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Impact of Chronic Liver Diseases on Specific Health-Related Quality of Life among a Sample in Babylon Governorate

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Abstract

Patients with chronic liver disease experience a variety of symptoms with profound negative impact on health-related quality of life. Also, non-life-threatening symptoms such as fatigue, muscle and joint pain, pruritus, loss of appetite, and digestive problems can hugely decrease their quality of life and well-being. Objective: This study aims to identify most properties of the specific health related quality of life in patients suffering from (CLDs), and in order to find out the relationships among an overall evaluation of specific health related quality of life in patients with (CLDs) with some associated variables. They include but not limited to [sociodemographic characteristics]. A cross sectional study design was performed at the Gastrointestinal and Liver Diseases center in Babylon governorate, including 133 participants collected from 2nd January 2022 to 4th April 2022. There is a clear discrepancy in the level of responses for the studied domains, Specific quality of life for patients studied assigned that observed responses are mostly moderate, and they are accounted 15 (55.17%), and items of having a high-level evaluation accounted 11 (37.93%), and leftover items by having a low evaluation are accounted 2 (6.90%). According to this research findings, patients with (CLDs) have to go down regarding specific quality of life, since most studied items are accounted a moderate responding. The necessity to carry out similar further large-scale studies in different Iraqi regions in order to identify aspects of excellence and regression that progress and slow in the light of which the results of evaluating the health status related to the specific quality of life for (CLDs) patients.

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Keywords: Chronic liver diseases (CLDs); Specific health related quality of life (SHR-QoL); Babylon.

1. Introduction

Chronic liver disease includes a broad range of injuries to the liver, including inflammation, necrosis, fibrosis, and carcinogenesis [1]. There are many different reasons of chronic liver disease; however, the most common reasons for chronic liver disease globally are alcohol and non-alcoholic fatty liver disease, as well as chronic hepatitis C and B, [2]. The liver is an indication of a person's health in many ways, and it should be prioritized in global public health policies. According to current estimates, 844 million individuals worldwide suffer from the chronic liver diseases, with a yearly mortality of two million fatalities [3]. Quality of Life has recently gained prominence in the clinical care of patients. Impact of healthcare intervention on a patient's daily life, instead of just their health, is being increasingly recognized [4]. Liver disease is becoming a more well recognized cause of chronic illness across the world due to the burden of its epidemiology, possible influence on patients' health, and their health-related quality of life. The consequences of nonalcoholic fatty liver diseases and chronic viral hepatitis is enormous, and many of individuals die as a result of the complications of CLD and cirrhosis. CLD is associated with significant morbidity in addition to its influence on mortality, which has a detrimental influence on patients' specific HR-QoL [5]. Though the relevance of this study stems from the fact that the severity of CLD is usually considered a significant prognostic factor by clinicians, previous research has indicated that the severity of CLD has an influence on patients' specific HR-QoL, having an impact on both physical and psychological factors, for these reasons the researcher wanted to evaluate the impact of various associations in people's daily lives with chronic liver disease, as well as for developing instruments for studying phenomena.

1.1. Study aims

- To identify most properties of the specific HR-QoL in patients who suffers from chronic liver diseases.
- To detect the relations between an overall evaluation of specific HR-QoL in patients with chronic liver diseases with some related variables, such as (sociodemographic characteristics).

Nomenclature			
HR-QoL	Health Related Quality of Life	CLDQ	Chronic Liver Disease Questionnaire
QoL	Quality of Life	SDCv	Socio-Demographic Characteristic variables
SES	Socio-Economic Status	SD	Standard Deviation
C.S.	Comparison Significant	SPSS	Statistical Package for the Social Sciences

2. Patients and Methods

A cross sectional study design for patients with chronic liver diseases was conducted starting between [2nd January 2022 to 4th April 2022] in Martyr Dr. Majid Hassan Al-Jubouri Center for Gastrointestinal and Liver Diseases in Babylon governorate. A convenient sample of 133 patient with chronic liver diseases who have received diagnosis and treatments from hepatologist in Digestive and Liver Center in Babylon in Iraq where they admitted for treatment or other investigations. This questionnaire is a disease specific HR-QoL and developed to measure one or more dimensions of health-related quality of life. The instrument was constructed through a questionnaire that was prepared after a review of the available literature. This instrument was created by Yonossi in 1999 to assess the quality of life of patients with chronic liver diseases [6]. It is composed of 6 domains: Abdominal Symptoms, Systemic Symptoms, Activity, Fatigue, Emotional Function, and Worry. The CLDQ is a disease specific HR-QoL questionnaire made up of 29 questions evaluated on a 3-point Likert scale wherein varying answers include 'All of the time' to 'none of the time'.

2.1. Inclusion and Exclusion criteria

Table 1 Inclusion and Exclusion criteria

Inclusion	Exclusion criteria
▪ Patients who live in Babylon Governorate.	▪ Patients who live outside Babylon governorate.
▪ Had an established diagnosis of chronic liver diseases, at least after six months of diagnosis, were at least 18 years of age.	▪ Patients aged less than 18 years old and pregnant women.
▪ Oriented and able to communicate verbally.	▪ Patients had a malignancy, liver transplantation, HIV, psychiatric disorders (based on prescribed medications).
▪ Completed scan and other investigations dependent to provide the medical diagnosis of any type of chronic liver diseases.	▪ Language or cognitive difficulties that prevented reliable completion of the questionnaire.

3. Statistical Data Analysis

Data entry and data analysis were carried out by using SPSS version (22.0). Tables including [Frequencies, and Percentages]. Standard Deviation and Mean. Summary Statistics include the following: Standard Deviation, Mean of score, Relative Sufficiency, Pooled Standard Deviation and Percentile Grand/or Global Mean of Score. In addition to that, scoring scales for studying specific HR-QoL of patients with CLD's diseases concerning three ordinal scales [None of the time, Some time, and All of the time] of integer numbers [1, 2, 3] of sampling zero respectively.

4. Result

Respect to subjects of study [SDCv.], Table 2 shows that males account to 72 individuals (54.1%). Age groups show that most studied patients were recorded with more than 40 years old, and they account to 99 individual (74.4%), and the mean of age, as well as the standard deviation are estimated to be 49.16 and 15.81 years. respectively, and 95 (71.4%) of the sample are wedded. More than half of the studied subjects were recorded, their educational levels at the primary school or less, and they were accounted 74 (55.6%), and the majority of them have unskilled workers, and they were calculated 120 (90.2%), finally urban residency is accounted 81 (60.9%) of the study sample.
Regarding SES, the vast majority of the studied sample had at low, and moderate level, and they are accounted cumulative percent 127 [95.5%].

Table 2 Distribution of the studied sample according to Socio-Demographic characteristics. [N=133]

SDCv.	Categories	No.	%
Gender	Male	72	54.1
	Female	61	45.9
Age Groups yrs.	< 20	7	5.3
	20 _ 29	10	7.5
	30 _ 39	17	12.8
	40 _ 49	27	20.3
	50 _ 59	32	24.1
	60 _ 69	30	22.6
	70 >	10	7.5
	Mean ± SD	49.16 ± 15.81	
Marital Status	Married	95	71.4
	Single	30	22.6
	Divorced	1	0.8

	Widow	7	5.3
Education level	Illiterate	20	15
	Read & Write	21	15.8
	Primary	33	24.8
	Intermediate	28	21.1
	Secondary	18	13.5
	College & More	13	9.8
Occupation	Highly professional	2	1.5
	Lower professionals	11	8.3
	Unskilled workers	120	90.2
Residency	Urban	81	60.9
	Rural	52	39.1
SES	< 60 [Low[	94	70.7
	60-80 [Moderate[	33	24.8
	> 80 [High[	6	4.5
	Total	133	100

No: number of patients, %: percentage, SD: standard deviation.

Table 3 shows summary statistics, such that, pooled standard deviation and percentile grand mean of score, as well as different responding grades of evaluating main domains for specific HR-QoL by percentile transform score by three differentiated categories' levels, like that [Low, Moderate, and High] according to [[0.00 – 33.33], [33.34 – 66.66], [66.67 – 100]] intervals respectively, which consists of [Abdominal Symptoms, Fatigue, Systemic Symptoms, Activity, Emotional Function, and Worry] main domains.
Regarding to subjects of study main domains, results show that a moderate to high evaluation are accounted for the studied patients with CLD, as well as an overall evaluation scored a moderate rating level close to the high level.

Table 3 Summary Statistics of Percentile Score Specific HR-QoL main domains in the studied patients [N=133]

Main Domains	No.	Min.	Max.	PGMS	PSD	Ev.
Abdominal Symptoms	133	0	100	52.13	30.39	M
Fatigue	133	0	100	67.74	25.54	H
Systemic Symptoms	133	0	90	41.20	18.51	L
Activity	133	0	100	70.30	32.78	H
Emotional Function	133	0	100	61.37	24.88	M
Worry	133	0	100	66.17	27.79	M
Overall Scale	133	14.31	93.33	59.82	15.07	M

PSD: Pooled Standard deviation; PGMS: Percentile Grand Mean of Score and Ev.: Evaluation

To detect relations amongst an overall evaluation of specific – health related quality of life with regard to CLDs patient in light of their [Socio-Demographic Characteristic variables-[SDCv.]] in Table 4 consist a contingency coefficient and their significant levels.
Findings show that weak relations are accounted by redistribution of overall specific health related quality of life of patients with CLD and their [SDCv.] at P>0.05, except of age groups, since significant different are accounted at P<0.05 by increasing number of patients with high evaluated negative impact on health quality of life with increasing of age.

Table 4 Relationships among Specific HR-QoL patients with CLD's diseases Patients in light of [SDCv.] [N=133]

SDCv.	Relationships	
	C.C.	P-value
Gender	0.138	0.109 [NS]
Age Groups	0.296	0.047 S
Marital Status	0.151	0.373 [NS]
Education	0.176	0.517 [NS]
Occupation	0.146	0.236 [NS]
Residency	0.024	0.782 [NS]
Socio-Economic Status	0.041	0.892 [NS]

[*] S: Sig. at P<0.05; NS: No Sig. at P>0.05; Statistical hypothesis based on Contingency's Coefficient test.

5. Discussion

According to the conducted study, chronic liver diseases appeared in a very close to equal percentage in males and females, where the percentage of males was 54.1% and the percentage of females was 45.9%, this can be the result of an equal presence of men and women at "Martyr Dr. Majid Hassan Al-Jubouri Center for Gastrointestinal and Liver Diseases", where a sample was collected. The study sample's predominant age

range is between (50-69) years old, this result was in agreement with the finding of the study done in Egypt [7], which stated that with a percentage of 46%, patients between the ages of 50 and 60 made up the majority. Male to female ratio was almost equal.

Seventy-one of the studied samples were married, and these results agree with the findings of other study conducted at Egypt by [8], which reports that, most of their samples were married to assess the Quality of life among patients with CLDs. And another study consistent with our study by [9], where the highest percentage of the sample are married.

As for the educational level, most of the studied samples were primary study. As a result of the tragic political events, such a result is a normal one for our society, which the country had passed. This outcome conflicts with the research's findings conducted in Brazil [10] which demonstrated that the largest proportion of education in the study sample was had primary school education only. So, unawareness of low educational levels may result in exposure to some of chronic liver disease at any moment because they are unable to accurately determine when they require counselling or medical attention. Also, this result was compatible with study conducted in Malaysia [11], that show most of the study subjects were lower educational levels.

Results in relation to employment indicate that the highest percentage of the research sample are non-occupied and retired, this result is consistent with research from Egypt by [12] where they find that the highest percentage of their study samples regarding employment in terms of current professional status were retired and non-occupied.

Regarding residency the findings indicate that more than half of a study sample are live in the urban area. This study is not compatible with the study conducted by [13], which observed that the greatest percentage of residency of their study sample living in rural area, this can be explained by the high attendance of patients who were from urban areas during the study period.

Regarding subjects of that specific "Health Related-QoL" for patients with CLD's diseases, Specific HR-QoL for the studied patients showed that the majority of the observed answers are moderate, and they are accounted (55.17%), and items of having a high-level evaluation accounted (37.93%), these finding showed agreement with a study done in 2021 in Egypt which found that most of responses are moderately (55.1%) [8].

With respect to subject of several domains, Abdominal Symptoms scale showed that the overall response for this domain was moderate in the present study. This result is agreed with study done in Egypt by [7], which revealed also Abdominal Symptoms was moderately affected by CLDs.

Regarding the systemic symptoms domain, the results of this study showed that the evaluation of the patient's response was low in this domain. This result is in agreement with a study done in Egypt by [7].

Regarding the fatigue domain, the present study findings shows that a large proportion of patients were suffering from fatigue. This result is agreed with the findings of study conducted in Pakistan by [14], which shows that fatigue has an effect on QOL.

With respect to subject activity domain, our study showed that highly affected the patient's quality of life, this result is comparable with a study done in Pakistan by [15], which was revealed that the activity domain in their study was the most affected domain by CLDs on their health-related quality of life.

In relation to the worry domain, the study result indicate that the worry has moderately effect on quality of life for CLD patients, this result is agreed with the findings of a previous study conducted in Brazil by [16].

The emotional function domain in the current study is moderately effect on the health-related quality of life for CLD patients, these results disagree with a finding of the study done in Egypt by [7] that found lower effect of the emotional function on the specific quality of life for CLDs patients.

Results indicate that overall specific health related quality of life redistribution (under/upper) a cutoff point of percentile scoring scale that sociodemographic variables, reported significant relationships are accounted by redistribution of overall specific HR-QoL of patients with CLD's diseases and their age groups. This finding is comparable with previous study done in Togo by [17]. And another study is in agreement with our study done in Canada [18].

Also, these results show that occupation, gender and level of education did not influence on specific HR-QoL in our research. These results are comparable to study conducted in spain by [19], study done in Serbia by [20], and study done in India by [21].

Regarding the association between HR-QoL scores and marital status, results show that was statistically not significant, which is supported by the study done in Nepal by [22], study done by [23], and study done in south korea by [24].

The findings of this investigation found no significant correlation between specific HR-QoL and the education status, this finding correspond with the study done in Nepal by [22].

In current study, there was no significant correlation between specific HR-QoL scores and the occupation. This finding showed consistent to study done in India by [21]. Also, another study is agreed with our result by [17].

6. Conclusion

This study evidenced that patient with CLDs have to go down regarding with specific HR-QoL, since most studied items are accounted a moderate responding. In addition, [SDCv.] reported significant relationships with overall specific HR-QoL of patients with CLD's diseases, except with marital status, education, residency, occupation, and gender.

7. Recommendation

Establishing an educational program to enhance the patient's quality of life who suffer from chronic liver disease. As well as early assessment of the key components of specific health related quality of life early in disease course will aid in identifying high-risk individuals in whom modifying these predictors may help in providing active and healthy life for patients with chronic liver diseases. The necessity to carry out similar further large-scale studies in different Iraqi regions in order to identify aspects of excellence and regression that progress and slow in the light of which the results of evaluating the health status related to the specific quality of life for CLDs patients. The need for further studies to assess the influence of [comorbidity, type of disease and duration of disease] variables on specific HR-QoL of CLD's patients and this would help to better improve morbidity and mortality associated with low specific HR-QoL.

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