disease patients.

The present study showed that more than half of the patients have average quality of life.

The mean age of the patients was 47.15±10.86. The majority of the patients were male. The study findings were supported by the study conducted to assess the quality of life among chronic liver disease patient revealed that majority of the patients were male.¹¹

In the present study the MELD score was used to assess the mortality among chronic liver diseases patient which showed that 32 percent of the patient has 20 percent mortality rate, 45 percent patients have 6 percent mortality rate. Similar study conducted to assess the

quality of life among chronic diseases used MELD score to predict the mortality. The findings of MELD Score revealed that the majority (93.2%) of the patient were at low risk, 5.3 percent were at moderate risk whereas only 1.5 percent of the patient were at high risk of mortality.

The present study findings revealed a positive correlation with MELD and CTP score which concluded that MELD Score can predict the prognosis or survival rate exactly.

A study conducted to assess the health-related quality of life among chronic diseases patient showed that the overall CLDQ score was also low in patients below 45 years old ($p < 0.05$).¹¹

The limitation of the study was sample size and data was collected from only one institute.¹¹

Conclusion

The study concluded that only 35.2 percent of the patient have moderate quality of life, more than half (64.2%) of the patient have good quality of life. So, the effective steps need to be taken to improve the quality of life among patients with Chronic Liver Diseases.

Ethical Clearance: Ethical clearance taken from institutional ethical committee.

Conflict of Interest: Nil

Source of Funding: Self

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