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**FACTORS AFFECTING THE QUALITY OF LIFE OF
PATIENTS WITH HEART FAILURE IN IRAQ**

Master's Thesis

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**FACTORS AFFECTING THE QUALITY OF LIFE OF
PATIENTS WITH HEART FAILURE IN IRAQ**

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The Department of Nursing
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ETHICS STATEMENT

The thesis entitled “Factors Affecting The Quality of Life of Patients With Heart Failure in Iraq” which was prepared and presented as a thesis, was written by myself and in accordance with the scientific, academic rules and ethical conduct. The idea/hypothesis of my thesis solely belongs to my supervisor and me. The research pertaining to the thesis was conducted by myself and therefore, all of the used sentences and interpretations within the work belongs to me.

I declare the aforementioned issues to be correct.

Date:10 / 10 / 2022

Saja Kareem Hasan Khaleel

Signature

PREFACE AND ACKNOWLEDGEMENTS

I give thanks to my Creator and then to my father

My special thanks go to Asst. Prof. Dr. Müjgan ONARICI for standing by us and giving her valuable comments and we thank her for her patience

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LIST OF ABBREVIATIONS

HF	Heart Failure
USA	United States of America
ESC-HF	European Society of Cardiology Heart Failure
COPD	Chronic Pulmonary Disorders
CO₂	Carbon Dioxide
HR	Heart Rate
BP	Blood Pressure
RV	Right Ventricular
MRI	Magnetic Resonance Imaging
CT	Computed Tomography
NPs	Nanoparticles
PaO₂	Partial Pressure of Oxygen
SaO₂	Percent or Oxygen Saturation
NIPPV	Noninvasive Positive Pressure Ventilation
LVEF	Left Ventricular Ejection Fraction
ACEIs	Angiotensin Converting Enzyme Inhibitors
ARBs	Angiotensin Receptor Blockers
WHO	World Health Organization
JVP	Jugular Venous Pressure

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FACTORS AFFECTING THE QUALITY OF LIFE OF PATIENTS WITH HEART FAILURE IN IRAQ

ABSTRACT

HASAN KHALEEL, Saja Kareem. Factors Affecting The Quality of Life of Patients With Heart Failure in Iraq, (Master of Science), Çankırı, 2022.

Background: Heart failure, whose frequency is increasing every other day and which can sometimes be diagnosed incorrectly, is a general and serious condition of health that can lead to a serious influence on the quality of life and life expectancy of patients. Because of changing population dynamics, the prevalence of hypertension and coronary heart disease will increase modestly assuming constant incidence rates specific to age, race and gender. The incidence of diabetes and obesity is expected to rise by age, ethnicity and gender, resulting in a higher prevalence of these risk factors and possibly a higher prevalence of heart failure than that caused by alteration population dynamics. Heart failure will remain a growing health problem. **Objective:** The aim of the study is to evaluate the levels of factors affecting the quality of life of patients with heart failure. **Methods:** In the study, a descriptive cross-sectional design was used. A total of 150 adults with heart failure were randomly selected among patients in the Al-Hakeim, Al-Sadir, and Al-Furat hospitals, which provides health care for patients with heart failure, in Nejef Governorate ($n = 246$) according to the hospitals' monthly target for intensive care units. The study relied on the study of Krejcie and Morgan to determine the sample size based on an equation. This procedure included selecting (150) patients from the Al-Hakeim, Al-Sadir, and Al-Furat hospitals, where the total number of patients was 246. Al-Sadir hospital included 199 patients, Al-Hakeim hospital had 35 patients, and Al-Furat hospital had 12 patients. The proportional stratified sampling

procedure was employed for calculating the number of patients for each hospital. So, the number of patients selected from each hospital was found as follows: 122 from Al-Sadr Hospital, 21 from Al Hakim Hospital, and 7 from Al Furat Hospital. Participants answered a three-part questionnaire. These parts included demographic characteristics, medical characteristics, and quality of life domains from the World Health Organization Quality of Life Scale. A five-point likert-type scale was used to evaluate the items. Data were collected from January 1, 2022 to March 1, 2022 through interviews and were analyzed by applying descriptive statistical analysis that included percentages, numbers, standard deviation values, mean scores, and p-value. **Results:** It was found that the majority of the patients with heart failure were aged 65 and above, the disorder was more prevalent among females, the majority of the patients had not received higher education, most patients were housewives and unemployed, and that the majority of patients with heart failure were urban residents. According to the findings, most patients with heart failure had a considerable limitation in physical activity, the majority of them had high blood pressure and diabetes, and most of them were smokers. The study indicated that the majority of patients controlled their weight, a high percentage of patients had been readmitted to hospital due to heart failure, and that most of the patients could not do their personal hygiene. The majority of patients had a higher level of social support than the rest of the psychological, environmental, and physical domains. The information obtained about the disease was acceptable, but the safety precautions against the disease were poor. Statistically significant differences were found between quality of life and occupation, monthly income, and stage of heart failure and hospital readmission. **Conclusions:** We concluded that the quality of life had a substantial effect on patients with heart failure, as the quality of life of the majority of patients in Najaf governorate was poor.

Key Words : Heart failure, Quality of life, Nursing.

IRAK'TA KALP YETMEZLİĞİ OLAN HASTALARIN YAŞAM KALİTESİNİ ETKİLEYEN FAKTÖRLER

ÖZET

HASAN KHALEEL, Saja Kareem. Irak'ta Kalp Yetmezliği Olan Hastaların Yaşam Kalitesini Etkileyen Faktörler, (Yüksek Lisans Tezi), Çankırı, 2022.

Giriş: Kalp yetmezliği, hastaların yaşam beklentisi ve yaşam kalitesi üzerinde ciddi etkileri olabilen, artan sıklığı ve bazen yanlış tanımlar ile yaygın ve ciddi bir sağlık durumudur. Değişen nüfus dinamikleri nedeniyle, yaşa, ırka ve cinsiyete özgü sabit insidans oranları varsayıldığında, hipertansiyon ve koroner kalp hastalığı prevalansı mütevazı bir şekilde artacaktır. Diyabet ve obezite insidansının yaşa, etnik kökene ve cinsiyete göre artması, bu risk faktörlerinin daha yüksek prevalansı ve muhtemelen değişen popülasyon dinamiklerinin neden olduğundan daha yüksek kalp yetmezliği prevalansı ile sonuçlanması beklenmektedir. Kalp yetmezliği büyüyen bir sağlık sorunu olmaya devam edecek. **Yöntem:** Çalışmada tanımlayıcı ve kesitsel araştırma deseni kullanılmıştır. Nejef Valiliği'ndeki Al-Hakeim, Al-Sadir ve Al-Furat hastanelerindeki hastalar arasından (n=246) kalp yetmezliği olan 150 yetişkin rastgele ve hastanenin kalp hastalığı olan bireyler için bakım veren yoğun bakım ünitelerinin aylık hedefine göre seçilmiştir. Çalışmada, örneklem boyutu için Krejcie ve Morgan'ın çalışması temel alınmış ve bir denkleme dayalı olarak örneklem büyüklüğünü belirlemek için bir tablo oluşturulmuştur. Bu işlem, toplam hasta sayısının 246 olduğu Al-Hakeim, Al-Sadir ve Al-Furat hastanelerinden 150 hastanın seçilmesini içeriyordu. Hastane bazında ifade etmek gerekirse, Al-Sadir hastanesinde 199 hasta, Al-Hakeim hastanesinde 35 hasta ve Al-Furat hastanesinde 12 hasta vardı. Daha sonra, her hastane için seçilen hasta sayıları ağırlıklandırma yapılarak orantılı tabakalı örnekleme yöntemi ile belirlendi (tabakalı örnekleme denklemi). Buna göre, Al-Sadr Hastanesinden 122, Al-Hakim Hastanesinden

21 ve Al-Furat Hastanesinden 7 hasta örnekleme dahil edildi. Katılımcılar üç bölümden oluşan bir anketi yanıtladılar. Bu bölümler, hastaların demografik özellikleri, tıbbi özellikleri ve Dünya Sağlık Örgütü'nün Yaşam Kalitesi Ölçeği alanlarını içermektedir. Maddeleri değerlendirmek için beşli Likert tip ölçek kullanılmıştır. Veriler 1 Ocak 2022 ve 1 Mart 2022 tarihleri arasında gerçekleştirilen görüşmeler yoluyla toplanmış ve sayı, yüzde, ortalama, standart sapma ve p-değerini içeren istatistiksel analiz uygulanarak analiz edilmiştir. **Bulgular:** Çalışmada kalp yetmezliği olan hastaların çoğunluğunun 65 yaş ve üstü olduğu ve kalp hastalığının kadınlarda daha sık görüldüğü sonucuna varılmıştır. Ayrıca hastaların çoğunluğunun yüksek eğitim almamış olduğu, mesleki açıdan ev hanımları ve işsizlerin çoğunlukta olduğu, önemli bir kısmının bir şehirde yaşadıkları, çoğunun fiziksel aktivite konusunda önemli düzeyde kısıtlamaya sahip olduğu ve hastaların büyük bir bölümünün yüksek tansiyon ve diyabetinin olduğu bulunmuştur. Çalışma bulgularına göre, hastaların çoğu sigara kullanıyordu, büyük bir kısmı kilo kontrolü yapıyordu ve hastaların çoğunluğu kalp yetmezliği nedeniyle yeniden hastaneye yatış yapmıştı. Hastalar arasında kişisel hijyen eksikliği oranı oldukça yüksekti. Yaşam kalitesi ölçeği sonuçlarına göre çalışma, hastaların çoğunun sosyal desteğinin psikolojik, çevresel ve fiziksel alanların geri kalanından daha yüksek olduğunu ortaya koymuştur. Hastalıkla ilgili elde edilen veriler kabul edilebilir düzeydeydi, ancak hastalığa karşı güvenlik önlemleri yetersizdi. Yaşam kalitesi ile meslek, aylık gelir ile kalp yetmezliği evresi ve tekrar hastaneye yatış arasında anlamlı farklar bulunmuştur. **Sonuç:** Çalışmada, Nəcəf vilayetindeki hastaların yaşam kalitesinin çoğunluğunun düşük olması nedeniyle, yaşam kalitesinin kalp yetmezliği olan hastalar üzerinde önemli bir etkiye sahip olduğu sonucuna varılmıştır.

Anahtar Kelimeler: Kalp yetmezliği, Yaşam kalitesi, Hemşirelik.

1. INTRODUCTION

Heart failure (HF) is the typical aging cardiovascular syndrome, which is triggered by cardiovascular diseases that are associated with age and alteration in cardiovascular function and structure (Dharmarajan and Rich, 2017).

The body retains water and sodium to compensate for the loss, thereby exacerbating heart failure in the long term and reducing the health-related quality of life (QoL) (Baert et al, 2018).

Around 64.3 million people are impacted by HF globally. It is known that the prevalence of diagnosed heart failure ranges from 1% and 2% in the adult population in developed nations. Despite differences in diagnostic criteria, there are many studies indicating that more than half of all patients with HF are in the general community, and that this number is growing (Groenewegen, Rutten, Mosterd and Hoes, 2020).

HF impacts emotional, physical, and social health-related QoL, adversely. Thus, patients with HF have a lower health-related QoL even than individuals with other severe chronic disorders, for example end-stage renal disease on hemodialysis. Longevity is critical for many patients with HF, but improving their health-related QoL is just as vital, if not more so (Chandra et al, 2020).

Maintaining a high level of QoL is as much crucial as surviving. Individuals who have HF have a much worse QoL than healthy people or those who have other chronic diseases. The complicated impact of a clinical condition and the way how it is treated on patients' daily living is seen in QoL. Some mental and physical symptoms of HF involve chest discomfort, lethargy, dyspnea, sleeping problems, edema, and sadness, which limit patients' daily social and physical activities, thereby leading to a low level of QoL. High

rates of hospitalization and death are associated with poor QoL. Therefore, individuals who have HF ought to get their quality of life examined to see how it affects their everyday lives (Heo, Lennie, Okoli and Moser, 2009).

Multiple causes contribute to worsening HF, leading to hospitalization and a reduced QoL. This relates to patients and healthcare practitioners, in addition to healthcare and economic systems. Re-hospitalization is possible when there is no social support and the patient has no spouse and lives alone. Symptoms, prognosis, well-being, the disease, and performance improve in adults with HF who develop their self-management competency through programs for the management of the disease. Individuals at risk of adverse outcomes such as rehospitalization have been identified and targeted using psychological risk models. Because of the limits in medical therapy and the high economic cost of HF, primary and secondary preventive techniques have been pursued, including education. Some programs for disease management have been tried to help individuals HF save money, avoid hospitalization, and enhance their quality of life. However, these programs frequently involve a multidisciplinary approach and they result in considerable expenses. As a result, nurse-led programs for disease management may be more economical in the treatment of HF. Furthermore, self-care has been regarded as a critical element of the management of HF, whose primary goals include educating patients on self-care, raising the level of self-efficacy and adjustment, enhancing QoL, and reducing the cost of healthcare (Rice and Betihavas, 2018).

The aim of management programs is to extend life, alleviate symptoms, and enhance general health. Outcomes that are reported by patients such as QoL measures associated with health are practical in the assessment of the success of these objectives from the patient's point of view. They are also getting significance because they predict hospitalization and mortality in patients who have HF, in addition to traditional clinical endpoints. Furthermore, these outcomes may assist physicians and patients in making decisions better. They also allow for a comparison of provider performance in order to inspire service changes, and they are suggested as indicators of quality evaluation by international bodies (Garin et al, 2013).

1.1 Importance of The Study

HF, whose frequency is increasing every other day and which can sometimes be misdiagnosed, is a widespread and serious health condition that can seriously affect patients' life expectancy and QoL. This research is of significance as it intends to determine the QoL of patients who have HF at various stages and to see if there is a link between various aspects of QoL (Ameen and Gardi, 2019). QoL associated with health is as important as survival for patients with HF. Patients who have HF can often experience a sense of loss of control, which affects health-related QoL adversely. Knowledge of alterable characteristics associated with perceived control can direct the establishment of treatment methods to enhance perceived control and thus QoL associated with health (Heo et al, 2015).

We need to understand elements that influence the QoL of patients with HF and their relationships to create efficient interventions aiming to enhance the poor quality of life in patients with HF (Wang and Yang, 2020).

Sustaining a high QoL is as much crucial as surviving for the majority of patients with progressive and chronic diseases. The QoL of individuals with HF is much worse than individuals who have other chronic diseases and the general population. We can see that the complex effects of a clinical condition and its treatment on a patient's daily life are reflected in QoL. Some of the mental and physical symptoms that patients with HF experience include tiredness, dyspnea, sadness, chest discomfort, edema, and sleeping problems, which restrict the daily social and physical activities of patients and lead to low QoL. Also, high rates of hospitalization and death are associated with poor QoL. For this reason, people who have HF are advised to get their QoL examined to see how it affects their everyday lives (Heo, Lennie, Okoliü, and Moser, 2009).

1.2 Problem Statement

HF is a health problem that is widespread and growing every other day. Early diagnosis of the disease and improving QoL from an economic, social, and psychological point of view has a considerable part to play in hospitalization and

mortality. The current study was planned to evaluate elements that impact the lifestyle of patients with heart failure in Al-Najaf City.

1.3 Objective

This study was carried out to evaluate factors that impact the QoL of patients who have heart failure.

1.4 Limitations

Difficulty communicating with the patient due to extreme fatigue and inability to speak.

2. GENERAL INFORMATION

2.1 Heart Failure

We can define HF as the inability of the heart to deliver adequate oxygen and blood to the peripheral tissues so that their metabolic demands can be met. From a pathophysiological point of view, cardiac output in its absolute or relative value is low or has a pathological distribution. Leads to a clinical syndrome characterized by symptoms such as dyspnea or weariness, and signs such as raised jugular venous pressure, arrhythmias or edema (Tanai and Frantz, 2015).

The estimated size of individuals with HF is over 5.8 million in the US and more than 23 million globally (Bui, Horwich and Fonarow, 2010).

Therefore, it is considered a public health concern that is on the rise. Despite the little improvement in the death rate for HF patients in recent decades, it is still high, Ischemic heart disease, blood pressure, obesity, diabetes, and smoking are all risk factors for developing HF and predict poor outcomes in the early stages of the illness (Bui et al, 2010).

HF causes a clinical syndrome that presents indications, such as peripheral edema, high jugular venous pressure, tachycardia, in addition to weariness and dyspnea. An underlying myocardial illness is often the most widespread reason for HF; however, cardiac failure can also stem from, endocardial or pericardial abnormalities, heart rate/rhythm problems, and valve diseases (Tanai and Frantz, 2015).

At rest or during stress, this results in a decreased cardiac output and/or higher intra-cardiac pressures. As the failing heart tries to preserve appropriate function, it engages a number of compensatory processes. These include boosting cardiac output

through the Frank–Starling mechanism, increasing ventricular volume and wall thickness through ventricular remodeling, and sustaining tissue perfusion with increased mean arterial pressure via neurohormonal activation. All of these compensatory mechanisms, while initially useful in the early stages of HF, eventually lead to a vicious cycle of increasing HF (Kemp and Conte, 2012).

In 2016, the European Society of Cardiology and Scientific Recommendations for Heart Failure (ESC-HF) worked on identifying non-pharmacological approaches to cardiac patients, emphasizing the importance of multispecialty teams, monitoring, education, self-care, physical activity. Despite this, several studies imply that individuals with HF have poor illness awareness and self-care ability. Adherence to non-pharmacological suggestions is poor, which raises the risk of negative outcomes and may affect HF prognosis. Readmissions to the hospital have also been linked to a bad prognosis (Kolasa et al, 2021; Dennison et al, 2011).

2.1.1Epidemiology

In the Western world, HF is the leading cause of hospitalization in those aged 65 and over, accounting for more than 1 million hospitalizations each year in the United States US (Tubaro, Vranckx and Price, 2016).

Several HF registries from across the world have been published in recent years, offering an important body of knowledge on the epidemiology of the condition. Interestingly, these registries now include not just Europe and the US, as was the case previously, but also several countries of Asia and Africa, providing for a better knowledge of global HF epidemiology (Tubaro et al, 2016).

The number of people with HF is more than 5.8 million people in the US and more than 23 million worldwide (Bui et al, 2010).

Which is subject to increase. Although evidence suggests that the incidence of age-corrected HF may have stabilized, but HF still carries significant morbidity and mortality as it rivals many cancers. HF represents a huge burden on the healthcare system (Bui et al, 2010).

In Turkey, the prevalence of diagnosed HF in those over 35 years old was found to be 2.9 percent (rate per 100,000). In Iraq, the rate of heart disease caused by ischemic heart disease was around 27% per 1000 inpatients, with ages ranging from 18 to 65. (30 - less than 70 years). Ischemic heart disease was responsible for 25% of deaths in Syria. The prevalence rate (rate per 100,000) was 4,198 for Russia, 1,612 for China, and 2,696 for France (Khan et al, 2020; Iraqi Ministry of Health, 2020; World Health Organization, 2018) .

2.1.2 Etiology

The disorders that can cause HF are diverse, and early discovery is critical since it can alter diagnostic, therapeutic, and preventive strategies (Cubero, Rivera, Moral and Melchor, 2004).

1. Valvular heart disease is an important risk factor for heart failure.
2. Hyperglycemia
3. Use of tobacco
4. Lack of physical exercise
5. Increase in body mass
6. Low socioeconomic status
7. Cardiomyopathies, infections (eg infectious myocarditis, Chagas disease) are among the most leading reason for mortality in the elderly
8. Toxins (eg. Alcohol, cytotoxic drugs)
9. Prolonged arrhythmias (King, Kingery and Casey, 2012).
10. Your ancestors
11. Infections caused by viruses
12. Heart abnormalities that are present at birth
13. Chronic pulmonary disorders (COPD)
14. Ischaemic (coronary artery disease, coronary dissection, and coronary embolism)
15. Valvular (Rheumatic heart disease, valvular degeneration) (Tanai and Frantz, 2015; Schwinger, 2021; Ziaieian and Fonarow, 2016).

2.1.3 Physiopathology

The quantity of blood pumped by the heart over a specific period is known as cardiac output, which is the product of heart rate (HR) and stroke volume and is normally 4–8 L/min in normal physiology. Other factors that impact carbon dioxide (CO₂) levels include synergistic ventricular contraction, ventricular wall integrity, and valvular competence. The quantity of blood evacuated by the ventricle for each heart beat is measured in stroke volume, which is generally 1 cc/kg (60–100 cc) (Kemp and Conte, 2012).

HF is a complicated condition caused by any anatomical or functional cardiac damage that inhibits the ventricle's capacity to fill with or expel blood. It indicates a significant disruption of normally well-tuned physiologic processes that keep cardiac output, blood pressure (BP), and fluid balance in check (Rathi and Deedwania, 2012).

2.1.3.1 Physiopathology of right heart failure

The physiopathology of right heart failure is inextricably tied to the right ventricle's specific characteristics. The Right Ventricular (RV) is able to handle severe changes in venous return because of its tiny size and particular shape. The basic mechanisms of right heart failure include myocardial dysfunction, pressure overload, volume overload, and reduced preload. Ventricular interdependence plays an important role in the pathophysiology of right ventricle dysfunction. When the right ventricle dilates due to acute pressure or volume overload, the interventricular septum shifts to the left, resulting in reduced cardiac output due to greater pericardial restriction. The auto aggravation of the low cardiac output situation creates an irreversible vicious loop as the filling pressures grow (Arsenescu-Georgescu, Pleșoianu and Șălaru, 2018) .

2.1.3.2 Physiopathology of left heart failure

Left heart failure can be caused by a variety of factors. Chronic or poorly managed hypertension leads to an increase in afterload, and left ventricular hypertrophy may be triggered by a resulting increase in cardiac effort. At first, this hypertrophy

functions as a restorative process that may help maintain cardiac output, however, the process may also lead to poorer cardiac filling and reduced left ventricular output at some time in the future as it may impede myocardial relaxation. Straightforward ischemia damage to the myocardium may occur due to coronary artery disease, which leads to renovation and scarring, thereby reducing contractility and cardiac output (Chahine and Alvey, 2021).

2.1.4 Types of heart failure

HF usually impacts only one side of the heart, although it can affect both. Accordingly, doctors distinguish three forms of HF (Informed Health, 2018).

2.1.4.1 Left-sided heart failure

Left heart failure is a complicated clinical syndrome defined by left ventricular pump malfunction and concomitant clinical symptoms (exercise intolerance, dyspnea, fatigue, and so on), as well as indicators of volume overload (peripheral edema, pulmonary crackles, etc.). All stages of energy extraction, transport, and use are impacted, with metabolic failure serving as the primary pathophysiologic mechanism, resulting in myocardial and subsequently systemic decompensation. The pathophysiologic condition, independent of the triggering event, maintains the development of the failure through a variety of compensatory mechanisms. On every level of this situation, compensatory mechanisms exist to reduce clinical symptoms by correcting the global imbalance between catabolic and anabolic state; nevertheless, they might exacerbate myocardial degeneration and aggravate the high-fat, high-sucrose diet (Kirali, Ozer and Ozgur, 2017).

2.1.4.2 Right-sided heart failure

Right heart failure is a syndrome characterized by systemic congestion as well as morphological and/or functional abnormalities in the right heart. Right heart failure can be caused by a renovascular disease or RV remodeling, such as cyclic dilatation producing tricuspid insufficiency and right atrial dysfunction. These changes cause exertional shortness of breath, reduced exercise capacity, and/or right-sided

decompensation symptoms, including jugular venous distention, ascites, and peripheral edema, and hepatomegaly. The right heart supplies enough blood to the pulmonary circulation at normal central venous pressure, but cardiac activity decreases, eventually leading to death if not treated effectively (Gorter et al, 2017) .

2.1.4.3 Biventricular heart failure

What starts with a failing heart that is unable to meet the metabolic and renal demands of the tissues it serves develops into a systemic sickness with roots in neurohormonal activation. Pathologic ramifications arise from this unwelcomed and unwanted homeostatic stressor response, which is a faulty adaptation. The adrenergic and renin-angiotensin-aldosterone systems produce effector hormones with endocrine characteristics. The symptoms and indications of congestive heart failure are anchored in a hormonally driven salt-abundant condition. The intravascular space expands as a result of the salt and water retention, resulting in central and systemic venous congestion that affects the heart and lungs, the liver, stomach, and kidneys, and finally the extravascular space. The proinflammatory phenotype of congestive HF is associated with other pathophysiologic consequences. They comprise continuous unfavorable renovation of the HF, with extracellular and intracellular monovalent and divalent cation dyshomeostasis, which contributes to the emergence of oxidative stress; bone resorption and loss of soft tissues; necrotic cardiomyocyte loss and replacement fibrosis, as well as weakened antioxidant defenses and an immunostimulatory state, with activated lymphocytes and monocytes producing proinflammatory cytokines (Dube and Weber, 2011) .

2.1.5 Signs and symptoms of heart failure

Dyspnea (on exertion, nocturnal), nocturnal cough, weariness, lethargy, weakness, orthopnea, edema, cachexia, and muscular wasting are all signs of HF. The following symptoms are seen in the late stages of HF: elevated jugular venous pressure (JVP) and tachycardiapedal, lung noises that are weird (crackles) (Mosterd and Azadas, 2007).

Other signs, such as hepatjugular reflux and ascites, wheeze, anorexia and exercise intolerance and swelling ankles are frequent signs of HF patients have a wide range of symptoms, the majority of which are non-specific, yet, the accuracy of diagnosis that relies only on clinical characteristics is occasionally inadequate, especially in females and aged individuals or those with obesity (Watson, Gibbs and Lip, 2000) .

2.1.6 Clinical classification and stages of heart failure

The international classification of HF in terms of severity of symptoms and physical activity by the European Society of Cardiology is as follows.

A: (Mild) There are no restrictions on physical activities. Normal physical exertion does not result in excessive exhaustion, palpitation, or dyspnea (shortness of breath).

B: (Mild) Physical activity is restricted slightly. At rest, it's comfortable, but regular physical exertion causes tiredness, palpitation, or dyspnea.

C: (Moderate) Copyright-protected content Physical exercise is severely restricted. At rest, it's comfortable, but less-than-normal activity induces tiredness, palpitation, or dyspnea.

D: (Severe) Unable to engage in any physical exercise without pain. At rest, symptoms indicate cardiac insufficiency. When patients engage in any type of physical exercise, they will feel more uncomfortable (Rutten, 2013).

The four levels of staging scheme established by the American College of Cardiology/American Heart Association (ACC/AHA) are as follows:

Stage A: There is a high chance of heart failure, but there are no structural heart diseases or heart failure symptoms.

Stage B: Heart disease with no signs or symptoms of heart failure.

Stage C: Heart failure symptoms and structural heart disease.

Stage D: Refractory heart failure that necessitates specialized treatment (Inamdar and Inamdar, 2016).

2.1.7 Diagnosis in heart failure

Physical examination to determine the presence of clinical symptoms and signs, blood tests, including complete blood count, urinalysis, complete metabolic profile for levels of serum electrolytes (including calcium and magnesium), blood urea nitrogen, serum creatinine, glucose, fasting lipid profile, liver function tests, and thyroid-stimulating hormone. Biomarkers not only give essential information on the pathogenesis of the disease, but they also provide insights into the severity of the progression of the disease. In terms of HF biomarkers, the National Academy of Clinical Biochemistry has set similar goals in a consensus document, stating that a biomarker in heart failure should be able to: (i) identify possible underlying and potentially reversible causes of HF; (ii) confirm the presence or absence of the HF syndrome; and (iii) estimate the severity of HF and the risk of disease progression (Inamdar & Inamdar, 2016).

2.1.7.1 Chest radiography

Because chest radiography can detect pulmonary causes of dyspnea, it should be done first to rule out HF (e.g., pneumonia, pneumothorax, mass). When a patient with dyspnea has pulmonary venous congestion and interstitial edema on chest radiography, the diagnosis of HF is more likely (King et al., 2012) .

2.1.7.2 Electrocardiography

In patients with suspected HF, electrocardiography can help identify other causes. Changes such as left bundle branch block, left ventricular hypertrophy, acute or previous myocardial infarction, or atrial fibrillation can be detected and may require further investigation through echocardiography, stress testing, or consultation with a cardiologist (King et al., 2012) .

2.1.7.3 Magnetic resonance imaging

Left ventricular volume and ejection fraction data acquired with magnetic resonance imaging are equivalent to those obtained with echocardiography. Magnetic resonance imaging (MRI) can provide additional information on myocardial perfusion, viability, and fibrosis, which can help determine the cause of HF and prognosis. Magnetic resonance imaging also has a great anatomical resolution of all elements of the heart and its surroundings (King et al., 2012) .

2.1.7.4 Laboratory exams

The European Society of Cardiology recommends laboratory testing as part of the standard diagnostic procedure. These lab tests can also guide the practitioner to alternative diagnoses and potentially modifiable causes of HF. Plasma nanoparticles (NPs) should be measured following the initial diagnostic, as previously stated. The measurement of NPs should be used to rule out HF rather than to confirm the diagnosis, according to the recommendations of the European Society of Cardiology (ESC) recommendations (Spoletini and Vitale, 2017).

2.1.7.5 Stress echocardiography

Stress echocardiography may allow the detection of exercise-related dysfunction in patients who have shortness of breath, preserved left ventricular ejection fraction and inconclusive diastolic parameters at rest (Ponikowski et al., 2016) .

2.1.8 Treatment in heart failure

In-patient HF management: It is recommended that the patient be admitted to a telemetry bed or the intensive care unit (ICU), with therapy based on the following considerations.

1. The patient's oxygen levels should be monitored, whether Partial Pressure of Oxygen (PaO₂) is 60 percent or oxygen saturation (SaO₂) is 90 percent.
2. Provide noninvasive positive pressure ventilation (NIPPV) should be provided for

respiratory support in a few cases of respiratory distress to prevent intubation.

3. Depending on the precipitating factors and symptoms/signs of congestion, use the following pharmacological agents should be used:

- a. Diuretics (loop diuretics, thiazides and potassium sparing) (to reduce edema by reducing venous pressure and blood volume), and salt restriction to reduce fluid retention in patients with current or previous HF symptoms and a reduced left ventricular ejection fraction for symptomatic relief.
- b. Angiotensin-converting enzyme inhibitors or angiotensin receptor blockers for neurohormonal modification, vasodilation, and improvement in Left ventricular ejection fraction (LVEF) (in patients who do not respond to Angiotensin Converting Enzyme Inhibitors (ACEIs) or Angiotensin receptor blockers (ARBs), replace hydralazine and/or nitrates).
- c. Beta-adrenergic blockers for neuro-hormonal changes, improved symptoms and Left ventricular ejection fraction (LVEF), improved survival, arrhythmia avoidance, and ventricular rate control.
- d. Aldosterone antagonists as a supplement to other medicines for additive diuresis, HF symptom management, decreased ventricular arrhythmias, reduced cardiac strain, increased Left ventricular ejection fraction (LVEF), and enhanced survival.
- e. Digoxin, which can result in cardiac output with a slight increase, improved heart failure symptoms, and fewer HF hospitalizations.
- f. Anticoagulants to reduce the risk of thromboembolism, if necessary.
- g. Inotropic drugs to enhance cardiac output and minimize neurohumoral activation in patients with heart failure with lower ejection fraction by restoring organ perfusion and reducing congestion (Inamdar and Inamdar, 2016) .

2.1.9 Prognosis in heart failure

Once HF is diagnosed, identifying the characteristics that may indicate a poor prognosis is critical in order to refer patients for evaluation of eligibility for advanced treatments or consolidation of palliative care as soon as possible (Chaudhry and Stewart, 2016).

Physicians, patients, and their families can determine a suitable type of treatment and its timing via the prognosis for sickness, disability, and mortality. They can especially switch to advanced types of treatments and resources and healthcare and social services can be planned with the help of the prognosis. Some predictive markers of mortality and/or admission to hospital related to HF have been determined in patients who have HF (Ponikowski and Voors, 2017).

Clinical considerations, the right heart, laboratory examination, and pharmaceutical intolerances are four categories of important prognostic variables (Chaudhry and Stewart, 2016).

2.1.10 Nursing care in heart failure

The function of nurses was previously determined in the long-term treatment of patients with chronic illnesses, and the involvement of nurses in HF disease management services was swiftly reinforced. Such a high degree of attention has since been recognized in international guidelines and as a sign of good service. More recently, there has been a growing interest in improving patient outcomes by focusing more on in-patient admission, faster diagnosis of acute or decompensated HF, and in-patient management in an appropriate care environment (Riley, 2015).

2.1.10.1 Monitoring the vital signs of a patient with heart failure and expected findings

A low cardiac activity, which identifies left heart failure, impacts vital signs adversely. For this reason, the nurse needs to observe the vital signs, recognize irregular

adjustments, monitor everything, update the schedule of the nursing care, and inform the physician about any abnormalities (Amakali, 2015).

2.1.10.2 Diet modification for the patient

Diet is critical for keeping fit for patients who have a heart disease. The diet of the patient needs modifying to adjust to the golden rule of fat-free and low salt formula. A low-salt, low-fat diet reduces the risk of fluid accumulation. The patient should be recommended to sustain a Semi-Fowler posture after each meal. To supplement the energy, calorie-rich food should be supplied. Since the patient's immunity is poor due to low body metabolism, vitamin-rich food should be given to increase their immunity (Amakali, 2015).

2.1.10.3 Promoting activity tolerance and controlling anxiety

Physical exercise is a class IA recommendation in the European Society of Cardiology Guidelines for heart disease to increase functional ability, quality of life, and prognosis (Zores et al., 2019).

Patients with heart disease are advised to engage in regular physical exercise. Patients who are physically active on a regular basis have improved fitness capability and are less likely to develop diabetes. If they were admitted to the hospital, the prognosis would be higher (Klompstra, 2016).

Depression and anxiety problems in people with HF should be treated with both psychotherapy and medicine. Compared to pharmacotherapy, psychotherapy has a number of benefits. For starters, it can be tailored to the needs of specific patients (Celano, Villegas, Albanese, Gaggin and Huffman, 2018).

2.1.10.4 Life styles modification

It is critical for the patient to change his or her lifestyle and emotions, all of which may increase the workload of the heart. As a result, the nurse should have both provisional care interventions for the patient's life adjustment and make

recommendations to the patient about how to change his or her lifestyle for better health outcomes (Amakali, 2015).

Lifestyle treatments are expected to be successful during the progression of the disease. While beneficial lifestyle improvements are widely advocated, the evidence for their effectiveness is controversial (Aggarwal et al, 2018).

2.1.10.5 Administration of medications and oxygen therapy

The prescriptions for symptomatic treatment of heart disease are administered by the practitioner in a hospital setting. The nurse's job is to follow the order and prescribe the prescriptions. The nurse is required to provide pharmacological expertise against both the therapeutic and side effects of those drugs. The drugs used to treat heart disease can be fatal if they are given without caution. As a result, the nurse will be responsible for his or her nursing activities related to the delivery of prescription drugs (Amakali, 2015).

2.1.10.6 Coordination of the diagnostic examinations for efficient clinical management of the patient with heart failure

The practitioner has authority over the basis and prescribing of medical testing for a patient with heart disease in a hospital setting. The nurse's primary duty is to ensure that diagnostic tests are carried out and that the findings are available for review by the practitioner so that care can be adjusted appropriately. Chest x-rays, electrocardiograms (ECGs), and laboratory blood samples are the most basic screening tests (Amakali, 2015).

2.1.10.7 Provision of counseling and health education to the patient and the family

Patients with heart disease should also be given preventive education so that they can take care of themselves at home. Self-monitoring, behavioral improvement, diet, and medicine can be the focus of health education for a patient with heart heart disease, self-administered medication and follow-up care (Amakali, 2015)

2.1.10.8 Implementation of ethical principles in caring for the patient with heart failure

Patients are individuals with their own set of morals, interests, and societal norms. As a result, a patient with heart disease should receive professional treatment that is tailored to his or her specific needs, ethically driven, and contextually important. The ethical principles of fairness, autonomy, and reverence for an individual, as well as reality, beneficence, and the maxim of no maleficence, should all be observed in this regard (Amakali, 2015).

2.2 Quality of Life

“Quality of life” denotes a comprehensive and multidimensional term that comprises subjective judgements of positive and negative factors of life. It involves a person's or a society's expectations for a good existence. Values, aspirations, and the social and cultural milieu in which the individual lives drive these expectations. It serves as a benchmark by which an individual or society may assess many aspects of personal life. Quality of life is defined as a patient's "cognitive life activity" in relation to HF and its treatment on an individual's health. It comprises the patient's assessment of physical, psychological, and social health characteristics. Patients with HF have a variety of physical, psychological, social, vocational, and economic issues that negatively impact their quality of life (Mohammed and Mohammed, 2021).

One of the ultimate goals of the Human Development Strategy is to improve people's lives and their quality of life. This is also the initial goal of any country's social-economic development plan. Many nations and international organizations have explored and created techniques for measuring the QoL as a foundation for assessing significant changes in the QoL over time and comparing the QoL among countries, regions, cities, or communities (Ngan, 2020) .

2.2.1 Health-related quality of life

QoL means 'leading a nice life and being satisfied with life.' It is now described as a statistical indicator according to many criteria relating to an individual's or group's

living situations, including economic, health, and environmental factors. According to the model of socio-psychological QoL put forward by Levine in 1991, QoL is a period of life by which an individual is affected directly and which is significant to the individual. In 1997, Saxen and Orley used this concept to identify the aspects that contribute to an individual's quality of life, such as physical health, psychological condition, level of independence, interpersonal connections, and the environment in which the person lives (Sosnowski et al., 2017) .

The phrase "health" is a broad concept that encompasses numerous aspects of physical, mental, and societal well-being. It is "a state of total physical, mental, and social well-being, rather than only the absence of sickness or disability," according to the World Health Organization (WHO). Health status, functional rank, and quality of life are all phrases that are widely used to refer to "health." This domain encompasses everything from pleasure to death. Death is regarded as a bad aspect of life, but happiness is regarded as good quality. It represents QoL, as addressed as a subject of well-being. Quality of life rises as a concept that encompasses aspects of social, physiological, emotional, and divine happiness. When seen as a feature of QoL, health is a superlative belief that is commonly used to describe QoL. It is measured to fall below the worry of healthcare team members, and it is viewed as a goal of a healthcare incursion. According to the World Health Organization (WHO), the most important determinants of health include the social and economic environment, the physical environment, and the creature's individual characteristics and activities. Socioeconomic status, education and literacy, employment and working environments, individual's health and wellbeing practices, social surroundings, managing skills, healthy child growth, healthcare facilities, age, gender, and values and cultures or norms are all factors that influence whether people are healthy or unhealthy (Nasim et al., 2018).

2.2.2 Heart failure and quality of life

Health-related quality of life is a method of evaluating a patient's condition and well-being from their point of view, omitting difficulties that are directly connected to their health. Patients with HF can use health-related quality of life to identify the

disease's influence on their physical and mental well-being, which is difficult to detect using standard clinical assessments. As a result, heart failure care focuses on supporting patients psychologically and improving health-related quality of life (Molla, Yitayal and Amare, 2021) .

Several studies have found that socio-demographic characteristics, such as age, gender, educational status, and employment, have a substantial impact on health-related QoL of patients with HF. Because the major goal of heart failure management is to enhance patients' QoL related to health, understanding it and factors that influence it is critical for providing appropriate healthcare, treatment, and management (Molla et al., 2021) .

Reducing symptoms and improving health-related QoL are important goals of HF therapy. Despite these goals, HF patients' health-related quality of life is much lower than that of the general population and those with other conditions (Kraai, Vermeulen, Hillege, Jaarsma and Hoekstra, 2017).

HF increases the risk of infection, makes the most of health-care resources, raises treatment costs, lengthens hospital stays, and places an undue load on the family and society, all of which lower the QoL of patients with HF. Quality of life is viewed as a more holistic approach to medicine, a critical aspect in determining the impact of illnesses and improving the quality of medical treatment (Costa, Islam, Anowar and Latif., 2020).

2.2.3 Heart failure-related of life and nursing

Cardiovascular disorders are responsible for high morbidity and death rates, as well as an increase in hospital admissions, resulting in increased public health costs and a decline in the quality of life of those afflicted. HF, which is the ultimate common route of most heart illnesses, is emphasized as a severe and rising concern in public health across the world. Dyspnea, exertional weariness, lower limb edema, nocturnal cough, and orthopnea are all documented indications and symptoms of the condition. Other symptoms, including as hypotension, vertigo, and bradycardia, may be present, resulting

in recurrent hospitalizations. According to evidence found in the literature, around half of patients with heart failure are readmitted to the hospital within 90 days of release, with deteriorating clinical circumstances that can lead to mortality. Low adherence to the complicated therapy regimen given is one of the primary causes of the aggravation of the illness (Azevedo et al., 2018).

Because of the changes imposed by the disease on the lifestyle with the acquisition of new habits, HF has a direct impact on QoL (Sousa et al., 2017).

The QoL of patients with HF will ultimately worsen. As a result, the typical therapeutic aims for HF will alleviate symptoms, enhance prognosis, and eventually improve the patient's QoL. Patients with HF suffer from physical impairments as well as a number of psychological and economical issues that affect their overall QoL. HF is also distinguished by rapid changes in state, unlike cancer, which has a more predictable prognosis (Hwang, Liao and Huang., 2014) .

It is critical for the nurse to be up to date on his or her role in health education and treatment for people with heart failure, given the relevance of a nurse's knowledge in HF care (Azevedo et al., 2018) .

In order to provide high-quality health care to individuals with HF and improve their prognosis, research show that pharmaceutical and surgical therapies increase their quality of life (Amaral, Rossi, Lopes and Lopes., 2017).

Nonpharmacological therapies, on the other hand, can enhance results if nurses are aware of their effectiveness (Amaral et al, 2017).

3. MATERIALS AND METHODS

This study was conducted to assess the levels of factors affecting the QoL of patients with heart failure.

3.1 Study Design

A descriptive cross-sectional design was used. The study was carried out to assess factors affecting the QoL of patients with heart failure in Najaf, Iraq between the 1st of January and 1st of March.

3.2 Setting and Sample of The Study

The study was conducted in Al-Sadir Teaching Hospital, Al-Hakeim Hospital and Al-Furat Hospital in Al-Najaf Al-Ashraf Governorate (n = 246), and the hospitals were selected according to their monthly target for intensive care units, which provides healthcare for patients with HF. The sample was selected using the simple random method from the total study population. The study relied on Krejcie and Morgan (1970) and used a table to determine the sample size, based on the following equation (Bukhari, 2021).

$$s = \frac{X^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

S= Sample size

X= confidence level (3.841).

N= size of the population.

P = proportion of the population (considered as fifty as it was thought to yield the maximum sample size)

D = the level of accuracy (0.5)

This procedure included selecting 150 subjects from three hospitals, where the total population consisted of 246 patients, including 199 in Al-Sadir hospital, 35 in Al-Hakeim hospital, and 12 in Al-Furat hospital. The proportional stratified sampling procedure was employed for calculating the number of patients for each hospital based on a weighting law: $\text{part/total} \times \text{sample size}$ (United States Department of Agriculture., 2000).

So the sample size for each hospital was calculated as follows:

Al-Sadr Hospital = $199/246 \times 150 = 122$

Al-Hakim Hospital = $35/246 \times 150 = 21$

Al Furat Hospital = $12/246 \times 150 = 7$

3.3 Study Instruments

Based on the quality of WHO guidelines for QoL for patients with heart failure to assess the study phenomena, the researcher used a questionnaire in this study to assess the levels of factors that affected the QoL of patients with heart failure. The questionnaire consisted of (2) two sections as follows (Appendix 1):

The first section: the demographic data of the sample, such as age, gender, educational level, and marital status.

The demographic data of the participants in the study were collected using a questionnaire prepared by the researchers in light of the literature, including heart failure stage, smoking, alcohol, diet, weight control, profession, monthly income, having children, number of children, diagnosis of heart failure, accompanying diseases, medication adherence, whether the disease affected the patient's life negatively, the caregiver at home, other patients with heart diseases in the family, previous hospitalization due to heart failure, and activities restricted due to heart failure (Çaloğlu, 2012; Ohaeri and Awadalla, 2009).

The second section: The quality of life scale of the World Health Organization, which consists of four domains these are (physical, Psychological, Social, Environment). So, general domains are content (26) items. Each individual item of the WHOQOL-BREF is scored from 1 to 5 on a response scale, which is stipulated as a five-point ordinal scale. The scores are then transformed linearly to a 0–100-scale. This scale is developed by WHO, it should certainly be known that the Arabic validity and reliability carried out by Ohaeri and Awadalla in 2009. The internal consistency values for the full questionnaire and the domains had $\alpha \geq 0,7$ from Cronbach. As for the Cronbach for this study is 0,85. In addition to Cronbach for the domains: physical health domain is 0,77, psychological domain is 0,76, society domain is 0,75, environmental domain is 0,78.

Domain 1: General physical health and overall QOL includes (9) ability to roll, energy for life, satisfaction with general health, satisfaction with ability to work, activities of daily living, physical pain, the need for treatment to do work, overall rating of QOL, sleep satisfaction .

Domain 2: Psychological health includes (6) finding life meaningful, enjoyment of life, acceptance of physical appearance, negative feelings (anxiety and depression), ability to concentrate, and self-satisfaction.

Domain 3: Social relations includes (4) Satisfaction with personal relations, satisfaction with sex, satisfaction with support from friends, satisfaction with health.

Domain 4: Environment includes (7) satisfaction with access to health services, satisfaction with transport, enough money for needs, satisfaction with the conditions of the place of residence, feeling safe in daily life, opportunity for leisure activities, and satisfaction with available information (WHO,1996) .

3.4. Data Collection Method

Data were collected between January 1 and March 1 in the hospitals of Al-Najaf city in Iraq (Al-Sadir, Al-Hakeim, and the Middle Euphrates). The total sample size was 150 patients who suffered from heart failure and this number was distributed to hospitals according to the monthly target in the recovery and emergency recovery units. Face-to-face interviews with patients were used to collect study data. The researcher introduced herself and informed patients about the purpose of the research. Patients were informed that their information would be kept confidential. After that, patients answered the questions, and the researcher filled out the questionnaire. Four patients refused to participate in the interview due to extreme fatigue and inability to speak or unconscious. It took 10 - 15 minutes to fill out the questionnaire.

3.5 Data Analysis

The study data in the current study were analyzed on SPSS version 20. The frequency, percentage, range, arithmetic means and standard deviation values were used for descriptive statistics of the data. One-way ANOVA and independent t-test were used for inferential statistics. The outcomes were considered statistically significant when the P-value was equal to or less than 0,05.

3.6 Ethical Aspects

Before starting the research, the authors' approval of QoL was obtained by communicating with them via e-mail (Appendix 2). The researcher obtained the Ethics Committee of Çankırı Karatekin Üniversitesi in Turkey (Appendix 3) No.: 24 on 29-12-2021. The researcher obtained the approval of the Ethics Committee of the Najaf Health Directorate. Ethical permission No.: 54 dated 29-12-2021 was obtained from Najaf Health Director to facilitate data collection from Najaf city hospitals (Appendix 4-5-6). Patients were informed the nature of the current work, its benefits to society, and agreed to cooperate as a voluntary sample for the study. Patients were informed that their identities would be kept confidential. Their names were not disclosed by filling out the questionnaire during the interview, and they were told that they could quit the study when they wanted to, even if the interview process was not completed. In addition,

patients gave their consent to the researcher after they were informed about the purpose of the study.



4. RESULTS

This study was conducted to evaluate the levels of factors affecting the QoL of patients with heart failure.

Table 4.1: Statistical distribution of the study sample by demographic and clinical data.

	Demographic data	N	%
Age	40 – 45	7	4,67
	46 – 51	2	1,33
	52 – 57	9	6,00
	58 – 64	25	16,67
	65 and older	107	71,33
Gender	Male	70	46,67
	Female	80	53,33
Level of education	Illiterate	102	68,00
	Primary	19	12,67
	Secondary	20	13,33
	Institute and above	9	6,00
Profession	Employee	13	8,67
	Housewife	79	52,67
	Self-employed	6	4,00
	Unemployed	36	24,00
	Retired	14	9,33
	Driver	1	,67
	Farmer	1	,67
Marital status	Single	1	,67
	Married	149	99,33
Monthly income	Enough	11	7,33
	Equal Enough	90	60,00
	Not enough	49	32,67

Table 4.1 (Cont.....) : Statistical distribution of the study sample by demographic and clinical data.

Having children	Yes	144	96,00
	No	6	4,00
If yes, how many children	<= 5	66	45,83
	6 – 15	82	56,94
	16 and more	1	0,69
Residential area	Urban	100	66,67
	Rural	50	33,33
Clinical data			
Stage of heart failure	No physical activity limitation	1	,67
	Mild limitation of physical activity	16	10,67
	Significant limitation in physical Activity	94	62,67
	Any physical activity without discomfort and inability to continue activity	39	26,00
Diagnosis of heart failure	6 months-1 year	32	21,33
	1-2 years	16	10,67
	2 years and above	102	68,00
Other disease besides heart failure	None	22	14,67
	DM	12	8,00
	BP	44	29,33
	RSD	3	2,00
	RA	1	,67
	DM+BP	49	32,67
	BP+ULCER	1	,67
	BP+DM+RSD	2	1,33
	BP+DM+RF	8	5,33
	BP+DM+CVA+RF	2	1,33
	BP+RA	1	,67
	DM+RSD	1	,67
	BP+RSD	2	1,33
	RF	1	,67
	BP+DM+AZ	1	,67
Smoking	Yes	83	55,33
	No	67	44,67

Table 4.1 (Cont.....) : Statistical distribution of the study sample by demographic and clinical data.

Using alcohol	Yes	3	2,00
	No	147	98,00
Weight control	I do	85	56,67
	I don't	65	43,33
Cardiac diet (low salt)	Yes	87	58,00
	No	63	42,00
Reasons for not following a diet	None	84	56,00
	Reject	44	29,33
	Lack of knowledge	21	14,00
	Both	1	,67
Appropriate drug use	Always	65	43,33
	Often	49	32,67
	Sometime	32	21,33
	Never	4	2,67
Has your illness negatively affected your life (work/family)?	Yes	149	99,33
	No	1	,67
Who do you live with or who takes care of you at home?	I live with my wife and children	147	98,00
	I live alone	3	2,00
	I live in an elderly care home	0	,00
Are there other heart patients in your family	Yes	58	38,67
	No	92	61,33
If your answer is "yes", what is the degree of closeness?	None	92	61,33
	I am first degree relative (mother, father, sibling, child)	49	32,67
	My second degree relative (aunt, uncle, aunt, etc.)	9	6
Have you been hospitalized for heart failure before?	I slept	145	96,67
	I didn't sleep	5	3,33
Which of your activities below were restricted due to heart failure?*	Driving a motor vehicle, automobile	15	8,52
	Doing housework	19	10,80
	Ability to act quickly and in haste	0	0
	Exercise	5	2,84

Table 4.1 (Cont.....) : Statistical distribution of the study sample by demographic and clinical data.

Sexual life	5	2,84
Climbing uphill or stairs	26	14,77
Using appliances that require power and energy	7	3,98
Personal hygiene	99	56,25
Total	150	100%

*Multiple responses variable.

Table 4.1 presents the statistical distribution of participants according to their demographic data. As seen in the table, the majority of the patients with heart failure were aged 65 and older with a percentage of 71,33%. The percentage of women was 53,33%, 68,00% of the participants had not received any education, 52,67% of them were housewives, and the percentage of urban residents was 66,67%. The percentage of those who had a significant restriction in physical activity was 62,67%, and the percentage of those who had been diagnosed with heart failure for one year and over was 68,00%. The percentage of patients with heart failure, pressure, and diabetes was 32,67%, 55,33% were smokers, 56,67% controlled their weight, 56,00% did not follow a diet (none), and 99,33% were affected negatively by the disease. The percentage of non-affected families with this disease was 61,33%, while their families were first-degree patients with a rate of 32,67%. The percentage of hospital admissions due to heart failure was 96,67%, and the percentage of those who were unable to do personal hygiene was 56,25.

Table 4.2: Statistical distribution of Quality of Life Domains.

Quality of Life Domains		n	%	Mean $\pm$ SD
1- Physical health	Poor	136	90,7	39,54 $\pm$ 12,9
	Good	14	9,3	
2- Psychological	Poor	108	72	45,1 $\pm$ 13,4
	Good	42	28	
3- Social	Poor	33	22	59,2 $\pm$ 11,9
	Good	117	78	
4- Environmental	Poor	111	74	48,5 $\pm$ 8,02
	Good	39	26	
Overall Quality of Life domains	Poor	92	61,3	48,07 $\pm$ 8,7
	Good	58	38,7	
Total		150	100%	

Using Descriptive statistical analysis (frequency, percentage, Mean and Standard deviation (SD) ; Mean $\leq$ 50: Poor, Mean $>$ 50: Good

Table 4.2 demonstrates the distribution of descriptive statistics for the domains of QoL according to patients' overall quality of life. This table confirms that the majority of the domains were reported as poor (48,07 %). Mean response in the social domain was Mean $\pm$ SD=59,2 $\pm$ 11,9.

Table 4.3: The relationship of scores on the quality of life with demographic data by demographic categories and with clinical data by clinical categories.

Demographic data		N	Mean $\pm$ SD	p-value
Age	40 – 45	7	47,49 $\pm$ 1,07	0,426
	46 – 51	2	57,18 $\pm$ 0,46	
	52 – 57	9	48,41 $\pm$ 1,19	
	58 – 64	25	48,24 $\pm$ 1,41	
	65 and More	107	48,44 $\pm$ 1,38	
Gender	Male	70	48,61 $\pm$ 1,43	0,130
	Female	80	47,27 $\pm$ 1,27	
Level of education	I have not received any training	102	47,37 $\pm$ 1,26	0,093
	Primary school-secondary school	19	46,16 $\pm$ 1,47	
	High school or Equivalent	20	48,52 $\pm$ 1,58	
	License	9	56,47 $\pm$ 1,34	

Table 4.3 (Cont...) : The relationship of scores on the quality of life with demographic data by demographic categories and with clinical data by clinical categories.

Profession	Employee	13	57,42±0,9 ^a	0,002**
	Housewife	79	19.25±1.31 ^b	
	Free work	6	46,1±0,73 ^c	
	Unemployed	36	47,41±1,38 ^{abc}	
	Retired	14	56,22±1,35 ^{abc}	
	Driver	1	33,95±0 ^{abc}	
	Farmer	1	47,93± ^{0abc}	
Marital status	Single	1	51,07±0	0,636
	Married	149	48,43±1,36	
Monthly income	Enough	11	48,91±1,9 ^a	0,039*
	Equal Enough	90	48,58±1,2 ^a	
	Not enough	49	47,05±1,43 ^b	
Having children	Yes	144	48,44±1,36	0,615
	No	6	47,16±1,39	
If yes, how many children	<= 5	66	48,45±1,5	0,975
	6 – 15	82	48,41±1,25	
	16 and more	1	47,23±0	
Residential area	Urban	100	78,41±1,43	0,827
	Rural	50	48,46±1,2	
Clinical data				
Stage of heart failure	No physical activity limitation	1	42,51±0 ^{abc}	<0,0001 **
	Mild limitation of physical activity	16	58,54±1,15 ^a	
	Significant limitation in physical activity	94	48,61±1,2 ^b	
	Any physical activity without discomfort	39	48,48±1,23 ^c	
	inability to continue activity			
Diagnosis of heart failure	6 months-1 year	32	48,76±1,32	0,257
	1-2 years	16	47,16±1,47	
	2 years and above	102	47,87±1,34	
Other disease besides heart failure	None	22	48,51±1,27	0,07
	DM	12	47,31±1,31	
	BP	44	48,7±1,34	
	RSD	3	47,2±1,25	

Table 4.3 (Cont...) : The relationship of scores on the quality of life with demographic data by demographic categories and with clinical data by clinical categories.

	RA	1	44,43±0	
	DM+BP	49	48,59±1,43	
	BP+ULCER	1	47,27±0	
	BP+DM+RSD	2	48,2±0,62	
	BP+DM+RF	8	48,44±0,79	
	BP+DM+CVA+RF	2	48,64±0,64	
	BP+RA	1	58,76±0	
	DM+RSD	1	42,62±0	
	BP+RSD	2	48,56±1,7	
	RF	1	43,71±0	
	BP+DM+AZ	1	48,42±0	
Smoking	Yes	83	48,43±1,38	0,962
	No	67	48,22±1,33	
Using alcohol	Yes	3	48,86±0,98	0,585
	No	147	47,42±1,36	
Weight control	I do	85	47,37±1,46	0,251
	I don't	65	48,52±1,22	
Cardiac diet (low salt)	Yes	87	48,53±1,41	0,274
	No	63	47,29±1,27	
Reasons for not following a diet	None	84	48,52±1,41	0,741
	Reject	44	47,32±1,28	
	Lack of knowledge	21	47,34±1,34	
	Both	1	48,52±0	
Appropriate drug use	Always	65	48,6±1,53	0,267
	Often	49	47,23±1,28	
	Sometime	32	48,2±1,06	
	Never	4	48,34±0,92	
Has your illness negatively affected your life (work/family)?	Yes	149	47,43±1,36	0,748
	No	1	48,99±0,0	
Who do you live with or who takes care of you at home?	I live with my wife and children	147	47,14±1,37	0,551
	I live alone	3	48,97±0,21	
	I live in an elderly care home	0	0	

Table 4.3 (Cont...) : The relationship of scores on the quality of life with demographic data by demographic categories and with clinical data by clinical categories.

Other heart patients in your family	Yes	58	47,28±1,29	0,298
	No	92	48,52±1,39	
If your answer is “yes”, what is the degree of closeness?	None	94	48,52±1,38	0,147
	I am first degree relative (mother, father, sibling, child)	49	47,4±1,29	
	My second degree relative (aunt, uncle, aunt, etc.)	7	48,48±1,14	
Have you been hospitalized for heart failure before?	I slept	145	47,39±1,34	0,042*
	I didn't sleep	5	57,64±1,16	
Total		150	100%	

Abbreviation: P =probability value was calculated by using t-test when there are two groups and using One-way ANOVA when there are three or more groups; *= Significant if the $p \leq 0.05$, **= High Significant if the $p \leq 0.01$; abc= there is a significant difference, if the letters are different between groups, and there is no significant difference if the letters are the same.

Table 4.3 reflects the relationship between demographic data and quality of life scores according to demographic categories. This table shows there are a highly significant relationships between the overall quality of life and profession (Mean $\pm$ SD=19,25±1,31^b, $p < 0.002$) in which the most poor quality of life subgroups those who are housewife; and monthly income in which the most dissatisfied subgroup are those with equal enough monthly income (Mean $\pm$ SD=48,58±1,2^a; $p = 0,039$), in addition the stage of heart failure had been affected in the quality of life (Mean $\pm$ SD=48,61±1,2^b; $P \leq 0,0001$) in which the most subgroup are those have you been hospitalized for heart failure (Mean $\pm$ SD=47,39±1,34, $p < 0,042$).

5. DISCUSSION

This chapter presents a systematically organized interpretation and discussion of the results with the support of the available literature and related studies.

5.1 Demographic and Clinical Data

The highest rates of heart failure were from age 65 and over 71,33% and this is in agreement with the Ameen and Gardi study (2019) in Erbil Governorate, Iraq , It could be because the quality of life for this age group is bad .

Regarding gender, the incidence of HF was higher in females than in males with 53,33%, and this was consistent with the study conducted by Chang, Chiou, Cheng, and Lin (2016). This reflects the results of the study conducted by Stehlik et al. (2019) that men were more likely to have heart failure than other people. It could be because of the social situation in Iraq and the responsibilities and psychological pressures.

As for the profession, the majority of the patients were housewives with 52,67%, which was in agreement with the results of the study conducted by Molla et al. (2021). It could be because these women did not have physical fitness and did not work. For married people, the percentage was higher with 99,33%, which was supported by the results of the study conducted by Blinderman, Homel, Billings, Portenoy, and Tennstedt. (2008). This is due to psychological pressure, poor living conditions and limited monthly income.

The results proved that 66,67% of patients with heart failure lived in urban areas and this was consistent with the study of Al-Hchaim (2019). This may be because urban residents do not adhere to healthy food and rely on foods rich in fat and most Iraqi people stop working and do not exercise when they reach a certain age group.

The results also showed that the third stage of heart failure had the highest percentage with 62,67%, and this was consistent with the study conducted by Gallagher, Luttik, and Jaarsma. (2011). In contrast, Chuang, Kao, Lin, and Chang (2019) found that the second stage had the highest percentage. This may be because these patients had diseases other than heart failure.

In addition, the majority of heart failure patients suffered from blood pressure and diabetes with 32,67%, which was consistent with the results of the study conducted by Okura, Urban, Mahoney, Jacobsen, and Rodeheffer (2004). The cause can be genetic, and patients already had pressure or diabetes, which led to heart failure.

The study showed that 55,33% of patients with heart failure smoked. This was in agreement with the study of Piek et al (2017). The causes of heart failure also include smoking. It can be one of the reasons for the bad health in Iraq, including poor living conditions and psychological stress.

The results also showed that 98,00% of heart failure patients did not drink alcohol and this was in agreement with the study conducted by Del Gobbo et al. (2015). The reason may be that most patients with heart failure do not drink due to social and religious status.

In addition, the results showed that the majority of heart failure patients controlled their weight (56,67%), and this was in agreement with the study conducted by Aminde et al. (2017). The reason could be that heart failure leads to weight loss in some people eating healthy food.

The results showed that 58,00% of patients had a healthy diet (low salt) and this was in agreement with the study conducted by Madanat, Saleh, Maraskine, Halalau, and Bukovec (2021). The reason could be that most patients with heart failure resort to dietary commitment to avoid complications, high pressure, and diabetes.

The study also showed that 99,33% of patients (work and family) were affected negatively by heart failure, and this was in agreement with the study conducted by

McHorney et al. (2021). This is because heart failure limits movement and daily activities and negatively affects the psychology of the patient.

The results showed that 61,33% of patients did not have a family history of heart failure. According to the results, most of those who did not have a family history of heart failure might be smokers or have a bad lifestyle.

According to the results of the study, 96,67% of patients were readmitted to the hospital due to heart failure, and this is consistent with the study conducted by Vaccarino, Kasl, Abramson, and Krumholz (2001). It may be due to a lack of adherence to medication, eating healthy food, or exercise.

5.2 Statistical Distribution of Quality of Life Domains.

The results indicated that the mean score on the physical domain was $39,54 \pm 12,9$, the psychological domain was $45,1 \pm 13,4$, the social domain was $59,2 \pm 11,9$, and the environmental domain was $48,5 \pm 8,02$. According to these results, it was proven that the social field was higher than other domains (psychological, environmental, and physical), and this was due to the great support provided by husbands, family, and friends to these patients. The physical field was lower than the rest of the fields, and this was due to a high level of restriction in movement, working, and doing other activities. This study was in agreement with the study conducted by Yıldırım and Hacıhasanoğlu (2011). In contrast, the study conducted by Alzahrani et al. (2022) showed that the psychological domain was higher than the rest of the domains. The reason for the difference may be that Iraq is a country that loves life, in addition to accepting illness and the great social support provided by family and friends. These can relieve depression and anxiety for the patient.

5.3 Discussion Between Demographic Data and Quality of Life Scores According to Demographic Categories and Between Clinical Data and Quality of Life Scores According to Clinical Categories.

The data analysis revealed a significant relationship between the profession and total quality of life as shown in Table No. (4.3), and this result was consistent with the

results of the study conducted by Juenger et al. (2002). As mentioned, this study showed that the profession played a major role in the quality of life of patients. Most patients were housewives, and they did not go out for work or do sports or did not have a job, which negatively affected their lifestyle and lives.

The results of the study also showed the existence of a statistically highly significant difference between monthly income (sufficient to some extent) and quality of life for patients with heart failure, and this was consistent with the study conducted by Seid, Abdela, and Zeleke (2019). The results indicated that financial status had an impact on the quality of life. Most of the Iraqi population suffers from poverty, lack of jobs, high cost of living, or not having enough money to buy medicine.

In addition, the stage of heart failure had a significant effect on quality of life, especially stage (III-IV), and this was in agreement with the study conducted by Hoekstra et al. (2013). The reason may be that the third and fourth stages restrict patients to a large extent and prevent their ability to work.

Furthermore, there was a statistically significant difference in terms of the frequency of hospitalization due to heart failure, and this finding was in line with the study conducted by Wideqvist, Cui, Magnusson, Schaufelberger, and Fu (2021). This may be due to poor nutrition, inadequate physical activity, and the inability of patients to take care of themselves, which brings about an economic cost to the country.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Based on the results of the study and discussion,

1. According to the results of the study, most of the patients with heart failure were not satisfied with their health and had a poor quality of life.
2. The results showed that patients' social support was higher than environmental, psychological, and physical domains.
- 3 .The study indicated that the majority of the patients with HF were aged 65 and over, and the number of females was higher than that of males. Also, the rate of following responses was higher in their categories: having received no education, being a housewives, being married, having a monthly income that is sufficient to a certain extent, living with children, being an urban resident, being heavily restricted in physical activity, having been diagnosed with HF for 2 years or more, having high blood pressure and diabetes, smoking, not using alcohol, adherence to a diet (low salt), adherence to the prescribed treatment, being highly affected by heart failure, living with the spouse and children, not having a family history of HF, and repeated admission to hospital due to heart failure.
- 4 . There was a relationship between demographic data and quality of life in terms of profession, monthly income, the stage of heart failure, and frequency of hospitalization due to heart failure.

6.2. Recommendations

1. This study can be used as a resource for future research on the quality of life of patients with heart failure.
2. The Ministry of Health in Iraq should provide awareness programs on self-care at home in terms of eating healthy food, taking the prescribed treatment, committing to physical activity, and controlling weight.
3. Educational and training courses should provide psychological support and advice for these patients in Iraq.
4. Financial support must be provided for this category of people because of the high price of treatment in Iraq.

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APPENDICES

Appendix 1: Final Form

Factors affecting the quality of life of patients with heart failure in Iraq

We invite you to participate in our study titled "Factors affecting the quality of life of patients with heart failure in Iraq" prepared by SAJA KAREEM HASAN KHALEEL under the consultancy of its member Asst. Prof. Mijgan ONARICI. Before deciding whether or not to participate in this research, you need to know why and how you will do the research. It is very important to read and understand this form. If there is anything that you do not understand and is unclear to you, or if you want more information, ask us. Participation in this study is completely voluntary. You have the right not to participate in the study or to leave the study at any time after participation. Your response to the research will be interpreted as your consent to participate in the research. While answering the questions on the forms given to you, do not be under pressure from anyone or do not take their suggestions into account. Personal information obtained from these forms will remain completely confidential and will be used for research purposes only. Thank you for your participation.

1. What is your gender?

A) Male

B) woman

2. What is your age?

A) 40 - 45 Ages

B) 46 - 51 Years

C) 52-57 years old

D) 58-64 years old

E) 65 years and over

3. Level of education?

A) I have not received any training

B) Primary school-secondary school

C) High school or equivalent

D) License

E) Master's/Professional Degree

4. Profession:

A) Employee

B) Housewife

C) Free work

5. What is your marital status?
- D) unemployed
E) Retired
F) Other.....
6. Monthly income:
- A) Married
B) Single
7. Do you have any children?
- A) Enough
B) Equal enough
C) Not enough
8. If yes, how many children do you have?
- A) Yes
B) No
9. Settlement Area:
- A) urban
B) rural
10. What is the stage of heart failure?
- A) No physical activity limitation.
B) Mild limitation of physical activity.
C) Significant limitation in physical activity.
D) Any physical activity without discomfort inability to continue activity
11. When was the diagnosis of heart failure made?
- A) 6 months-1 year
B) 1-2 years
C) 2 years and above
12. Do you have any other disease besides heart failure?
- A) Diabetes
B) Hypertension
C) Diseases of the respiratory system
D) Rheumatic diseases
E) Other.....
13. Do you smoke?
- A) Yes
B) No
14. Do you drink alcohol
- A) Yes
B) No
15. Do you have regular weight control?
- A) I do
B) I don't

16. Are you following your cardiac diet (low salt)?

A) Yes

B) No

17. If your answer is "no", why don't you follow your diet?

18. Do you take your medications as prescribed?

A) always

B) often

C) sometimes

D) never

19. Has your illness negatively affected your life (work/family)?

A) Affected

B) Not Affected

20. Who lives or takes care of you at home?

A) I live with my wife and children

B) I live alone

C) I live in an elderly care home

21. Do you have any other heart patients in your family?

A) Yes

B) None

22. If your answer is "yes", what is the degree of closeness?

A) I am first degree relative (mother, father, sibling, child)

B) My second degree relative (aunt, uncle, aunt, etc.)

23. Have you been hospitalized for heart failure before?

A) I slept

B) I didn't sleep

24. Which of your activities below were restricted due to heart failure?

A) Driving a motor vehicle, automobile

B) doing housework

C) Ability to act quickly and in haste

D) exercise

E) Sexual life

F) Climbing uphill or stairs

G) Using appliances that require power and energy

H) Personal hygien

WORLD HEALTH ORGANIZATION QUALITY OF LIFE (WHOQOL) -BREF:For each of the following, please select the answer that best describes how satisfied you are with that area of your life. Please mark your answer by circling the number. There is no right or wrong answer.

No	Statements	Very Dissatisfied	Moderately Dissatisfied	Slightly Dissatisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied
1.	How would you rate your quality of life?						
2.	How satisfied are you with your health?						
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?						
4.	How much do you need any medical treatment to function in your daily life?						
5.	How much do you enjoy life?						
6.	To what extent do you feel your life to be meaningful?						
7.	How well are you able to concentrate?						
8.	How safe do you feel in your daily life?						
9.	How healthy is your physical environment?						
10.	Do you have enough energy for everyday life?						
11.	Are you able to accept your bodily appearance?						
12.	Have you enough money to meet your needs?						

13.	How available to you is the information that you need in your day-to-day life?						
14.	To what extent do you have the opportunity for leisure activities?						
15.	How well are you able to get around?						
16.	How satisfied are you with your sleep?						
17.	How satisfied are you with your ability to perform your daily living activities?						
18.	How satisfied are you with your capacity for work?						
19.	How satisfied are you with yourself?						
20.	How satisfied are you with your personal relationships?						
21.	How satisfied are you with your sex life?						
22.	How satisfied are you with the support you get from your friends?						
23.	How satisfied are you with the conditions of your living place?						
24.	How satisfied are you with your access to health services?						
25.	How satisfied are you with your transport?						
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?						

جودة الحياة في منظمة الصحة
العالمية (WHOQOL)
المعلومات الديموغرافية للمقياس

1. الجنس : ذكر ☐ أنثى ☐

2. العمر :

☐ (a) 40 - 45 سنة

☐ (b) 46 - 51 سنة

☐ (c) 52 - 57 سنة

☐ (d) 58 - 64 سنة

☐ (e) 65 سنة فأكثر

3. المستوى التعليمي :

☐ (a) أمي

☐ (b) ابتدائية

☐ (c) ثانوية

☐ (d) معهد/كلية

☐ (e) خريج دراسات عليا

4. المهنة :

☐ (a) موظف/موظفة

☐ (b) ربة بيت

☐ (c) اعمال حرة

☐ (d) عاطل عن العمل

☐ (e) متقاعد

☐ (f) أخرى.....

5. الحالة الزوجية :

☐ متزوج/ة ☐ أعزب/عزباء

6. الدخل الشهري : ☐ كاف ☐ كاف لحد ما ☐ غير كاف

7. هل لديك اطفال: ☐ ☐

8. اذا كان الجواب نعم كم عدد الاطفال لديك ؟ ☐

9. منطقة السكن: ☐ ☐

10. ماهي مرحله قصور القلب :

- ☐ (a) لا يوجد قيود على النشاط البدني.
- ☐ (b) الحد الخفيف من النشاط البدني.
- ☐ (c) محدودية كبيرة في النشاط البدني.
- ☐ (d) عدم القدرة على القيام بأي نشاط بدني دون إزعاج

11. متى تم تشخيص قصور القلب ؟

- ☐ (a) ستة أشهر - سنة
- ☐ (b) 1-2 سنوات
- ☐ (c) سنتان وما فوق

12. هل لديك امراض اخرى غير قصور القلب ؟

- ☐ (a) مرض السكري
- ☐ (b) ارتفاع ضغط الدم
- ☐ (c) امراض الجهاز التنفسي
- ☐ (d) امراض الروماتيزم
- ☐ (e) أخرى.....

13. هل تدخن ؟

☐

14. هل تتعاط الكحول ؟

☐

15. هل انت مسيطرة/ة على وزنك ☐

☐

16. هل تتبع نظام غذائي خاص بأمراض القلب (قليل الملح)؟

☐

17. اذا كان الجواب "لا" فلماذا لا تتبع نظام غذائي ؟

18. هل تتناول ادويةك حسب تعليمات طبيبك ؟

- ☐ (a) دائما
- ☐ (b) في كثير من الأحيان
- ☐ (c) أحيانا

(d) ابدأ

19. هل اثر مرضك سلبي على حياتك (العمل / الاسرة) ؟

لا تتأثر

تتأثر

20. من يعيش معك في المنزل أو يعتني بك؟

(a) أعيش مع زوجتي واولادي

(b) أعيش وحدي

(c) أعيش في دار رعاية المسنين

لا يوجد

يوجد

21. هل يوجد في عائلتك اخرين لديهم مرض بالقلب ؟

22. اذا كان الإجابة "نعم" فما هي درجة التقارب ؟

(a) قريب من الدرجة الأولى (ام , اب , اخ , طفل)

(b) قريب من الدرجة الثانية (عمة , عم , خال , خالة , الخ..)

لا

نعم

23. هل دخلت المستشفى بسبب قصور القلب من قبل ؟

24. أي من الأنشطة الخاصة بك أدناه تم تقييدها بسبب قصور القلب ؟

(a) قيادة السيارة

(b) القيام بالأعمال المنزلية

(c) القدرة على التصرف بالعجلة وبالسعة

(d) التمارين الرياضية

(e) الحياة الجنسية

(f) صعود الدرج أو التلال

(g) استخدام الأجهزة التي تتطلب القوة والطاقة

(h) النظافة الشخصية

ت	مستاء جدا	غير راض إلى حد ما	مستاء قليلا	راض قليلا	راض إلى حد ما	راضي جدا
1.						كيف تقيم نوعية حياتك
2.						ما مدى رضاك عن صحتك
3.						إلى أي حد تشعر بأن الألم الجسدي يمنعك من القيام بالأعمال التي تريدها ؟
4.						إلى أي مدى أنت بحاجة للعلاج الطبي لتتمكن من القيام بأعمالك اليومية ؟
5.						إلى أي مدى تستمتع بالحياة ؟
6.						إلى أي مدى تشعر بأن حياتك ذات معنى ؟
7.						إلى أي مدى أنت قادر على التركيز ؟
8.						إلى أي مدى تشعر بالأمان في حياتك اليومية ؟
9.						إلى أي حد تعتبر أن البيئة المحيطة بك صحية ؟
10.						هل لديك طاقة كافية لمزاولة الحياة اليومية؟
11.						هل أنت قادر على قبول مظهرك الخارجي؟
12.						هل لديك من المال ما يكفي لتلبية احتياجاتك؟
13.						ما مدى توفر المعلومات التي تحتاجها في حياتك اليومية ؟
14.						إلى أي مدى لديك الفرصة لممارسة الأنشطة الترفيهية؟
15.						إلى أي مدى أنت قادر على التنقل بسهولة؟
16.						كم أنت راض عن نومك ؟
17.						إلى أي مدى أنت راض عن قدرتك على القيام بنشاطاتك اليومية ؟
18.						كم أنت راض عن قدرتك على العمل ؟

						19. كم أنت راض عن نفسك ؟
						20. كم أنت راض عن علاقاتك الشخصية ؟
						21. كم أنت راض عن حياتك الجنسية ؟
						22. كم أنت راض عن الدعم أو المساعدة من الأصدقاء ؟
						23. كم أنت راض عن الأوضاع في مكان سكنتك ؟
						24. كم أنت راض عن الخدمات الصحية المتوفرة لك ؟
						25. كم أنت راض عن وسائل المواصلات التي تستخدمها ؟
						26. كم من المرات كانت لديك مشاعر سلبية مثل المزاج السيئ، اليأس، القلق، الاكتئاب ؟

Appendix 2: Consent of the researcher to use Scale



Appendix 3: Approval of Turkey Ethics Committee



Appendix 4: Ethical commitment and Approval of Thesis Sample(in language of arabic)





Appendix 5: Ethical commitment and Approval of Thesis Sample (in language of English)



Appendix 6 : Ethical commitment and Approval of Thesis Sample (in language of Turkish)



CURRICULUM VITAE

Surname : Saja Kareem Hasan Khaleel

