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Original Research Article

Health Related Quality of Life of Patient with Chronic Liver Disease in a Tertiary Hospital, Kathmandu

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ABSTRACT

Chronic liver disease can have a profound negative impact on patients' health related quality of life and well-being. The objective of the study was to find out the health related quality of life of patient with chronic liver disease. Descriptive cross sectional research design based on quantitative approach was adopted. The study was conducted in Tribhuvan University, Teaching Hospital. Non-probability, purposive sampling was used to select 103 respondents who were interviewed using semi-structured interview based on WHOQOL-BREF 26 item questionnaire. Data was collected by researcher herself in total four weeks. Descriptive and inferential statistics (independent t test and ANOVA) were used to analyze the data.

Study findings revealed that mean score of overall health related quality of life was 43.26±14.27. The highest score was found in social relationship domain (50.58±10.02) and lowest in physical health domain (43.78±13.08). In socio-demographic characteristics, significant mean difference was found between different domains of health related quality of life (p<0.05) and age, occupation, economic status; in medical variables between social relationship domain and duration of disease; in personal behavioral variables between different domains of health related quality of life and alcohol consumption and tobacco consumption.

Based on the findings of the study it can be concluded that health related quality of life of patient with chronic liver disease was below norm. Thus, nursing strategies considering updated counseling and educational materials to improve quality of life are suggested.

Keywords: Liver Disease, Health Related Quality of Life, WHOQOL-BREF.

INTRODUCTION

Background of the Study

Liver, or hepatic, disease comprises a wide range of complex conditions that affect the liver. Chronic liver disease (CLD) including a number of hepatocellular and cholestatic conditions, is increasingly recognized as an important cause of chronic disease worldwide because of its epidemiological burdens, its potential impact on patients' health and their health-related quality of life (HRQOL). [1] Liver diseases are extremely costly in terms of human suffering, doctor and hospital visits, and premature loss of productivity. [2]

Approximately 325 million people are living with chronic hepatitis infections worldwide in 2015. [3] In 2013, 29 million people in the European region suffered from a chronic liver condition and more than 30 million Americans had liver disease. [4] Hepatitis C is a chronic infection that affects approximately 170 million people worldwide with annual mortality of 350,000. There are approximately 15,000 deaths annually in the US. [5]

Total deaths worldwide from cirrhosis and liver cancer rose by 50 million per year and 1.3 million deaths worldwide are due to chronic viral hepatitis, which is comparable

to the burden of HIV/AIDS, tuberculosis, and malaria. [6]

Liver disease is increasingly being recognized as an important cause of chronic disease worldwide because of its epidemiological burden, its potential impact on the patients' health and their health-related quality of life (HRQL). In fact, patients with liver disease suffer from debilitating fatigue, pruritus, loss of self-esteem, depression and complications of cirrhosis such as hepatic encephalopathy, ascites, spontaneous bacterial peritonitis and recurrent variceal bleeding. These complications can have a profound negative impact on patients' HRQL and well-being. [2]

Health related quality of life (HRQOL) represents an important outcome from a patient's perspective. Health related quality of life under the broader category of quality of life which accounts for the influence of health, environment, freedom, economy, as well as aspects of one's culture, values, and spirituality on an individual's wellbeing. Health related quality of life (HRQOL) is a multidimensional concept that includes self reported measures of one's physical and mental health as well as their social wellbeing. [7]

Quality of life has an important status in patient management suffering from chronic liver disease. Patient with chronic liver disease suffer from fatigue, loss of self esteem, inability to function at work, anxiety, depression and other emotional problem that profoundly decreases their quality of life and well being. The QOL assessment provides valuable information regarding the specific areas of deficit, which require greater attention by the health care workers. The knowledge of the specific areas of deficit helps in setting goals for psycho-social therapies and rehabilitation. A study carried out in Thailand on Chronic Liver Disease patients reported a significantly lower HRQOL. [8]

The quality of life of chronic liver disease patient was poor assessed on the parts of physical, social, emotional, functional wellbeing and other additional domains, where as QOL was more poor in emotional and functional wellbeing, in comparison to physical and social wellbeing. [9] Similarly, about 87.2% of the patients with liver cirrhosis rated their general health as poor in Egypt. [10] A survey conducted among patients with chronic liver disease in Rio De Generio, Brazil shows similar finding in which most individuals presented low health-related quality of life. [11] A study conducted in Pakistan by Prakash, Iqbal, Jafri, Azam & Jafri in 2012 revealed that among 273 cirrhosis participants, poor health related quality of life (HRQOL) was seen in 69% of participants. A study carried out in Thailand on Chronic Liver Disease patients reported a significantly lower HRQOL. [8] Similar result was obtained in a study done in India where, quality of life of chronic liver disease patient was poor assessed on the parts of physical, social, emotional, functional wellbeing and other domains. [9]

Need of the Study

Estimated 325 million people had chronic hepatitis infections worldwide in 2015. [3] Liver diseases are recognized as the second leading cause of mortality amongst all digestive diseases in the US. [12] In 2013, 29 million people in the European region suffered from a chronic liver condition and more than 30 million Americans had liver disease. [4] In China, liver diseases, primarily viral hepatitis, nonalcoholic fatty liver disease and alcoholic liver disease affect approximately 300 million people. [13] The data published by WHO, 2014 stated that Nepal ranks 60th position out of 172 nations on burden of liver disease in which the death rate is 20 per 1,00,000. Chronic liver disease is associated with significant morbidity and mortality, and is one of the major burdens for health care systems.

Generally, patients with chronic liver disease have been found to suffer from disease related stress that can influence their physical and mental health status. Liver disease was perceived to be more stressful

than diabetes and hypertension by patients with chronic HCV. [14]

Quality of life has an important status in patient management suffering from chronic liver disease. Patient with chronic liver disease suffer from fatigue, loss of self esteem, inability to function at work, anxiety, depression and other emotional problem that profoundly decreases their quality of life and well being. The QOL assessment provides valuable information regarding the specific areas of deficit, which require greater attention by the health care workers. Understanding the drivers of impaired HRQOL can help identify targets for improvement through new treatments or health systems service delivery. [15]

Currently, Health Related Quality of Life (HRQOL) is considered one of the most important result measures in clinical studies. Assessing health-related quality of life (HQOL) is useful for documenting the patients' perceived burden of chronic disease, tracking changes in health over time, assessing the effects of treatment and quantifying the return on health care investment. [16]

Liver disease is increasingly being recognized as an important cause of chronic disease worldwide because of its epidemiological burden, its potential impact on the patients' health and their health-related quality of life. However, the limited study on such important issue has heightened the eagerness of researcher to explore about the proposed title.

Objectives of the study

General Objective

The general objective of this study was to find out the health related quality of life of patient with chronic liver disease in a tertiary hospital of Kathmandu.

Specific Objectives

To assess the health related quality of life of patient with chronic liver disease in physical, psychological, social and environmental wellbeing domain.

To examine the mean difference of different domains of health related quality of life of patient with chronic liver disease and selected socio-demographic characteristics.

To differentiate the mean difference of different domains of health related quality of life of patient with chronic liver disease and medical variables.

To examine the mean difference of different domains of health related quality of life of patient with chronic liver disease and personal behavioral variables.

Significance of the Study

The findings of this study might provide a baseline data and reference material for future researcher and nurse educators to conduct further study in this issue. Furthermore, the finding of this small scale research study is expected to be helpful for nurses to plan effective nursing care plan, provide support, information, and in assisting patient to better utilize problem solving method to enhance their health related quality of life in patients suffered with liver disease.

MATERIALS AND METHODS

Research Design

Descriptive cross sectional research design based on quantitative approach was adopted because of limited duration of time frame for the study.

Research Setting and Population

The study was conducted in Tribhuvan University, Teaching Hospital (TUTH). The gastro medical OPD is conducted every Monday and Wednesday in which the people with liver disease is attended. Because of the familiarity and feasibility researcher selected the particular area purposively.

Study Population

Those patients diagnosed to have chronic liver disease by physician, attending gastro outpatient department, emergency observation department and inpatient of medical ward were taken as study population.

Sampling

Sampling Technique

Non-probability purposive sampling was used.

Sample Size

The sample size was calculated by using Cochran's formula (Cochran, 1977)

$n_0 = Z^2pq/E^2$ with the desired precision of 5% (95% confidence limits at an allowable error of 5%)

Here, n_0 = the desired sample size

Z= the standard deviate (set for a 95% CI) = 1.96

p = the assumed prevalence 50% i.e., 0.5, q= 1-p

Absolute allowable error (E) = 0.05

$n_0 = (1.96)^2x\ (0.5)\ x\ 0.5/\ (0.05)^2 = 384.16 = 385$

As the study was conducted in TUTH, the weekly patient flow was approximately 30.

So, N = 30x4 = 120

Here, for finite population, the sample size was adjusted by using formula (Cochran, 1977)

$N = n_0/\ [1+ (n_0-1)/N] = 385/\ [1+ (385-1)/120] = 92.40$ i.e., 93

Adding 10% non-response rate,

93+10 = 103

Final sample size was 103.

Inclusion Criteria

- Those patients who attended gastro-medical OPD, inpatient of medical ward and emergency observation unit diagnosed to have chronic liver disease by physician.
- Those patients who were willing to participate in this study.
- Those patients who could communicate well with researcher during the period of data collection.

Research Instrumentation

Semi-structured face to face interview based questionnaire was used to identify the health related quality of life of patients with chronic liver disease.

Instrument consists of four parts.

Part I: Socio-demographic characteristics

Part II: Questions related to medical variables

Part III: Questions related to personal behavioral habits

Part IV: Questions related to Health Related Quality of Life of patient with chronic liver disease, measured by standard WHOQOL-BREF tool.

The first, second and third part of the tool was constructed by the investigator and contain questions on socio-demographic characteristics, clinical factors and personal habits.

Part IV, WHOQOL BREF tool obtained from WHO was used to assess the quality of life.

In this study, the Nepali version of the WHOQOL-BREF questionnaire was used after getting permission from the Mental health division, WHO, Geneva, Switzerland. The scoring was done as per guideline and raw scores of each domain were transformed to 0-100 scale.

The validity of the Part I, Part II, and Part III of the instrument was established by reviewing the related literatures and consultation with research advisor and subject matter experts. Opinion from language experts was taken for comprehensibility and simplicity of the language during Nepali translation. Part IV of the tool, WHOQOL-BREF in Nepali version is available from World Health Organization.

Reliability of tool was ascertained by calculating cronbach's alpha which was 0.918 of 26 items. Pretesting of instrument was done in 10% of estimated study sample in TUTH.

The researcher selected WHOQOL-BREF tool in this study as this tool had been widely used in several developed and developing countries for studying HRQOL of people.

Statistical Analysis

Collected data were edited, classified, coded and then entered into Statistical Package for Social Science (SPSS) version 16. The raw score obtained were transformed into 4-20 score and then to 0-100 score as per the guideline provided by WHOQOL so as to make the valid comparison. Overall quality of life and four domains of WHOQOL-BREF (Physical health, psychological health, social relationship and environment) were

computed using the formula provided by WHOQOL-BREF instruction. Descriptive statistics (frequency, percentage, mean, standard deviation and range) were used to describe the socio-demographic, medical variables, personal behavioral variables and quality of life scores of people with chronic liver disease. After the normality test using the Shapiro-Wilk test, the overall HRQOL test scores were found to be normal (*p* value >0.05 at 95% confidence interval), parametric test such as t test and ANOVA test were used to measure the association of selected variables and health related quality of life. The significance level was set at *p* value <0.05 and 95% of confidence interval.

RESULT

This consists of analysis and interpretation of the data collected from 103 patients with chronic liver disease attending medical OPD, emergency observation unit and inpatient of medical ward, TUTH, Kathmandu. The findings are displayed in tabular form.

Table 1 shows socio-demographic characteristics of the respondents related to age, sex, ethnicity, marital status, literacy status, education level, employment status, type of occupation and economic status. The greatest percentage of respondents (42.71%) was between 40-59 years. The mean age of the respondents was 47.44±14.41 years. About two third of respondents (61.20%) were male. Disadvantaged janajati comprise 34% followed by upper caste group (23.30%) whereas religious minorities occupy only 0.97% of total ethnic group. Majority of the respondents (79.6%) were married and living with spouse. Also, majority of the respondents (71.8%) could read and write and among them 40.5% had informal education and least number of respondents (4.1%) had bachelors and higher level of education.

Almost all of the respondents (94.2%) were employed and among employed, 32.98% of respondents were involved in agriculture. In regard to economic status, about two third of respondents (65%) had family income sufficient for 6-12 months.

TABLE 1: Socio-demographic Characteristics of the Respondents n=103

Socio-demographic Characteristics	Number	Percentage
Age (completed years)		
20-39	32	31.06
40-59	44	42.71
60+	27	26.21
Mean ± SD = 47.44±14.41		
Sex		
Male	63	61.20
Female	40	38.80
Ethnicity		
Disadvantaged janajati	35	33.98
Upper caste group	24	23.30
Disadvantaged non Dalit Terai caste group	17	16.50
Relatively advantaged janajatis	15	14.56
Dalit	11	10.60
Religious minorities	1	0.97
Marital Status		
Unmarried	18	17.47
Married and living with spouse	82	79.61
Widowed	2	1.94
Divorced	1	0.97
Literacy Status		
Cannot read and write	29	28.20
Can read and write	74	71.80
Educational level (n=74)		
Informal education	30	40.50
Primary	11	14.90
Secondary	17	23.00
Higher Secondary	13	17.60
Bachelors and above	3	4.10
Employment status		
Employed	97	94.20
Unemployed	6	5.80
Type of Occupation (n =97)		
Agriculture	32	32.98
Homemaker	23	23.70
Service(Private/Government)	14	14.40
Business	14	14.40
Daily earner/labor	9	9.30
Student	5	5.20
Economic Status		
Family income sufficient for < 6 months	15	14.60
Family income sufficient for 6-12 months	67	65.00
Family income sufficient for 12 months and surplus	21	20.40

TABLE 2: Medical Variables of the Respondents n =103

Medical Variables	Number	Percentage
Care setting		
Inpatient	36	34.95
Outpatient	67	65.04
Duration of disease		
< 3year	90	87.38
≥3year	13	12.62
Comorbid illness		
No	72	69.90
Yes	31	30.09
Type of comorbidities* (n=31)		
Hypertension	22	70.96
Diabetes Mellitus	9	29.03
Asthma	2	6.45
Heart Disease	1	3.22
Kidney Disease	1	3.22

**Multiple Responses*

Table 2 depicts medical variables of the Chronic Liver Diseased Respondents. Nearly two third of the respondents (65.04%) were from inpatient setting. Most of the respondents (87.38%) had less than 3 year of duration of disease. About one third of respondents (30.09) were living with co morbidities other than chronic liver disease and among them 70.96% were suffering from hypertension.

TABLE 3: Personal Behavioral Variables of the Respondents n =103

Personal Behavioral Variables	Number	Percentage
Alcohol Consumption Status		
Current	10	9.7
Former	65	63.1
Never	28	27.2
Frequency of Alcohol Consumption (n=75)		
Daily	60	80.00
4 or more times a week	4	5.30
2 or 3 times a week	7	9.30
2 to 3 times a month	4	5.30
Amount of Alcohol Consumption (n=75)		
< 50 gram	27	36.0
≥ 50 gram	48	64.0
Tobacco Consumption Status		
Current	16	15.50
Former	49	47.60
Never	38	36.90

Table 3 shows the personal behavioral variables of respondents with chronic liver disease. Nearly two third of respondents (63.1%) were former alcohol users and 27.2% never consumed alcohol. Among the alcohol consumers, 80% consumed alcohol on daily basis and 64% consumed ≥ 50 gram. In respect to tobacco consumption, 47.6% of the respondents were former tobacco consumers and 15.5% of the respondents were current tobacco consumers.

TABLE 4: Health related Quality of Life of the Respondents on Different Domains n =103

Dimensions	Minimum Scores	Maximum Scores	Mean± SD
Physical Health	16	77.71	43.78±13.08
Psychological Health	16	74.66	46.65±11.86
Social Relationship	21.33	80	54.67±10.36
Environment	22	74	50.58±10.02
Overall quality of life	16	80	43.26±14.27

The more the score, the better the quality of life.

Table 4 shows the health related quality of life of the respondents in different domains of WHOQOL-BREF. The mean scores on 4 domains of WHOQOL-BREF 26 were as follows: WHOQOL-BREF-physical, 43.78±13.08; WHOQOL-BREF-psychological, 46.65±11.86; WHOQOL-BREF-social, 54.67±10.36; and WHOQOL-BREF-environmental, 50.58±10.02 which signify that high score was obtained in social relationship domain and low in physical domain. Scores on overall quality of life of respondents range from 16 to 80 with Mean± SD as 43.26±14.27.

TABLE 5: Mean Difference of HRQOL Scores in Different Domains and Socio-demographic Characteristics (Age, Sex and Ethnicity) n =103

Socio-demographic Characteristics	N	HRQOL Scores on WHOQOL-BREF Domains Mean ± SD			
		Phy H	Psy H	SR	E
Age of respondents(years)					
20-39	32	48.7±14.9	48.6±13.7	57.3±11.8	52.0±11.2
40-59	44	41.7±12.3	44.8±11.9	53.2±10.4	49.7±9.8
60+	27	41.2±10.4	47.2±8.8	53.9±7.7	50.2±8.9
^F value		3.57	0.99	1.57	0.48
p value		0.03	0.37	0.21	0.61
Sex					
Male	63	44.6±12.8	47.0±11.9	54.8±10.8	50.0±9.3
Female	40	42.4±13.4	46.0±11.2	54.4±9.7	51.4±11.0
#t statistics		0.81	0.39	0.21	-0.65
p value		0.41	0.69	0.82	0.51
Ethnicity					
Brahmin/Chhetri	24	42.9±11.3	46.6±10.8	55.7±7.8	52.33±8.6
Indigenous/Janajati	67	43.4±14.3	45.8±12.5	54.1±11.4	49.4±10.5
Dalit	12	46.6±8.9	51.1±9.6	55.5±8.34	53.1±9.2
^F value		0.34	1.00	0.26	1.16
p value		0.70	0.37	0.76	0.31

Phy H- Physical Health, Psy H- Psychological Health, SR- Social Relationship, E- Environment
p value at <0.05 level, ^ANOVA, #Independent t test, n-number
The more the score, the better the quality of life scores

Table 5 represents the mean difference between age, sex, ethnicity with four domains of WHOQOL-BREF. The scores was found higher in social domain (57.33±11.88) among the age group of 20-39 years compared to other age groups, which was found to be statistically significant in physical dimension (*p* value=0.032) only.

TABLE 6: Mean Difference of HRQOL Scores in Different Domains and Socio-demographic Characteristics (Marital status, Education status and Education level) n =103

Socio-demographic Characteristics	N	HRQOL Scores on WHOQOL-BREF Domains Mean ± SD			
		Phy H	Psy H	SR	E
Marital status					
Unmarried and single	21	49.2±17.2	51.1±13.6	58.9±9.9	54.1±9.1
Married and living with spouse	82	42.7±11.9	45.6±11.4	54.1±10.1	49.8±10.2
#t statistics		1.91	1.75	1.84	1.64
p value		0.05	0.08	0.06	0.10
Education status					
Cannot read and write	29	40.3±10.2	46.4±10.3	54.4±8.1	49.5±9.7
Can read and write	74	45.1±13.8	46.7±12.4	54.7±11.1	50.9±10.1
#t statistics		-1.68	-0.11	-0.14	-0.63
p value		0.09	0.90	0.88	0.53
Educational level (74)					
Upto secondary	58	43.5±13.4	44.9±11.8	54.7±11.1	50.3±10.6
Above secondary	16	50.8±14.1	53.3±12.6	55.0±11.4	53.3±8.1
#t statistics		-1.90	-2.47	-0.90	-1.06
p value		0.06	0.01	0.92	0.29

Phy H- Physical Health, Psy H- Psychological Health, SR- Social Relationship, E- Environment
p value at <0.05 level, #Independent t test, n-number
The more the score, the better the quality of life scores

Table 6 illustrates the mean difference of WHOQOL-BREF domains with marital status, education status and educational level. There was significant mean difference between psychological domain of WHOQOL-BREF and educational level.

TABLE 7: Mean Difference of HRQOL Scores in Different Domains and Socio-demographic Characteristics (Employment status, Occupation and Economic status) n =103

Socio-demographic Characteristics	N	HRQOL Scores on WHOQOL-BREF Domains Mean ± SD			
		Phy H	Psy H	SR	E
Employment Status					
Employed	97	44.0±13.0	46.9±11.8	54.5±10.0	50.5±10.1
Unemployed	6	40.0±14.9	41.77±12.69	56.8±15.3	51.3±8.6
#t statistics		0.72	1.03	-0.53	-0.18
p value		0.46	0.30	0.59	0.85
Occupation(n=97)					
Agriculture	52	40.3±11.2	44.1±10.5	54.2±9.9	49.5±10.1
Service	31	48.6±14.1	52.2±11.9	57.1±7.6	52.1±9.9
Business	14	47.3±13.0	45.7±12.8	49.9±13.6	50.8±10.5
^F value		4.86	4.99	2.59	0.65
p value		0.01	0.00	0.08	0.52
Economic Status (In Months)					
Income sufficient for < 6	15	42.2±15.6	42.4±12.3	55.8±8.0	50.1±12.1
Income sufficient for 6-12	67	42.2±11.8	45.6±10.9	53.6±9.9	49.1±8.7
Income sufficient for ≥12	21	49.8±13.8	52.9±12.4	57.1±12.7	55.3±11.2
^F value		2.94	4.41	1.01	3.14
p value		0.05	0.01	0.36	0.04

Phy H- Physical Health, Psy H- Psychological Health, SR- Social Relationship, E- Environment
p value at <0.05 level, ^ANOVA, #Independent t test, n-number
The more the score, the better the quality of life scores

Table 7 shows the mean difference of WHOQOL-BREF domains and employment status, occupation and duration of food sufficiency. Significant mean difference was seen between physical domain (*p*=0.01), psychological domain (*p*=0.00), and type of occupation. In addition, significant mean difference was obtained between psychological domain (*p*=0.01), environment domain (*p*=0.04) and economic status.

TABLE 8: Mean Difference of HRQOL Scores in Different Domains and Medical Variables n =103

Medical Variables		HRQOL Scores on WHOQOL-BREF Domains			
	N	Mean ± SD			
		Phy H	Psy H	SR	E
Care Setting					
Outpatient	67	45.2±13.6	47.4±12.0	55.7±9.6	51.5±9.4
Inpatient	36	41.0±11.64	45.2±11.5	52.7±11.5	48.7±10.9
#t statistics		1.54	0.87	1.39	1.38
p value		0.12	0.38	0.16	0.16
Duration of disease					
Below 3 years	90	43.1±12.7	46.2±12.1	55.2±10.5	51.2±9.3
Above 3 years	13	42.0±13.8	44.9±13.2	47.6±11.3	46.0±13.4
#t statistics		0.29	0.37	2.51	1.79
p value		0.76	0.70	0.01	0.07
Comorbidities					
Yes	31	41.3±12.3	44.0±11.8	52.9±9.8	49.0±8.6
No	72	44.8±13.4	47.6±11.8	55.3±10.6	51.2±10.6
#t statistics		-1.23	-1.37	-1.04	-1.01
p value		0.21	0.17	0.30	0.31

Phy H- Physical Health, Psy H- Psychological Health, SR- Social Relationship, E- Environment
p value at <0.05 level, #Independent t test, n-number
The more the score, the better the quality of life scores

Table 8 depicts the mean difference between different dimensions of HRQOL and care settings, duration of disease and comorbidities. Significant mean difference was found between duration of disease and social domain of HRQOL (p=0.01).

TABLE 9: Mean Difference of HRQOL Scores in Different Domains and Personal Behavioral Variables n=103

Personal Behavioral Variables		HRQOL Scores on WHOQOL-BREF Domains			
	N	Mean ± SD			
		Phy H	Psy H	SR	E
Alcohol Consumption Status					
Current	10	44.8±11.8	46.6±12.2	51.7±12.8	48.8±10.1
Former	65	40.8±10.9	44.8±9.9	53.2±10.6	49.2±9.4
Never	28	50.2±15.8	50.7±14.9	59.0±7.5	54.4±10.6
^F value		5.61	2.47	3.69	2.94
p value		0.00	0.09	0.02	0.05
Frequency of drinking					
Daily	60	42.2±10.8	45.7±10.2	52.1±11.2	49.6±9.1
4 or more times a week	4	30.2±6.0	36.0±9.1	53.3±9.7	41.5±13.7
2 or 3 times a week	7	42.1±12.2	47.6±9.4	60.1±5.0	48.8±8.2
2 to 3 times a month	4	37.1±11.4	40.6±7.96	53.3±11.5	49.5±12.3
^F value		1.74	1.56	1.15	0.93
p value		0.16	0.20	0.33	0.42
Amount of alcohol consumption					
< 50 gram	26	39.38±9.8	44.6±9.3	52.5±10.5	48.7±9.4
≥ 50 gram	48	42.61±11.7	45.4±10.8	53.5±11.2	49.4±9.7
#t statistics		-1.19	-0.32	-0.38	-0.27
p value		0.23	0.74	0.69	0.78
Tobacco Consumption Status					
Current	16	44.0±12.8	46.8±13.2	52.3±13.9	48.6±11.9
Former	49	41.9±10.5	46.0±10.4	53.6±9.9	49.02±9.1
Never	38	46.0±15.7	47.2±13.1	56.9±8.9	53.4±9.8
^F value		1.07	0.11	1.60	2.49
p value		0.34	0.89	2.49	0.08

Phy H- Physical Health, Psy H- Psychological Health, SR- Social Relationship, E- Environment
p value at <0.05 level, ^ANOVA, #Independent t test, n-number
The more the score, the better the quality of life scores

Table 9 shows the mean difference of alcohol consumption, tobacco consumption with different domains of HRQOL. Significant mean difference was found with physical and social domains of HRQOL i.e. physical (p=0.00) and social (p=0.02), environmental (p=0.017) and alcohol consumption status. However, no significant mean difference was found in present alcohol status, frequency of drinking and HRQOL domains.

DISCUSSION

This descriptive study was conducted to find out the health related quality of life of people with chronic liver

disease. This study also attempted to find out the mean difference of socio-demographic, medical and personal behavior characteristics with health related quality of life of people with chronic liver disease. Study population consists of total 103 respondents, who were diagnosed to have chronic liver disease for at least 6 months. Respondents were approached from gastro-medical OPD, inpatient Annex-II ward of TUTH during the 4 weeks period of data collection. WHOQOL-BREF 26, developed by WHO group, a generic health related quality of life tool was used to collect data on 4 domains to assess the health related quality of life of people with chronic liver disease.

Health Related Quality of life of People with Chronic Liver Disease

The mean scores on 4 dimensions of WHOQOL-BREF 26 were as follows: WHOQOL-BREF-physical, 43.78±13.08; psychological, 46.65±11.86; social, 54.67±10.36; and environmental, 50.58±10.02 which signify that high score was obtained in social relationship domain and low in physical domain and this finding is consistent to finding of study done by Hauser et al., [17] But this study finding contradicts to the result demonstrated by Plianbangchang et al. [8]

Scores on overall quality of life of respondents in present study range from 16 to 80 with mean ± sd as 43.26±14.27. The finding is similar to the mean score of CLD as 47.5 ± 21.9 in a study by Svirtlih et al., [18] but this finding contradicts to the finding in a study by Bagny et al. [19]

Association of HRQOL Scores of Chronic Liver Disease and Selected Variables

HRQOL domains and Socio-demographic Characteristics

In this study, the findings show statistical significance between physical health domain and age of respondents (p=0.032), whereas no statistical significance was observed between psychological health and age (p=0.37) and the finding is similar with the finding of study by Bagny et al., [19] Regarding the social domain and age, no significant association was seen in this study which is in contrast to the finding of Bagny et al., [19] showing significance between social domain and age.

Regarding the association between HRQOL scores in different domains and sex, significant association was not obtained in any domain in this study, i.e physical health (p=0.41), psychological health (p=0.69), social relationship (p=0.82) and environment (p=0.51) which was consistent with Bagny et al., [19] and Ray et al., [20] and contradicts to finding in a study by Youssef. [10] Regarding marital status, respondent's domain score was statistically not significant with the marital status which is supported by the study of Basal et al, [21] Kim et al. [22] and Afendy et al., [2]

In this study, no significant association was found between the HRQOL in all domains and literacy status and this finding contradicts the finding in a study by Youssef. [10] Regarding the association between HRQOL scores in different domains and education level, significant association was not obtained in any domain, i.e. physical health (p=0.112), psychological health (p=0.077), social relationship (p=0.916) and environment (p=0.401). This finding was consistent with Bagny et al., [19] In present study no significant association was observed between HRQOL scores in different domains and employment status i.e. physical (p=0.468), psychological health (p=0.302), social relationship (p=0.593) and environment (p=0.851). This finding was consistent to Afendy et al., [2] Bagny et al., [19] and this finding were in contrast to study by Youssef. [10]

HRQOL domains and Medical Variables

The finding of this study depicts the significant association between social domain and duration of illness (p=0.013). Contrary to this finding, no significant association was reported in a study by Afendy et al., [2] Regarding the relationship between domains of quality of life and comorbidity, there was no statistical significance in any HRQOL domains

(p=0.219, 0.172, 0.300 and 0.312 respectively) and this is similar to finding by Afendy et al., [2] and contradicts to the study by Hussain et al., [23] and Hauser et al. [17]

HRQOL domains and Personal Behavioral Variables

In this study, significant association was found with all domains of HRQOL i.e. physical (p=0.002), psychological (p=0.031), social (0.008), environmental (p=0.017) and alcohol consumption status. This finding was in against with Bagny et al. [19] The significant association was found in environmental domain (p=0.027) and tobacco consumption supporting the study finding by Salama et al., [24]

CONCLUSION

Based on the findings of study the overall health related quality of life of patient with chronic liver disease is below norm (cut off point 50). The highest score is observed in social relationship domain, while lowest score is found in physical domain. Significant mean difference was found between physical health domain and age; physical health, psychological health, environment domain and occupation. Significant mean difference is found with all domains of HRQOL and alcohol consumption status whereas, significant mean difference is found in only environment domain and tobacco consumption status.

This study's findings highlight the critical importance of assessing HRQOL and add value to what is important to healthcare providers by including outcomes from the patients' perspective thus modifying counseling considering the significant factors to improve quality of life.

In this study participants were recruited from single centre due to the limited resources and time available to the researcher. The cross-sectional study design, use of non-probability purposive sampling and sample size being only 103 has confounded the generalization of the finding of this study.

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