

Psychological Aspects Among Patients with Chronic Liver Disease in Al-Najaf Gastroenterology and Hepatology Center

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Abstract:

Chronic liver disease deteriorates the physical health of the patient and deprives his/her family's comfort and consumption of that society's balance of medicines and other health services and thus constitutes an economic burden on that country, the psychological problems that negatively affect multiple aspects of patients because of anxiety and potential concerns due to the nature of the spread of the disease (if viruses), treatments and periodic examination of lifelong and complications. In addition, Psychological distress one of the leading causes of disability in the adult population especially in chronic diseases, and expected to become the second leading cause of disability in all age groups by 2020. The aim of this study is to highlight on chronic liver patients in AL-Najaf AL-Ashraf province, and the suffering of these patients by psychological aspects that contribute one way or another to aggravate their morbidity and whether there are demographic variables associated with these aspects. A descriptive cross-sectional study design was carried out, so as to attain the stated objectives for patients with chronic liver disease in AL-Najaf Gastroenterology and Hepatology Center, located in the Medical Al-Sadr City. During the period from 1st November 2016 to 16th June 2017. The sampling chosen by non-probable (purposive) of 150 patients (exclusive (8) uncomplete questionnaire data) with chronic liver disease (duration of illnesses 6 months or more), adults ≥ 18 years only. The questionnaire consists of two parts socio-demographic with clinical data (18 items) and general health questionnaire (28 items). The study reveals that there is a highly significant relationship between the patients (psychological aspects) and their (age $P=0.001$, occupational status $p=0.001$, Daily activity $p=0.000$, BMI $P=0.000$, Duration of disease $p=0.001$). And significant in relation with (Type of disease $p=0.01$ Gender $p=0.021$, Educational level $p=0.04$, marital status $p=0.049$). while there is no significant the remaining of demographic and clinical data. In conclusion, there are relationships between psychological aspects of CLD patients and their socio-demographic data. So the study recommends, assist individuals in overcoming psychological distress and adjusting to their diseases diagnosis with treatment adherence. also, minimize distressing somatic symptoms secondary to comorbid medical conditions. Also teach patients about how to solve-problems related to the disease and its complications such as chronic pain, Cognitive Behavioral Therapy for self-monitoring and Insomnia, approaches for headache/back pain and others.

Key words: Al-Najaf Gastroenterology and Hepatology Center, Chronic liver disease, GHQ-28, Psychological aspects.

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1. INTRODUCTION

CHRONIC liver disease deteriorates the physical health of the patient and deprives his/her family's comfort and consumption of that society's balance of medicines and other health services and thus constitutes an economic burden on that country, there are other aspects more complex and the exacerbation of the disease, the psychological problems that negatively affect multiple aspects of patients because of anxiety and potential concerns due to the nature of the spread of the disease (if viruses), treatments and periodic examination of lifelong and complications. In addition, Psychological distress one of the leading causes of disability in the adult population especially in chronic disease patients, and expected to become the second leading cause of disability in all age groups by

2020. Furthermore, it has been pointed out that this illness as one of the most common clinical indicators in a broad assortment of different diseases ⁽¹⁾.

Chronic liver disease is growing annually and increases the mortality and morbidity in the world. It is also a complex disease that determines of the human effective especially in middle ages patients. In the last decade, the number of people with this disease has increased, about 500 million people are infected with this disease around the world because of viral infections only, and the number is even higher when we add the rest of the causes such as fatty liver, alcohol, immune diseases, cryptogenic and metabolic disorders.

CLD has a negative effect on health aspects since patients usually existing; loss of appetite, indisposition, asthenia, abdominal pain or discomfort, muscle weakness, joint pain, insomnia, and other complications related to chronic liver disease or cirrhosis, e.g. recurrent bleeding in the esophagus and stomach to variceal reason, ascites, and HE hepatic encephalopathy. Moreover, chronic liver disease is related to impaired job performance, mood swings, impaired functioning, low self-esteem, anxiety, depression, and other psychological or emotional problems that mainly effect mental health and well-being ⁽²⁾.

CLD may lead to the syndrome of hepatic encephalopathy (HE) or portal-systemic shunting (PSS). The HE is a complication of hepatocellular malfunction associated with a changeable degree of shunting through portal-systemic venous. In theory, HE may occur as a result synthesis by the failing liver of encephalopathogenic materials or their precursors, reduction synthesis by the failure liver of substances essential for normal brain function; and/or reduced extraction or metabolism by the failing liver of encephalopathogenic materials or their precursors⁽³⁾.

The impression for psychological aspects is correlation to multi-dimensions and interaction, particularly related to chronic disease, many factors as well as affective status, sex, low economic, educational level, comorbidity of liver disease underlying, complication, severity of disease and period of life expectation, possibly will be in the lead to a decreased mental health in long-term diseases. CLD has numerous forms which influence different facets of mental health. Fewer studies have stayed supported the impact of CLD on individual health as a whole ⁽⁴⁾.

Numerous of clinical illnesses lead to impairments in cognitive performance that cannot be attached to a lesion of the focal brain, and liver disease is one of these illnesses. The liver plays an important role in eliminating toxins from the blood, as materials that are neurotoxic. When the liver becomes an injured, inflamed, scarred and cirrhotic, some of the blood mixes with the toxins incoming to the liver through the portal vein cannot infiltrate the damaged liver ⁽⁵⁾.

There is a question that needs an answer; is the patient's psychological issue because of disease activity within the central nervous system? or is psychological issue secondary to social dysfunction, stigma, functional impairments or the inevitable concerns relating to long-duration prognosis? Probably the factors include severity of disease and loss in future expectations and poor psychological resources can play to increase psychological distress in chronic illnesses people, but still need to be verified. A numeral of conclusions recommends that individuals with a chronic liver disease are vulnerable to psychological trouble such as depression, anxiety, OCD and others ⁽⁶⁾.

Objectives of the study:

- To assess psychological aspects among patients with the chronic liver disease.
- To find out the relationship between psychological aspects of CLD patients and their socio-demographic and clinical characteristics.

2. Materials and Methods:

A descriptive cross-sectional study design was carried out, so as to attain the stated objectives, during the period from 1st November 2016 to 16th July 2017.

Study setting:

The study was conducted in AL-Najaf province, AL-Najaf AL-Ashraf Health Directorate, AL-Sadder Medical City, at AL-Najaf Gastroenterology and Hepatology Center.

Study sample: Non-probability (purposive sample) of (150 excluded 8 uncomplete data filling) chronic liver disease patients those who attended at the Center, are included in the study. **Criteria inclusion:**

- Chronic liver patients diagnosed by specialists and non-doubtful.
- Patients who have continued their illness for six months or more.
- The sample is only for those attending the center above.
- Conscious and aware.
- Patients aged 18 years or more.

Criteria exclusion:

- Those suffering from other highly advanced diseases such as cancer, kidney failure heart failure and others.
- Advanced liver disease.
- People who are suffer from a mental illness.
- People who are ready for endoscopy or biopsy.

The instrument of the study:

An assessment tool was adopted by the investigator to measure the impact of the chronic disease upon psychological well-being. The investigator translated the scales General Health Questionnaire 28, from English to Arabic. Translation validity was achieved through the process of forwarding and backward translation, then forwarded to the experts to be reviewed by the translation experts. The investigator obtained both copies in English and Arabic and used them directly after simple modification. The final study instrument consisted of two parts: Part I: Included two section: The first section included socio- demographic characteristics sheet consisted of 10 items, included age, gender, residence, marital status, children, socioeconomic status, educational level, family size, occupation, and the level of daily activity. The second section contained the clinical characteristics sheet consisted of 8 items including smoking, BMI, alcohol, disease type, duration of disease, reasons of injury, other physical diseases, psychological disease, and sedatives abuse.

Part II: The Psychological Screening Instruments: The general health questionnaire (GHQ-28) was highly used to assess the psychological distress among patients with chronic diseases and non-psychiatric clinical. The GHQ-28 was produced by Goldberg in 1978 (Goldberg 1978) and has since then been converted into 38 languages. It was developed as a screening instrument to distinguish those liable to have or to be at risk of a psychological issues, the GHQ-28 is a 28-questions measure the feeling in medical studies and setting. The questionnaire was modified and developed according to language, culture and understanding in a simple way. For example, question 27 Do you wish to be dead and away from everything? Modified the answer to (Not at all, think sometimes, think a lot, think constantly). Through element investigation, the GHQ-28 has been partitioned into four sub-scales. It takes under 5-7 minutes to finish⁽⁷⁾⁽⁸⁾.

It contains the necessary aspects to examine the psychological state of this group of people, compared to other questionnaires, it is considered short and easy to the patients and burdens of their disease. It consists of four domains including: the first seven items 1-7 screening the somatization e.g. (Having hot or cold spells), the second seven items 8-14 screening the insomnia and anxiety e.g. (Lost much sleep over worry), the third seven items 15-21 screening the social dysfunction e.g. (Felt capable of making decisions about things), and the last seven items 22-28 screening severe depression e.g. (Felt that life is entirely hopeless). The data were analysed with descriptive statistics, cut off point symptomatic (mean 2.5 and more), asymptomatic (mean less than 2.5), significance was set at $p < 0.05$ and CI confidence interval estimated at the 95% level. This instrument is structured based on previous studies some of these studies was conducted by Saja H. & Ali K. (2011) and Tuhafy *et al.*, (2013) ⁽⁹⁾.

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• The Results:

Table (1) study sample with socio-demographic data and distribution of the study sample (N = 142):

Demographic data	Rating and intervals	Freq.	%
Age / years	18-35	57	40.1
	36-50	50	35.2

	51-64	28	19.7
	65 and more	7	4.9
Gender	Male	80	56.3
	Female	62	43.7
Residency	Urban	104	73.2
	Rural	38	26.8
Marital status	Single	30	21.1
	Married	99	69.7
	Divorced	5	3.5
	Widowed	8	5.6
Do you have Children	No	36	25.4
	1-2	21	14.8
	3-4	53	37.3
	5 and more	32	22.5
Economic status Monthly income	Enough	19	13.4
	Enough to what limit	82	57.7
	Not enough	41	28.9
Educational levels	Illiterate	12	8.5
	Able to read	6	4.2
	Able to read and write	20	14.1
	Primary school	38	26.8
	Intermediate school	22	15.5
	Secondary school	19	13.4
	Institute or college	25	17.6
Number of Family member	1-2	1	0.7
	3-4	21	14.8
	5-9	87	61.3
	10-15	26	18.3
	16 and more	7	4.9
Occupation	Employee	80	56.3
Levels of Daily Activity	Setting (long-standing)	1	0.7
	Mild activity	15	10.6
	Moderate activity	67	47.2
	High activity	59	41.5

Table (2) Study Sample with Clinical Data:

Clinical data	Rating and intervals	Freq.	%
Smoking	Yes	5	3.5
	N	137	96.5

BMI	Underweight	17	12
	Normal weight	112	78.9
	Overweight	13	9.2
Alcohol	No	142	100
Disease Type	HBV with cirrhosis	11	7.7
	HBV without cirrhosis	63	44.4
	HCV with cirrhosis	13	9.2
	HCV without cirrhosis	42	29.6
	Carcinoma	3	2.1
	Autoimmune	7	4.9
	Cryptogenic	3	2.1
Duration of disease	Less than one year	57	40.1
	1-> 2	50	35.2
	2-> 3	21	14.8
	3 and more	14	9.9
Reason/s of injury	I don't know	102	71.8
	Blood transfusion	26	18.3
	Wounds or injections	13	9.2
	Sexual intercourse	1	0.7
Do you suffer from Physical Diseases	No	101	71.1
	Hypertension	19	13.4
	DM	11	7.7
	Renal failure	5	3.5
	Heart failure	1	0.7
	Others:2 HT&DM 2 GIT ulcerative 1 Asthma	5	3.5
Psychological Disease	No	142	100
Sedative	No	142	100

Table (3) assessment of Patients' overall responses to the psychological aspects:

Assessment of the Overall psychological aspects	Levels	Frequency	Percent	Mean	Assessment
	Symptomatic	80	56.3	2.56	Symptomatic
	Asymptomatic	62	43.7		
	Total	142	100		

Symptomatic (mean 2.5 and more), asymptomatic (mean less than 2.5).

Figure 1 assessment of CLD Patients' overall responses to the psychological aspects.

Table (4) assessment of Patients' overall responses to the physical domain items:

Physical Domain	Levels	Frequency	Percent	Mean	Assessment
	Symptomatic	101	71.1	2.71	Symptomatic
	Asymptomatic	41	28.9		
	Total	142	100		

Symptomatic (mean 2.5 and more), asymptomatic (mean less than 2.5).

Table (5) assessment of CLD Patients' overall responses to the anxiety and insomnia domain items:

Anxiety and Insomnia Domain	Levels	Frequency	Percent	Mean	Assessment
	Symptomatic	84	59.2	2.62	Symptomatic
	Asymptomatic	58	40.8		
	Total	142	100		

Symptomatic (mean 2.5 and more), asymptomatic (mean less than 2.5)

Table (6) assessment of CLD Patients' overall responses to the social failure domain items:

Social Failure Domain	Levels	Frequency	Percent	Mean	Assessment
	Symptomatic	85	59.9	2.69	Symptomatic
	Asymptomatic	57	40.1		
	Total	142	100		

Symptomatic (mean 2.5 and more), asymptomatic (mean less than 2.5)

Table (7) assessment of Patients' overall responses to the depression domain items:

Depression Domain	Levels	Frequency	Percent	Mean	Assessment
	Symptomatic	56	39.4	2.39	Asymptomatic
	Asymptomatic	86	60.6		
	Total	142	100		

Symptomatic (mean 2.5 and more), asymptomatic (mean less than 2.5)

Table (8) correlation between the CLD patients' physical status and their psychological aspects:

Studied domains	Statistical parameters	physical	Anxiety and insomnia	Social failure	Depression	Overall psychological status
Physical	Pearson Correlation	1	0.661	0.658	0.579	0.731

	Sig. (2-tailed)		0.001	0.001	0.001	0.001
Anxiety and insomnia	Pearson Correlation	0.661	1	0.628	0.628	0.889
	Sig. (2-tailed)	0.001		0.001	0.001	0.001
Social failure	Pearson Correlation	0.658	.628	1	0.585	0.827
	Sig. (2-tailed)	0.001	0.001		0.001	0.001
Depression	Pearson Correlation	0.579	0.628	0.585	1	0.865
	Sig. (2-tailed)	0.001	0.001	0.001		0.001
Overall psychological status	Pearson Correlation	0.731	0.889	0.827	0.865	1
	Sig. (2-tailed)	0.001	0.001	0.001	0.001	

Non-significant at p-value > 0.05; S, significant at p-value less < 0.05; HS, highly significant at p-value ≤ 0.01

Table (9) relationship between the patients' psychological aspects and their demographic and clinical data:

Demographic and clinical data	Chi-square Value	def.	P-value
Age / years	15.702	3	0.001 HS
Gender	5.348	1	0.021 S
Residency	.847	1	0.357 NS
Marital status	7.839	3	0.049 S
Number of children	2.217	3	0.529 NS
Economic status	6.948	2	0.084 NS
Educational levels	19.303	6	0.04 S
occupational status	11.452	1	0.001 HS
Daily activity	21.486	3	0.000 HS
Smoking	4.436	1	0.61 NS
BMI	32.052	2	0.000 HS
Disease type	13.341	6	0.010 S
Duration of disease	17.611	3	0.001 HS
Reason of disease	6.805	3	0.078 NS
Other Physical diseases	2.136	3	0.545 NS

Non-significant at p-value > 0.05; S, significant at p-value < 0.05; HS, highly significant at p-value < 0.01.

Table 1 shows that most of the study subjects were prime of age (40.1%), and under 50 years. The majority of study sample is (75.3%). regarding gender, male is more than female 80:62. Majority of study subjects sample are living in urban region 104 (73%). Marital status of subjects is married (69.7%). (74%) of the study sample participant had children.

Concerning the monthly income (57.7%) is enough to some limit while (28.9%) is not enough. The result of study with educational level revealed that (38%) represents primary school while (17.6%) college or institute. In addition, the study revealed most family number (5-9) are (61.3%). The result of study regarding occupation status is (56.3%) employee. In addition, most study sample is moderate activity (47.2%) in regarding to daily activity.

Table 2 shows that the majority of participants are no smoking (96.5%). The result of study sample at (78.9%) is normal regarding BMI. All study sample subjects are no alcohol drinking. Concerning type of diseases, the result reveals more than half are HBV (52.1%), cirrhosis patients are 7.7% and 9.2% due to HBV and HCV respectively. While the same percentage (2.1%) for carcinoma and cryptogenic. Regarding duration of diseases, the majority is less than one year (40.1%). Regarding reason/s of diseases the study shows that the most of I don't know is (71.8%). In addition, the result of study sample reveals that

the majority for subjects of study sample are not suffering from other physical disease (71.1%). No psychiatric disease no drugs abuse was shown by data of study.

Table 3 and figure 1 shows that the CLD patient's overall responses are significant (symptomatic) relationship with psychological distress.

Table 4 represents responses of overall to the physical domain, it is noted that the response rate is high and represents (71%) symptomatic that means clear signs of physical disease.

Table 5 show the study result of patients' overall responses to anxiety and insomnia domain are symptomatic of psychological caseness.

Table 6 revealing the patients' overall responses with social failure domain are symptomatic.

Table 7 reveals that it is asymptomatic with depression domain for patients' assessment overall.

Table 8 shows Pearson correlation ($-1 \leq r \leq 1$) between patients' physical status and their psychological aspects. There is significant correlation between them, with anxiety and insomnia (0.661), social failure 0.658, with severe depression domain (0.579), in overall Pearson correlation is highly significant in physical domain (0.731) and (0.889), (0.827), (0.865) for other domains respectively. P-value for all domains above are high significant (<0.01).

Table 9 reveals that there is a highly significant relationship between the patients (psychological aspects) and their (age P-value 0.001, occupational status p-value 0.001, Daily activity p-value 0.000, BMI P=0.000, Duration of disease p-value 0.001). and significant in relation to (Gender p-value 0.021, Educational level p-value 0.04, marital status p-value 0.049, type of disease p-value 0.01). while there is no significant remaining of demographic and clinical data.

• Discussion:

Part I: Discussion of the demographic data related to the CLD patients:

As for the age of the study participants, the results showed that the largest age is group between 18-35 (40.1%) followed by a group between 36-50 (35.2%). Most of the sample is under 50 years of age (75%), this result is reinforced by other studies, e.g. Chunzi Liu, et al (2015) and Hajarizadeh, et al (2016), the results of their study are that the predominant age of the study sample is 43.87 ± 13.31 years and 45 years respectively, also in our nation Alsamarai A. Ghane et al (2016) the mean of age was 26.7 ± 4.9 this can lead to the fact that the average age of the chronic liver disease in young and middle age of infected patients, compared to the rest of chronic diseases that are in the final stages of life, for example, atherosclerosis, blood pressure, strokes ⁽¹⁰⁾⁽¹¹⁾⁽¹⁾.

Regarding the gender, the result reveals that the male is more than female (56%) vs (44%), as demonstrated by some researches and participants study chronic liver disease such as Popovic, et al, (2015) and Perkins (2007), male was (56%) and, Boscarino et al, (2016) was male (57%) for each sample. This finding could lead us to the fact that men are more likely than women to develop the chronic disease (chronic liver disease) in this region. In this fact, the male is more exposed for injury and diseases especially with low socio-economic due to heavy, long duration, more energy spent and lack of addressing with some of task and more disasters trauma ⁽¹²⁾⁽¹³⁾⁽¹⁴⁾.

Some of studies (Souza et al., 2015) discovered that CHCV was significantly more stressful life events and anxiety that correlated with demographic of patient such as loss of source of income, divorce, or unemployed, the authors recommended and suggested that pre- and post- test psychosocial support and counselling would help to reduce the stress and anxiety associated with chronic hepatitis C diagnosis ⁽²⁾.

The results also showed that most of the people involved are from urban region (73.2%) and supported the results of several studies in the same field, for example, Goyal, Sidhu, and Kishore, (2017). This finding indicates that chronic liver disease is a modern disease and spreads in urban region because of the ease of movement of people from one place to another and the density of people exposed in the same area with infected people ⁽¹⁵⁾.

The results also revealed that most of the study subjects are married (70%), and followed by single (21%) then divorced and widowed 9%. This result of the study is consistent with some other studies e. g. Batista-Neves et al. (2009). Also, the present findings indicate that 37% of the study sample has 3-4 children while 25% have no children ⁽¹⁶⁾.

Our finding regarding economic status shows that most of the subjects are enough to some limit 58% while the following are not enough 29%, this result agrees with some studies Gitto et al., (2016) and Alsamarai et al, (2016) a rise indicate with low socioeconomic levels which may influence the availability of resources. This indicates that most of the infections of this disease among middle and poor income families, which may be more susceptible to diseases because of the demand for living and facing the difficulties of life. The opposite if a funding the patients and their families may increase health improvement and have less complications, this result arrived at by some researchers e.g. Younossi, Bireddinc and Henry ⁽¹¹⁾⁽¹⁷⁾.

Concerning to educational level the higher occurrence percentage is in primary school 27% and total under the primary school also 27% that means most of the subjects' study is 54% primary school or under. This result agrees with Al-taie, Ali, and Hasan (2014), and the same result of Hajarizadeh et al. (2016), that suggested the prevalence of chronic liver disease at low educational level or illiterates ⁽¹⁰⁾⁽¹⁸⁾.

Most of the study result regarding family size is 5-9 (61%). This result agrees with another study that indicates unplanning family size more psychological distress (Khatua et al., 2011) especially if that accompanying it with chronic disease ⁽¹⁹⁾.

The result indicates that 56% of the study sample is employee, most of them are male 74 vs 6. Most of the employees 58% are engaged in construction work, shops, taxi drivers and other free works while employees in the state and have a monthly salary are only 20 individuals. This result pointed that persons with low economic status are more exposed to the infectious diseases ⁽²⁰⁾.

Regarding daily activity, the higher percentage 47% is a moderate activity that direct effecting on psychological well-being this result agrees with Talley, and Lindor, (2016) and Checton et al., (2015) they mentioned approximately one-quarter of individuals with chronic diseases have one cause or more limitations of daily activity. Appraisals of illness intrusion interference from a numerous stressors correlation with the disease itself such as ascites, pain, disability, and fatigue, and/or treatment adverse effects ⁽²¹⁾⁽²²⁾.

Part II: Discussion of the clinical data related to the chronic liver disease patients:

The present study shows that 97% of patients are not smoking due to the recommendation or advice of caregivers and physicians. This result has no significant relationship with psychological issues. Regarding BMI, the higher percentage of normal weight is 79%, and followed by 9% for overweight. This result corresponds with Moscatiello et al., (2013) and Stapleton et al., (2013). This result reveals a high significant relation between psychological distress and BMI, especially for over body weight that means low mood with body fluid gain⁽²³⁾⁽²⁴⁾.

The study shows all subjects are not alcohol consumption 100%, this result indicates the reason for this religious belief and the holy place, or possibly drinking alcohol in complete confidentiality has been advised by the therapist to stop it because it worsens his health. This result is identical with the study of Bashar (2016)⁽²⁵⁾.

Concerning with type of chronic liver disease, there are most of the study subjects are with chronic viral hepatitis B and C 52% and 39% respectively, 17% of them are cirrhosis liver disease. Regarding chronic hepatitis, there is no statistically significant relation between hepatitis B & C for psychological issues. While, there is a high significant cirrhosis patients most of them with all psychological aspects. Also, there is a typical of psychological distress with another type of chronic liver disease (carcinoma, autoimmune and cryptogenic) that indicates loss of expectation and continues progressively with severe complication or treatment actions. This agrees with some studies e.g. (Allah MTarky et al., 2013; Alsamarai et al., 2016; Hajarizadeh et al., 2016)⁽¹⁰⁾⁽¹¹⁾⁽²⁶⁾.

Regarding duration of disease, the result reveals that the majority of the study subjects 40% are less than one year, besides, the numbers decrease as the time of infection remote and this indicates that new infections occur continuously (agree with Parimala, (2016); Goyal, Sidhu and Kishore (2017) they claimed that about four million annually are newly infected), or either cure or end fate by his illness Goyal, Sidhu, and Kishore, (2016)⁽¹⁴⁾⁽²⁷⁾.

Concerning the reason of disease most study result is 72% (I don't know). Most of them told me that it was possible to see a dentist or surgeon, but the length was so long that, some of them told me that the operation he performed 30 years ago, did not show any symptoms and that the injury was discovered by chance or by routine examination for marriage. This result agrees with Al-taie, Ali, and Hasan, (2014)⁽¹⁷⁾.

Regarding of whether you suffer from other physical diseases, most of them 71% do not suffer from any organic or chronic problems, so the reason is that the sample study is less than 50 years that already have not any other chronic diseases. This result is in line with the findings of the researcher Parimala, (2016)⁽²⁶⁾.

The study showed that there are no diagnosed psychiatric illnesses among the subjects or the use of painkillers or abuses of drugs.

Part III: Patients assessment overall responses to psychological aspects:

The current study regarding assessment of the psychological aspects overall domains are significantly effective at 56%. There is a relationship between patients' physical status and their psychological aspects p-value 0.001 is highly significant for each domain and all that is a correlation with the physical status. This result means that the disease has significant effect on a psychological well-being. The current finding supported by (18), they claimed that 49% of the study samples is at least one or more psychiatric comorbidities and consistent for bodily issues with psychologic distress. On another side, some of the psychiatric patients that use a treatment causing liver injury or even cirrhosis, such as mood stabilizers, neuroleptics and a few anti-anxious or antidepressant⁽²⁸⁾.

The somatization, insomnia-anxiety, social dysfunction and severe depression are coincided and associated with chronic liver disease and some negative effects on all aspects of psychology and/physiology of human being could happen. This study reveals relationships between severity of disease and negative impacts on mental health disorders and psychological distress.

Somatic domain:

somatic (physical) issues for patients with chronic liver disease indicating four items with effective or symptomatic (1,3,4,7), while ineffective or asymptomatic (2,5,6). The participants of study sample show fluctuation in physical domain due to some actions such of this, recurrent investigation, treatment, and follow-up, nevertheless, it is not possible to identify the causes of physical symptoms as a psychological origin or chronic liver disease process. Since most of the participant entry (91%) in the study are chronic viral hepatitis. The experts' assumptions to somatic issues is due to the processes of chronic hepatitis. We notice high psychological disorders as physical suffering increases, this result matches with another study, Modabbernia et al., (2013), he claimed that the severity of the

chronic liver disease can affect directly on psychological well-being especially on emotional and mood state. In this study, 71% of the physical domain is indicated as highly with psychological issues ⁽²⁹⁾.

Insomnia and anxiety:

The subject's responses of this domain are mainly effective or symptomatic at (2,4,5,6,7) items, while asymptomatic at (1,3) items. Sleep disturbances such as early insomnia or cannot still asleep and daytime somnolence, are certain signs with chronic liver disease due to using long-term of treatment regime or stress of disease that affects circadian rhythm disorders. This result agrees with many studies such as (Foster, 2009; AL-Jahdali et al., 2014; Changyun Liu et al., 2015; Nagel, 2015; Gonzalez et al., 2016) ⁽¹⁶⁾⁽³⁰⁾⁽³¹⁾⁽³²⁾.

Social dysfunction:

Concerning social dysfunction domain, most of the participants are symptomatic at (1,2,4,6,7) items, while asymptomatic at (3,5) items, most of results related social impairment are due to diseases stigmata such as jaundice, face pallor, loss of desirable and interest, sometimes ascites, rapped loss of energy and other physical and psychological problems that undergo on individual families or community's relationship. Some authors match this result and claimed that the stigmatized of chronic disease is associated with severe psychological risk and low level of motivation toward society or community that is leading social impairment or dysfunction.

Severe depression:

In this study the severe depression aspect are asymptomatic at 60% this result matching with other studies, some of these (Gonzalez et al., 2016), they claimed to be 40% of the sample is depression. Another study (AL-Jahdali et al., 2014) claimed that the depression domain was 21% for patients with the chronic liver disease. Another study showed that 30% of patients had psychological problems, including depression (Raphael et al., 2016). In contrast, there are studies showing a significant relationship of depression with the same chronic disease such of this studies (Popovic et al., 2015) they concluded that there is a correlation between chronic liver disease and depression 62%. Severe depression domain, which the researcher sees as an indicator of the negative psychological aspects, because the criterion is short and does not measure all aspects of depression ⁽²⁹⁾⁽³²⁾⁽³³⁾.

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Limitation: The habits of people in this area are usually not allowed to be alone with the researcher if they are women and therefore does not reveal the psychological issues within them. Also, some patients who have a high economic situation or some families do not go to the Center and only call the specialist doctors with the phone or private clinic.

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