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Quality of Life of Patients with Decompensated Heart Failure

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Abstract

Background: Impaired Quality of Life is related to increased rehospitalization and mortality. Approximately 40% of Decompensated Heart Failure, a negative emotional state resulting from a perceived inability to predict or control a threatening situation, anxiety symptoms significantly decrease in overall Quality of Life, and increase frequency of rehospitalization. **Aim:** To assess the Quality of Life of patients with Decompensated Heart Failure. **Design:** A descriptive exploratory cross-sectional study was carried out. **Setting**: This study was conducted at Coronary care unit at Memorial Souad Kafafi Hospital, in Egypt. **Subjects:** A purposeful sample include all available male& female patients admitted to coronary care unit, their age ranged from 18 to 65 years old. **Tool:** A questionnaire sheet was developed & utilized by the researcher to collect the data., **section I**: included socio – demographic characteristics of the study sample, **section II**: included medical related data regarding Decompensated Heart Failure, **section III:** included the Quality-of-Life scale. **Results:** The incidence of Decompensated Heart Failure was found to be third of them had a disease since more than ten years &about two fifths were hospitalized more than three times / year also most of them were smoked , so about half of the studied patients had a poor level of total Quality of Life , followed by third of them had an average level **Conclusion:** Heart failure affects patients' physical, social, psychological &spiritual health, health team must educate patients about medications& lifestyle modifications. **Recommendations:** medical & nursing education institution should implement programs to increase awareness of the public regarding Decompensated Heart Failure & managements.

Keywords: *decompensated heart failure, quality of life*

Introduction

Decompensated heart failure (DHF) has emerged over the past several decades as a major global public health problem, with rising prevalence reported in both industrialized and developing nations alike. In addition to the enormous costs in human suffering and loss of productivity, decompensated heart failure has imposed an increasingly heavy financial burden on health-care systems throughout the world **(Mullens et al., 2022).**

As well as the review of systems, may add data to infer the etiology and presence of comorbidities, shortness of breath intolerance to exercise, heart palpitations, feeling faint. abdominal bloating, Reduced ability to exercise, swelling of the belly area, very rapid weight gain from fluid buildup, Nausea and lack of appetite, difficulty concentrating or decreased alertness, Chest pain if heart failure is caused by a heart attack. Swelling in the feet, ankles, legs, or arms, fatigue, weakness, feeling full after only eating a small amount of food (**Johnson et al., 2023)**.

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there are many causes and risk factors that increase the incidence of decompensated heart failure as cardiomyopathy, high water intake, salt consumption, arrhythmia and pregnancy. From the conditions that may lead to decompensated heart failure include: cardiomyopathy, a condition that involves a weakened heart muscle, coronary heart disease, atrial fibrillation, a type of irregular heart rhythm and high blood pressure **(Sano & Majima, 2022).**

Decompensated Heart Failure if not treated well patients will have complications such as cardiac Arrhythmias, atrial fibrillation, stroke, Angina and myocardial infarction, cardiac cirrhosis pulmonary Congestion and organ failure **(Seo et al., 2022).**

The initial objective of the treatment of DHF is to achieve hemodynamic and symptomatic improvement. In addition, other targets should be sought, including the preservation and/or improvement of the renal function, prevention of myocardial damage, modulation of the neurohormonal and/or inflammatory activation, and management of comorbidities that could cause or contribute to the progression of the syndrome **(Quinlan et al., 2023).**

The QOL is a wide concept concerning whether a disease limits individuals' ability to fulfill normal roles. Several factors can be held responsible for diminished QOL in this vulnerable group such as HF exacerbations, coexisting symptoms, frequent readmissions, gloomy prognosis, poor self-care, low-socio-economic status, limited family or social support and knowledge deficits about disease management. According to patients' perspectives, the most important QOL-related issues involve independence in daily living, physical and cognitive impairment, symptom management, psychological status, and hospitalizations **(Nizamitdinovich, & Alisherovna, 2022).**

Nursing care plan goals for patients with heart failure include support to improve heart pump function by various nursing interventions, prevention, and identification of complications, and providing a teaching plan for lifestyle modifications. Nursing interventions include promoting diet, activity and reducing fatigue to relieve the symptoms of fluid overload **(Tang et al., 2020).**

Significance of the study:

An estimated 64.3 million people are living with heart failure worldwide. In developed countries, the prevalence of known heart failure is estimated at 1% to 2% of the general adult population. in Egypt CHF is 1,8 million patients (Statistics by Country for decompensated Heart Failure,) and reported that 23% of recorded deaths were heart failure, in Egypt, Saudi Arabia, Emirates heart failure patients' costs about 1.92 billion U$ annually (**WHO, 2020**).

Decompensated heart failure is major public health problem. Hospital admissions are often unplanned for readmission that have a high mortality rate as well, because of the increased incidence of mortality and morbidity in heart failure decompensated in the world and since 1948, when the World Health Organization defined health as being not only the absence of disease and infirmity, but Quality of life issues have also become steadily more important in health care practice and research. HF has a significant impact on patients Quality of life, as the progressive loss of physical autonomy and the subsequent psychological distress due to impairment of social interaction impose lifelong limitations on daily activities, so the study aimed to (**Salyer & Flattery, 2019**).

Aim of the study:

The aim of this study is to assess the quality of life of patients with decompensated heart failure.

Research questions:

1-What is the quality-of-life level for patients with decompensated heart failure?

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Subjects and Method:

Research design:

A descriptive exploratory study design was conducted to achieve the aim of the study.

Research Setting:

The study was conducted in coronary care unit at Memorial Souad Kafafi Hospital, in Egypt.

Subjects: The subjects of the existing study were 103 DHF patients which admitted to coronary care unit.

Sampling:

purposeful sample, which include all available patient's male and female who admitted to coronary care unit and their age ranged 18 to 65 years old during study period and agree to participate in the study.

The inclusion criteria include:

- Male and female patients.
- The age ranged from 18 to 65 years old.
- Agree to participate in the study.

Tools for data collection:

Tool (I): Patient interviewing questionnaires:

It was developed by the researcher based on literature review and presented in an Arabic language and consisted of tool.

Part (A): Demographic characteristics of patients:

To assess patients' data such as age, residence, educational level, and occupation**.**

Part (B) medical related data:

It includes (medical history variables such as duration of disease, family history, frequency of hospital admission, complaints from other diseases, complaints from chest pain, number smoking cigarettes.

Tool (2): The quality-of-life scale:

It was adopted and guided by this scale was used to determine the factors affecting quality of life of patients with DHF. from **Bergner (1977), paddila & Grant (1985) and king& hinds (1998).**

translated to Arabic language by the researcher and taken the opinion of (5) expertise.

It included the following domains:

a-Physical well-being (general health, physical problems).

b- Psychological well-being (emotional health problem and energy).

c- Social well-being (social activity).

d- Spiritual well-being (spiritual domain).

The scoring system:

The questions were deducted in such a way to elicit the response of patients along a continuum of rating scale:

0= No = No problem. 1= To some extent =little problem 2 = Yes = Severe problem.

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The high rate for positive response, the better Quality of life the patient's mark were added and collected to each dimension separately and recorded for each patient individually. The total score of quality-of-life scale could range from (0- 92). It is considered good if the score is 75%, average 60% and poor50%.

***Validity*:**

validity was conducted to determine whether the tool covers the aim. The tools were revised by a jury of 3 experts: three professors of medical surgical nursing. Two of them from Faculty of Nursing, Helwan University and one from Faculty of Nursing, 6 October University who reviewed the content of the tools for comprehensiveness, accuracy, clarity, relevance and applicability, minor modification was done. The percentage of consensus among the panel of experts regarding quality-of-life questionnaire was (98%) respectively.

Reliability:

is the consistency of measuring instrument. It is a degree to which the used tools measure what was supposed to be measured the same way each time & under the same condition with the same subjects **(Farkas et al., 2023)**.

Ethical consideration:

The purpose of the study was explained to the sample &confidentiality of the collected data was reaffirmed and their oral consent to participate in the study was secured. They informed that they have the right to withdraw from the study at any time.

Operational design:

Preparatory phase:

It included reviewing past, current, national, and international related literature, and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals, and magazines to develop tools for data collection.

Pilot study:

The pilot study was done on 10% of the patient under the study to evaluate the applicability, clarity, and efficiency of the tools. Patients the pilot study were chosen randomly and then included in the study of the sample later.

Field work:

- A review of national and international related literature in the various aspects of the problem using books, articles, periodicals, and magazines.
- Tool validity and reliability assured.
- An official letter was issued from the Dean of the faculty of nursing to the head of authorized administration in Memorial Souad Kafafi Hospital soliciting the necessary approval to conduct the present research after explaining the aim and nature of the study to them to obtain their cooperation.
- At the initial interview, the researcher introduced herself to initiate communication and explaine the nature and purpose of the study.
- The researcher interviewed each patient individually to fill out the study tool. The study was carried out at long day shift from 9 am to 9 pm on Sunday to Wednesday.
- Then the researcher used tool (II) their questions used to assess the level of quality of life of through, the physical domain, the psychological domain, the social domain, the social domain, and the spiritual.
- The researcher's role in completing the questionnaire was to facilitate the understanding of any confusing or difficult questions for the women.

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The time needed to complete one questionnaire was about 30 minutes.

Administrative design:

Approval to carry out this study was obtained from the Dean of the faculty of nursing, Helwan university and the director of Memorial Souad Kafafi University Hospital asking for cooperation and permission to conduct the study.

Statistical design:

Upon completion of data collection, data was computed and analyzed using Statistical Package for the Social Science (SPSS), version ٢١ for analysis. The P value will be set at 0.05. Descriptive statistics tests as numbers, percentage, mean ± standard deviation (± SD), will use to describe the results.

Result:

Table (1) shows that more than half (57.3%) of the studied patient with decompensated heart failure were male with a male to female ratio is 1.3:1. Additionally, more than two-thirds (70.9%) of the age of the studied patient with decompensated heart failure were ranged 50 < 65 years old, with a total mean age of 49.99 ± 8.35. Considering, occupation, more than one thirds (35.9%) of them were housewife while the minority (7.8%) of them hadn't work. Finally, more than half (57.3%) of them were married.

Table (2) shows that about one-third (28.2%) of the studied patients had a disease since ≥10 years with a total mean of**7.11 ± 4.25**. Additionally, about two-fifths (38.8% & 39.8%) of them were hospitalized more than three times/ year and had a family history of decompensated heart failure respectively. Additionally, 39.8%) of them smoked with total mean of number of smoking / days is 17.43 ± 9.14. Finally, more than half (58.3%& 54.4%) of the studied patients had a side effectof treatment and hadn't medical guidance respectively.

Table (3): represents that the total mean score of quality-of-life among the studied patient with decompensated heart failure is $\bar{x}$ ± SD= 128.64 ± 44.6 (total score is 235). Additionally, the spiritual domain and social activities is ranking as the first and the second dimensions regarding to quality-of-life. while general health is ranked as the last dimension.

Table (4): represents that, there was a highly statistically significant association between demographic characteristics (Age, gender, occupation, level ofeducation and marital status) and total level of total quality-of-life among the studied patient with decompensated heart failure, at P = ≤ 0.05.

Table (5): represents that, there was a highly statistically significant association between medical related data (duration of heart failure, history ofprevious hospitalization, and smoking) and total level of total quality-of-life amongthe studied patient with decompensated heart failure, at P = ≤ 0.05

Table (6): represents that, there was a strong positive statistically significantcorrelation between total score of the dimensions of quality-of-life (general health, physical activity, physical problems, emotional problems, energy & emotions, social activities, and spiritual domain) among the studied patient with decompensated heart failure, at ranged from 0.933 to 0.996 P = ≤ 0.01.

Figure (1): illustrates that about half (49.5%) of the studied patients had a poor level of total quality-of-life, followed by (35%) of them had an average level. While the minority of them (15.5%) of them had a good level of total quality-of-life. Additionally, there was a highly statistically significant difference between levels.

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Table (1): Frequency distribution of the demographic characteristics amongthe studied patients (n=103)

Demographic characteristics	No	%
Gender		
▪ Male	59	**57.3**
▪ Female	44	42.7
▪ **Male to female ratio**	**1.3:1**	
Age		
▪ 20 < 35 years old.	10	9.7
▪ 35 < 50 years old	20	19.4
▪ 50 < 65 years old	73	**70.9**
▪ **Mean ± SD**	**49.99 ± 8.35**	
Occupation		
▪ Official work	28	27.2
▪ Manual work	30	29.1
▪ Housewife.	37	**35.9**
▪ No work.	8	7.8
Level of education		
▪ Don't read &write	2	1.9
▪ Read and write.	15	14.6
▪ primary school.	13	12.6
▪ secondary school.	25	24.3
▪ Higher education	48	**46.6**
Marital status		
▪ Married	59	**57.3**
▪ Widow	36	35.0
▪ Divorced	8	7.8

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Part (II): Medical related data among the studied patient with decompensated heart failure.

Table (2): Frequency distribution of medical related data among the studiedpatients (n=103)

Medical related data	N	%
Duration of Heart failure:		
▪ < 1 year.	6	5.8
▪ 1 < 3 year	15	14.6
▪ 3 < 5 years.	21	20.4
▪ 5 < 7 years.	19	18.4
▪ 7 < 10 years.	13	12.6
▪ ≥10 years.	29	**28.2**
▪ **Mean ± SD**	**7.11 ± 4.25**	
History of previous hospitalization:		
▪ Once / year.	6	5.8
▪ Twice/ year.	24	23.3
▪ Three times/ year.	33	32.0
▪ More.	40	**38.8**
Family history		
▪ Yes	41	**39.8**
▪ No	62	60.2
History of smoking		
▪ Yes	49	47.6
▪ No	54	**52.4**
▪ **No of smoking / day (Mean ± SD)**	**17.43 ± 9.14**	
Side effects of treatment		
▪ Yes	43	41.7
▪ No	60	**58.3**
Guidance presence		
▪ Yes	47	45.6
▪ No	56	**54.4**

Table (3): Total mean score of quality-of-life among the studied patients (n=103)

Variable	Total score	Min	Max	$\bar{x}$ ± SD	Weight Mean ± SD	Rank
General health	6	6	30	13.83 ± 5.36	2.30 ± 0.89	7
Physical activity	10	10	50	27.12 ± 9.26	2.71 ± 0.92	4
Physical problems	4	4	20	10.81 ± 4.73	2.70 ± 1.18	5
Emotional problems	5	5	25	14.07 ± 5.09	2.80 ± 1.01	3
Energy and emotions	9	9	45	22.72 ± 8.90	2.52 ± 0.98	6
Social activities	8	8	40	22.51 ± 7.85	2.81 ± 0.98	2
Spiritual domain	5	5	25	17.59 ± 3.99	3.51 ± 0.79	1
Total	**47**	**47**	**235**	**128.64 ± 44.6**	**2.73 ± 0.95**	-

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Part (IV): Additional and relational findings between variables being studied.

Table (4): Crosstab relation association between total level of quality-of-life and demographic characteristics among the studied patients (n=103)

Demographics	N.	Low		Moderate		High		χ^2	P-Value
		51	49.5	36	35.0	16	15.5		
		N	%	N	%	N	%		
Age									
▪ Male	59	47	45.6	8	7.8	4	3.9	50.2	0.000**
▪ Female	44	4	3.9	28	27.2	12	11.7		
Gender									
▪ 20 < 35	10	1	1.0	1	1.0	8	7.8	55.3	0.000**
▪ 35 < 50	20	3	2.9	10	9.7	7	6.8		
▪ 50 < 65	73	47	45.6	25	24.3	1	1.0		
Occupation									
▪ Official work	28	14	13.6	10	9.7	4	3.9	12.6	0.049*
▪ Manual work	30	18	17.5	10	9.7	2	1.9		
▪ Housewife.	37	12	11.7	15	14.6	10	9.7		
▪ No work.	8	7	6.8	1	1.0	0	0.0		
Education									
▪ Don't read &write	2	2	1.9	0	0.0	0	0.0	46.9	0.000**
▪ Read & write.	15	12	11.7	1	1.0	2	1.9		
▪ primary school.	13	9	8.7	1	1.0	3	2.9		
▪ Secondary school.	25	20	19.4	2	1.9	3	2.9		
▪ Higher education	48	8	7.8	32	31.1	8	7.8		
Marital status									
▪ Married	59	13	12.6	34	33.0	12	11.7	45.3	0.000**
▪ Widow	36	32	31.1	2	1.9	2	1.9		
▪ Divorced	8	6	5.8	0	0.0	2	1.9		

*Significant $p \leq 0.05$ **Highly significant $p \leq 0.01$

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Table (5): Crosstab relation association between total level of quality-of-life and medical related data among the studied patients (n=103)

Demographics	N	Low		Moderate		High		χ^2	P-Value
		51	49.5	36	35.0	16	15.5		
		N	%	N	%	N	%		
Duration of Heart failure:									
■ < 1 year.	6	0	0.0	1	1.0	5	4.9	110	0.000**
■ 1 < 3 year	15	1	1.0	4	3.9	10	9.7		
■ 3 < 5 years.	21	3	2.9	17	16.5	1	1.0		
■ 5 < 7 years.	19	8	7.8	11	10.7	0	0.0		
■ 7 < 10 years.	13	11	10.7	2	1.9	0	0.0		
■ ≥10 years.	29	28	27.2	1	1.0	0	0.0		
History of previous hospitalization:									
■ Once / year.	6	0	0.0	0	0.0	6	5.8	93.3	0.000**
■ Twice/ year.	24	2	1.9	14	13.6	8	7.8		
■ Three times/ year.	33	12	11.7	21	20.4	0	0.0		
■ More.	40	37	35.9	1	1.0	2	1.9		
Family history									
■ Yes	41	34	33.0	4	3.9	3	2.9	30.6	0.000**
■ No	62	17	16.5	32	31.1	13	12.6		
Smoked									
■ Yes	49	45	43.7	3	2.9	1	1.0	66.9	0.000**
■ No	54	6	5.8	33	32.0	15	14.6		

*Significant $p \leq 0.05$ **Highly significant $p \leq 0.01$

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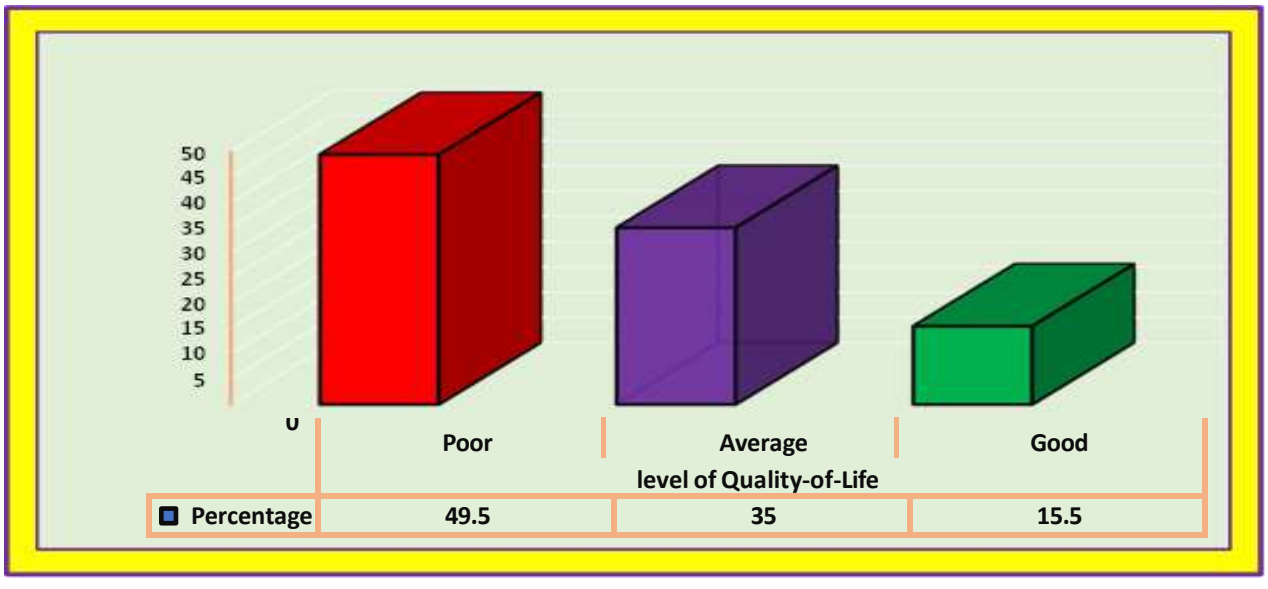
Part (V): Correlational findings between variables being studied.

Table (6): Correlation between total score of the dimensions of quality-of-life among the studied patients (n=103)

Items		General health	Physical activity	Physical problems	Emotional problems	Energy	Social	Spiritual	Total quality of life
▪ General health	r	1	0.983	0.964	0.972	0.984	0.982	0.933	0.989
	p		0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
▪ Physical activity	r	0.983	1	0.963	0.983	0.985	0.992	0.962	0.996
	p	0.000**		0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
▪ Physical problems	r	0.964	0.963	1	0.975	0.977	0.970	0.916	0.979
	p	0.000**	0.000**		0.000**	0.000**	0.000**	0.000**	0.000**
▪ Emotional problems	r	0.972	0.983	0.975	1	0.971	0.991	0.942	0.990
	p	0.000**	0.000**	0.000**		0.000**	0.000**	0.000**	0.000**
▪ Energy & emotions	r	0.984	0.985	0.977	0.971	1	0.982	0.940	0.992
	p	0.000**	0.000**	0.000**	0.000**		0.000**	0.000**	0.000**
▪ Social activities	r	0.982	0.992	0.970	0.991	0.982	1	0.954	0.996
	p	0.000**	0.000**	0.000**	0.000**	0.000**		0.000**	0.000**
▪ Spiritual domain	r	0.933	0.962	0.916	0.942	0.940	0.954	1	960
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**		0.000**
▪ Total quality of life	r	0.989	0.996	0.979	0.990	0.992	0.996	0.960	1
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	

**Highly significant p ≤ 0.01 *Significant p ≤ 0.05



χ^2=22.5, P= 0.000

Figure (1): Percentage distribution of the total quality-of-life among the studied patients (n=103).

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Discussion:

Regarding frequency distribution of the demographic characteristics among the studied patient with decompensated heart failure the current study showed that more than half of the studied patients with decompensated heart failure were male with a male to female ratio is 1.3:1. Additionally, more than two-thirds of the ages of the studied patient with decompensated heart failure were ranged 50 < 65 years old. Considering, occupation, more than one thirds of them were housewife while the minority of them hadn't work**.** Finally, more than half of the studied patients with decompensated heart failure were married. This may be because heart failure is more common in males rather females and between the older age groups.

This result was similar with the study conducted by **Johansson et al., (2021)**, which entitled "Health-related quality of life and mortality in heart failure: the global congestive heart failure study of 23 000 patients from 40 countries" and revealed that the mean age of participants was 65 years more than half of them were men. Also, this result was compatible with **Costa et al., (2020),** they conducted study entitled "Quality of life of chronic heart failure patients" and revealed that most of the patients were married and less than two fifth of them were housewives.

As regard to frequency distribution of the level of education among the studied patient with decompensated heart failure the present study illustrated that more than two-fifths of the studied patients with decompensated heart failure were hold a certificate of higher education while the minority of them weren't read and write. This may be due to patients' perception of the value and importance of education in improving their life that may be due to their family's culture , Also, this result was incompatible with **Costa et al., (2020),** they revealed that majority of the patients had held primary education, This result was disagreed with the study conducted by **Alharbi et al., (2022),** which entitled "Assessment of health-related quality of life in patients with heart failure: a cross-sectional study in Saudi Arabia" and reported that about half of patients had an education level of less than secondary school.

Concerning frequency distribution of medical related data among the studied patient with decompensated heart failure, the current study showed that about one-third of the studied patient with decompensated heart failure had a disease since ≥10 years. Additionally, about two-fifths of them were hospitalized more than three times/ year and had a family history of decompensated heart failure.

This result was incongruent with the study carried out by **Mulugeta et al., (2023),** they studied "Health-related quality of life and its influencing factors among people with heart failure in Ethiopia" and revealed that majority of participants had no family history of heart failure and about two thirds of them had less than three times of hospitalization in last12month.

According to frequency distribution of history of comorbidity diseases among the studied patient with decompensated heart failure the current study showed that more than half of the studied patient with decompensated heart failure had hypertension, chest pain, diabetes mellitus and coronary artery disease. While the minority of them had lunge disease, congenital heart disease, clotting disorder, and anemia. This may be attributed to the effect of those factors in the heart which worsen its normal functioning and contributes to heart failure. This result was supported by **Johansson et al., (2021)**, they found that about

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two thirds of patients had hypertension and about two fifths of them had coronary artery disease. Also, this result was consistent with **Mulugeta et al., (2023)** they revealed that less than half of patients had hypertension and diabetes mellitus.

According to frequency distribution of the quality-of-life regarding physical activity among the studied patients with decompensated heart failure the present study described that more than half of the studied patients perceived those the activity such as walking more than a mile is limited most of the time. More than two-fifths of the studied patients perceived those activities such as moving a table, pushing a bowl, lifting, or carrying groceries, and climbing several flights of stairs were limited **some of the time.** As well, more than two fifth of them perceived those activities such as running, lifting heavy objects, and bending, kneeling, or stooping were limited most **of the time.** This may be attributed to the required energy and blood supply with nutrients that the muscles and body require to carry out those activities that the heart is unable to supply.

This result agreed with **Nelson et al., (2023),** they studied "Physical activity and relationship to physical function, quality of life, and cognitive function in old er patients with acute decompensated heart failure" and found that patients spend 88 minutes of light physical activity, and 10 minutes of moderate-to-vigorous physical activity per day.

As regard to crosstab association between total level of quality-of-life and medical related data among the studied patient with decompensated heart failure the current study represented that, there was a highly statistically significant association between medical related data (duration of heart failure, history of previous hospitalization, and smoking) and total level of total quality-of-life among the studied patient with decompensated heart failure.

Concerning crosstab association between total level of quality-of-life and demographic characteristics among the studied patient with decompensated heart failure the present study represented that, there was a highly statistically significant association between demographic characteristics (Age, gender, occupation, level of education and marital status) and total level of total quality-of-life among the studied patient with decompensated heart failure. This may be due to the level of education that helps increases awareness and may enhance self-care and improves quality of life. In contrast, the increased age reduces patients' quality of life.

This result was in harmony with **Tarekegn et al., (2021),** they revealed that Age, residence, marital status, income, and duration of HF were significantly associated factors for quality of life among HF patients. Also, this result was in the same line with **Ventoulis et al., (2024),** they studied "Differences in Health-Related Quality of Life among Patients with Heart Failure" and it has consistently been reported that women with HF display poorer HRQOL compared to men, while younger patients with HF tend to exhibit lower levels of HRQOL than their older counterparts.

As regard to crosstab association between total level of quality-of-life and medical related data among the studied patient with decompensated heart failure the current study represented that, there was a highly statistically significant association between medical related data (duration of heart failure, history of previous hospitalization, and smoking) and total level of total quality-of-life among the studied patient with

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decompensated heart failure. This may be due to recurrent hospitalization that may be contributing to depression and anxiety which may reduce quality of life; besides, smoking may negatively affect body functioning and ability.

This result was congruent with the study conducted by **Cavanagh, (2019),** which entitled "Quality of life in heart failure: screening alone is insufficient" and demonstrated that poor QoL in patients with HF is linked to negative clinical outcomes, including high rates of hospitalization and mortality , Also, This result was supported by **Hsiang-Fen & Jung-Hua, (2021),** they studied "Quality of life and associated factors in older adults with heart failure" and found that the QoL of the participants was found to be associated with clinical characteristics, including hospital readmission for > 10 days.

Concerning correlation between total score of the dimensions of quality-of-life among the studied patient with decompensated heart failure the current study represented that, there was a strong positive statistically significant correlation between total score of the dimensions of quality-of-life (general health, physical activity, physical problems, emotional problems, energy & emotions, social activities, and spiritual domain) among the studied patient with decompensated heart failure. This may be because the health comorbidities affect normal functioning and quality of life.

This result was in line with **Pastva et al., (2021),** they reported that patients had severely reduced endurance and markedly impaired physical function and HF-specific QOL and general QOL were also severely diminished. Also, this result agreed with **Truong et al., (2023),** they demonstrated that there was a positive statistically significant correlation between the role limitations due to the physical health domain physical health problems.

According to percentage distribution of the total quality-of-life among the studied patient with decompensated heart failure the current study illustrated that about half of the studied patient with decompensated heart failure had a poor level of total quality-of-life, followed by more than one third of them had an average level. While the minority of them had a good level of total quality-of-life. Additionally, there was a highly statistically significant difference between levels. This may be due to various physical and emotional

symptoms such as dyspnea, fatigue, edema, sleeping difficulties, depression, and chest pain. These symptoms limit patients' daily physical and social activities that result in poor quality of life.

This result was congruent with the study carried out by **Ahmadzadeh et al., (2021),** which entitled "The relationship between health literacy level and quality of life in heart failure patients" and revealed that participants in our study had poor quality of life. Also, this result was compatible with the study conducted by **Truong et al., (2023),** which entitled "Assessment of Health-Related Quality of Life in Patients with Chronic Heart Failure" and concluded that health related quality of life in the outpatient population with chronic heart failure was notably low. This result was incompatible with **Alharbi et al., (2022**), they concluded that health-related quality of life was found to be moderate among these HF patients.

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Conclusion:

1- Heart failure affects patients' physical, social, psychological &spiritual health,

2- Health team must educate patients about medications& lifestyle modifications.

3- Mass media sector is required to broadcast well designed messages related to modification lifestyle & how to improve quality of life to decompensated heart failure patients.

4- Mdical &nursing education institutions should implement programs to increase awareness of the public regarding decompensated heart failure & its managements.

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