# Etiologies of Malnutrition in Chronic Liver Disease Patients and Tools for Assessment

**Dr. Archana Devi .M[1], Dr. S. T. Sakthi Suganya[2], Dr. Mounika Jetti[3], Dr Noor Mohamed Rasik .B[4], Dr. Aamina Hussain[5]**

[1]Assistant Professor, Department General Medicine,
Sri Lalithambigai Medical College and Hospital, Faculty of Medicine,
Dr. M.G.R Educational and Research Institute, Chennai, Tamil Nadu, India
archu1766@gmail.com

[2]Assistant Professor, Department of General Medicine,
ACS Medical College and Hospital, Chennai, Tamil Nadu, India
sakthi28385@gmail.com

[3]Associate Professor, Department of General Medicine,
Sri Lalithambigai Medical College and Hospital, Faculty of Medicine,
Dr. M.G.R Educational and Research Institute, Chennai, Tamil Nadu, India
mounikajetti39@gmail.com

[4]Assistant Professor, Department of community medicine,
Sri Lalithambigai Medical College and Hospital, Faculty of Medicine,
Dr M.G.R Educational and Research Institute, Adayalampattu, Madhuravoyal, Chennai,
Tamil Nadu, India
mohamedrasik007@gmail.com

[5]Senior Resident, Department of Community Medicine,
SRM Medical College Hospital and Research Centre, Tamil Nadu, India
aaminahussian@gmail.com

## Abstract

Malnutrition is a very serious complication among people with chronic liver disease. Liver cirrhosis is becoming a significant health concern and addressing the issue of malnutrition becomes important to improve patient outcomes. This particular review aims to describe the prevalence and causes of malnutrition in patients with chronic liver conditions along with the diagnostic tools and therapeutic mechanisms. The prevalence of malnutrition is often misdiagnosed among such patients with a range of factors contributing to the condition. There are specific screening tools and step-wise diagnostic approaches that can be used in this context and all of these have been discussed in detail in this article. Secondary data has been collected from peer-reviewed journals and articles to provide the necessary discussion on the entire and achieve the necessary success with the paper. In summary, malnutrition is quite common and requires proper attention for medical professionals associated with the care of such patients.

## 1. Introduction

The threat of malnutrition and choric issues of liver diseases has threatened world leaders and the health system administration worldwide. Global calamities, political hazards, cross-boundary conflicts, sort of resources, and escalating pace of unemployment have made it difficult for people all around the globe to cope with the increasing cost of living crisis. The basic concept of malnutrition can be defined as the imbalance or deficiency of the key nutritious elements within a human body to develop the necessary immunity of the individual (Pandey *et al.* 2023). The increasing rate of cost of living, food crisis, poor food habit, and lack of awareness of hygiene has actually escalated the threat of malnutrition and escalated chronic liver diseases among people all around the globe. The case of malnutrition and its negative impact on the human lever needs to be evaluated through its core root as it makes it essential for world leaders and social workers to proceed through a righteous pathway towards mitigating the malnutrition issue in the worldwide market.

A large number of countries in the worldwide periphery especially developing countries to struggle to ensure effective health, education, and food support system for the people which mostly enhance the threat of malnutrition and liver issues due to poor diet and hygiene concepts within the geographic periphery of the country. Etiologies is the concept that tells us to search for the origin of an event or occurrence (Siddiqui *et al.* 2020). In medical terms, etiologist refers to finding the core of a disease or analysing the syndrome and assisting to develop effective proceedings to enhance the medical need to fight against a chronic situation. The entire study focuses to develop an effective idea for the core socio-political and health concepts about malnutrition and its impact on the entire lever system through analysing a large number of conceptual insights within the study.

## 2. Aim of Article

The entire study has been going to keep its key focus on evaluating the core cause of the increasing cases of malnutrition and liver diseases among people in the global market. A large number of conceptual discussions are going to be performed within the study to build the pathway of remedy to mitigate malnutrition and liver issues globally. The basic aim of the study is to find the etiologist of malnutrition and chronic liver disease among patients and analyse assessment tools to fight against malnutrition and liver disease among people. The key objectives of this particular study are mentioned below.

### Objectives

1. To know the advanced management process of providing nutrition for liver patients.

2. To build an empirical idea about malnutrition and its relation with liver cirrhosis.

3. To know the assistance of leadership and technology to establish an effective health care system to fight against malnutrition and liver disease.

## 3. Material and Methods

The effective use of different methods and materials within a study helps to develop a superior understanding and output result on a certain topic. The entire pathway through which a study should go through to avail the desired goal and find authentic output results on a certain study. It helps to build a concrete understanding of a certain topic and gain absolute insight into the process. This particular study has kept its focus to find out the root cause of the increasing rate of malnutrition and liver problems among people in the global periphery. It also focuses on developing an idea to evaluate the role of governance, leadership, and technological tools to mitigate malnutrition and liver disease. Thus, it is essential to bring forth a large source of textual data and information within the study to gain superior insights on the topic. Qualitative types of data are textual and non-numeric data (Ruggiano & Perry, 2019). Hence, qualitative data will be collected to perform the entire study.

Multiple numbers of subjective and socially constructed information help to gather within research while using interpretivism research philosophy (Alharahsheh & Pius, 2020). It will help to meet the basic need of the study. Hence, interpretivism research philosophy has been taken to perform the entire study effectively. The study also needs to gather a large source of information by exploring various peer-reviewed and authentic journals and articles within the study. The secondary data collection process helps to gather a large set of data by exploring online sites (Branney *et al.* 2019). Thus, a secondary data collection process has been chosen within the study. It mostly helps the study to find the most effective etiologist of malnutrition and liver disease within the entire study. The overall process which would be performed within the study will follow the overall ethical considerations within the study to ensure the most effective understanding of the topic. The data and information published in various peer-reviewed and authentic online sites in the English language and published after 2019 were taken within the inclusion criteria within the entire study.

## 4. Results

### 4.1 Assessment of nutrition and advanced management in liver diseases

The overall process which is involved with the issues of malnutrition mostly occurred among children due to the problem of malnutrition cases and improper food habits issues. According to Mouzaki *et al.* (2019), a large number of technological tools have been started using in recent days in the health system process to evaluate the nutrition

level among patients, especially children, and provide effective gastro-logical treatment to reduce malnutrition issues among patients. The discussion has also portrayed that malnutrition among liver patients has increased the overall mortality rate of liver patients, hence it is essential to go with advanced technological and medical systems to handle the increasing case of malnutrition issues worldwide. Patients with acute liver problems mostly face a lack of nutrition resources within their bodies which reduces their ability to react effectively to medical treatment and avoid the need for liver plantation.

The discussion has elaborated on the necessary nutrition elements within the human body such as carbohydrates, protein, vitamins, and minerals among human body and said in order to ensure an effective cure for liver diseases it will be essential to consume the necessary nutrition substances. The increasing rate of the food crisis and the cost-of-living problem has most negatively impacted the physical health of children all around the globe and escalated the rate of malnutrition. It affects the overall immunity, and digestive and liver functions of the children and increases the rate of liver problems among children. Thus, in order to fight back against the malnutrition problem among liver patients it is essential to go with effective and advanced technological tools and ensure proper nutrition to the patients. Effective steps to diagnose the history and physical state of the patients, and review their nutrition assessment and food habits provide the key support to mitigate the increasing rate of malnutrition issues among liver patients all around the world.

### 4.2 An Overview of malnutrition relation with liver cirrhosis

The poor and unhealthy food habits of the patients increase the rate of acidic nature of the liver and started to harm the liver function of patients which could actually cause chronic lever cirrhosis issues among patients globally. The entire cultural and socio economical structure of a geographic periphery mostly impacted the overall hygiene and food practice of the people within a certain place. Improper food practices can cause malnutrition among people and cause the most negative impact on the overall functionary of the liver systems of the person. Excessive alcohol consuming habits also reduce the rate of nutritious elements within the individuals' bodies and increase the threat of liver cirrhosis among them. Between the fiscal year of 2017 to 2019, more than 69 thousand of people have died in the US due excessive rate of drinking habits and and malnutrition issues (Elflein, 2022). It exhibits the overall relation among food habits and malnutrition with the case of liver cirrhosis among patients.

The use of sarcopenia index mostly helps to predict the overall rate of malnutrition among patients facing issues of liver cirrhosis. As mentioned by Wu *et al* (2022), the effective use of the novel blood test to measure muscle mass through sarcopenia index analysis mostly helps to diamines the level of nutrition within the body of a liver patients and helps to take most effective treatment process to improve physical health and liver condition of the patients. The entire food habits and the nutrition level within body of the patients helps to provide effective treatment and medical service to the patients. Hence, the entire process related with sarcopenia index helps to improve the nutrition level within the body of the patients facing liver cirrhosis issues and reduce malnutrition rate.
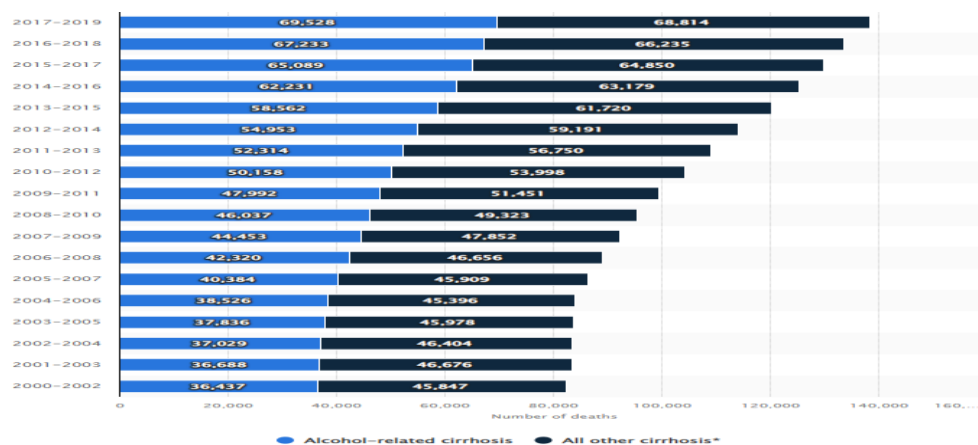


**Figure 1: Mortality rate in Liver Cirrhosis**

(Source: Elflein, 2022)

### 4.3 Impact of Leadership, governance, and Technology to provide effective assessment and Care for Malnutrition and lever diseases

The overall effort of the governance and leadership process within a health system provides a most significant impact on the treatment process and success rate of the health system within a certain area. The overall steps taken by the leaders and governance within a health system mostly help to provide an effective solution and treatment to liver patients and enhance nutrition levels among the patients. The analytical and diagnosing tools and technology within the health system also assist to identify the key issues and level of nutrition among the patient's liver diseases and helps to make an effective strategy to improve theory physical conditions through providing effective medical treatment to them. According to Casas Deza *et al*. (2021), the implication of effective malnutrition screening tools within the health system mostly helps to identify the level of malnutrition within the body of liver patients and improves the treatment process to cure liver cirrhosis issues. It mostly helps to enhance the assessment and care for malnutrition and liver diseases among patients in recent days worldwide market sphere.

The implication of effective malnutrition screening tools helps to identify the overall availability of nutritious substances in the body of the patients within a certain geographic area and helps to provide an effective solution to them to reduce malnutrition cases. The positive influence of the health care leaders and governance mostly supports the implementation of the necessary diagnosis and screening tools for malnutrition and helps to provide the most suited treatment to the patients suffering from liver diseases. Hence, healthcare leaders and administration have to keep their focus on deploying effective malnutrition screening technologies within the health system to enhance the treatment process of liver patients within the health system.

### 4.4 Need for Prioritizing Tool to predict malnutrition and risk outcomes of liver cirrhosis patients

Technological assistance within the medical treatment and diagnosing diseases mostly helps to ensure an effective success rate in predicting the key cause of certain medical issues of a patient and helps to go with the most suited treatment process. A large number of health system executives have implemented various technological tools within the health system to predict the deals and key root of the medical issues of the patients who come to visit within the healthcare system. The entire process has involved making an effective assumption of the technological tools to predict malnutrition and the overall physical condition of a patient suffering liver cirrhosis mostly helps to proceed with effective treatment and medication process. As mentioned in the writing by Wu *et al*. (2020), the overall steps taken to prioritize using technological tools in handling malnutrition issues among liver patients mostly assist to go with an effective treatment process. It provides the key support to enhance the performance of the health system to tackle chronic liver diseases and malnutrition issues among patients.

The guideline provided by The European Society for Clinical Nutrition and Metabolism also suggested implementing effective technological equipment for the diagnosis of malnutrition levels among chronic liver patients mostly helps to improve the medical treatment to handle chronic liver diseases. Hence, in order to fight back effectively against the increasing rate of malnutrition problems among patients with liver problems it is essential to take technical assistance to improve the overall quality and success of the treatment process.

### 4.5 Need for nutrition support to handle chronic liver disease cases among Children

The increasing rate of malnutrition cases among children facing severe liver diseases mostly affected the success rate of the health system policies of various countries and comes forth a critical question on the effectivity of the health policies within the areas. Most of the country leaders and health system administrators take the increasing threat of chronic liver diseases and malnutrition issues among children as the key concern to improve the quality of the entire health system. According to Larson-Nath & Goday (2019), the lack of nutrition intake reduces the ability of children to meet the necessary nutritious substance within their bodies which most negatively impacted the growth, immunity, and health condition of the children. The poor food habits and unhygienic practices escalate the rate of malnutrition and liver-oriented issues among the children which actually portrayed the need to take effective care to provide nutrition support to the children to mitigate chronic liver diseases. According to Unisef (2023), more than 45.4 million children all around the globe faced malnutrition issues in the fiscal year of 2020.

Improper food habits and unhygienic practices actually cause a high rate of malnutrition among children worldwide.

The entire step taken towards improving the food and diet habits of the children and ensuring providing nutrition support to them mostly helps to enhance the ability of a country's health system to fight against increasing liver diseases and malnutrition issues among the children. In developing countries, families cannot afford to provide necessary nutrition supplements to the children due to the increasing rate of the food crisis and cost of living problems which mostly escalates the overall rate of malnutrition among children. Thus, it is essential to secure food and necessary nutrition for children in order to improve their immunity ability and reduce malnutrition as well as liver diseases. Hence, it is the key responsibility of recent days country leaders to provide nutrition support to children to fight chronic liver disease cases among children all around the globe.

## 5. Discussion

The entire study has been performed to analyse etiologist of malnutrition in chronic liver disease patients and tools for assessment. The overall study has portrayed that poor food consumption and lack of awareness about hygiene actually aggravate the threat of malnutrition and cause chronic liver diseases among people all around the globe. The study has portrayed that lack of consumption of nutritious substances mostly causes critical malnutrition issues as well as affected most negatively on the liver functionary system of the human body. Hence, in order to tackle the increasing rate of liver diseases all around the world, it is mostly necessary to improve food habits and keep the focus on consuming nutritious substances to improve the ability of the liver. The study has also portrayed the effective implications of the technologies in the diagnosis process of the level of malnutrition among the patients suffering from malnutrition mostly helping to provide effective treatment to them.

The decision taken by the leaders or governance executives within a health system to prioritize necessary and modern tech gadgets and equipment mostly helps to enhance the rate of performance of the health system. The study has found that a large number of people in recent days worldwide market has been suffering due to liver cirrhosis issues which are mostly caused due to increasing malnutrition issues worldwide. The steps taken to avail technological assistance in diagnosis of the overall level of malnutrition mostly help to frame out effective strategic policy towards a health system to provide the most suited treatment to patients suffering liver cirrhosis. The study also shows that in order to reduce liver diseases among children it is essential to improve their food diet and take steps towards providing nutrition support towards them to enhance their immunity power to resist liver infections.

## 6. Conclusion

The health systems all around the globe have witnessed critical problems of malnutrition and liver disease. The rate of cost-of-living crisis, unhygienic practices, and poor diet habits affects the overall metabolism and immunity power of an individual in recent days worldwide Market. A large number of business leaders and social authorities have been struggling to provide necessary food and medical security to the people to fight back against liver diseases and malnutrition in the recent days worldwide market. The entire study has kept its focus on discussing the etiologist of malnutrition in chronic liver patients and making analysis the tool for the assessment. Various theoretical reviews and concepts which are related to the overall etiologist of malnutrition among chronic liver patients and necessary tools to mitigate the issue have also been analysed efficiently within the entire study. It mostly helps to understand an effective idea on the overall topic of the entire study.

A large set of qualitative data collected through a secondary data collection process has been used within the overall task to ensure a large resource of information and gained the most suitable textual understanding of the topic. The entire study has found that the overall occurrence of malnutrition and liver diseases issue happened among people mostly due to unhygienic food practices. The poor food habits of the people mostly reduce the presence of the necessary nutrients within the body and unhygienic livelihood practices escalate the chance of liver infections. Hence, in order to fight back against increasing malnutrition cases among liver patients it is essential to increase awareness about hygiene and provide necessary sources of nutrition to improve the immunity power of liver patients all around the world. Effective leadership and governance within the health system mostly support to perform the overall task efficiently. The support of various modern technological goods helps to assume

the case of malnutrition and diagnose liver problems among patients in the global market. It mostly helps to enlighten the way to come forth with the significant cure to handle malnutrition problem among liver patients in recent days global market surrounding.

## 7. Acknowledgement

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