

Relation between Severity of Symptoms, Resilience and Health-Related Quality of Life in Patients with Congestive Heart Failure

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ABSTRACT

Background: Patients who have heart failure need to accept health alteration and positive coping with chronic symptoms and maintain a good health-related quality of life as guaranteeing their survival. **Aim:** Assess the relationship between severity of symptoms, resilience and health-related quality of life for patients with congestive heart failure. **Design:** A descriptive, correlational design was employed. **Setting:** El-Salam general hospital and Al-Nasr specialized hospital in Egypt Health care Authority hospitals in Port Said governorate. **Subjects:** Purposive sample of 98 patients with CHF adult patients of both sexes who agreed to participate in the research with inclusion criteria patients who had been given a one-year congestive heart failure diagnosis. **Tools:** Anderson Symptom Inventory, the Resilience Scale, the Patients' health-related Quality of Life, and the Patients' characteristics questionnaire. **Results:** The majority of the patients (66.3 %) significantly had sever level of severity and symptom interfering with patients' life, also 42.9% of them had high level of resilience and majority of them (75.5%) had average level of total health-related quality of life. **Conclusion:** There is a negative correlation between the distress symptoms exhibited by the patient and their overall level of resilience, as supported by statistical analysis. Besides, a substantial negative correlation was recorded between the distress symptoms experienced by the patients and their overall health-related quality of life. **Recommendations:** designing and implementing intervention programs that improve patients' health-related quality of life since congestive heart failure affect their capacity for resilience.

Keywords: Congestive Heart Failure, Health-related Quality of Life, Resilience, Severity of Symptoms

INTRODUCTION

The morbidity and mortality rate of congestive heart failure (CHF), a complicated clinical illness that affects patients' health-related quality of life (HRQOL) internationally, is continuously rising. Patients with chronic heart failure often have IHD, hypertension, diabetes, and dilated cardiomyopathy as co-morbid conditions. Due to severe clinical symptoms such as shortness of breathing, chest pain, heart palpitations and swelling os legs, disability, and hospitalization, CHF patients have a worse health-related quality of life than the general population (Khaled, 2022).

Heart failure is a challenging clinical condition that arises from a functional or structural cardiac issue that hinders the ventricular filling or blood ejection to the systemic circulation. CHF is described as the inability to satisfy the systemic requirements for circulation (Malik, Brito, Vaqar & Chhabra, 2022).

Health-related quality of life, or HRQOL, is a multidimensional term that incorporates psychological, social, and physical functioning. Assessment of HRQOL is critical in patients with congestive heart failure(CHF) that force them to alter their regular routines or prevent them from carrying out their everyday tasks typically (Van der Plas, Schachar & Hitzler, 2018).

Resilience is described as the ability of people subjected to stressful events to sustain relatively safe and stable psychological and physical places, along with the ability to cope with new problems and obstacles and produce positive experiences despite these problems (Babanataj, Mazdarani, Hesamzadeh, Gorji, & Cherati, 2019). Resilience promotes effective adaptation mechanisms, minimizes the effects of the disease, and preserves positive moods in patients with a variety of disorders. (Rezai, Dehghanzadeh & Akbari, 2019).

The nurses have a central role in offering emotional and psychological support to patients and their families in all settings, such as supporting the patient through diagnosis and ensuring optimum care given to them. Besides the provision of technical care, nurses must have the qualified professional knowledge, attitudes and skills, providing the informational, emotional, practical supports, improving quality of care, enhancing patient safety, and providing continuity of care (Kleinpell, Grabenkort ,Kapu, Constantine, & Sicoutris, 2019).

Significance of the study

Despite the fact that many studies have focused on the patients' health-related quality of life due to congestive heart failure, more emphasis should be given to the patients' resilience and how they handle any potentially severe symptoms. (Shu, Zhang, Wu, Huang & Meng , 2019). Few studies have examined resilience in this group using validated measures, particularly when it comes to resilience linked to self-esteem, anxiety, or depression. These findings may assist the development of interdisciplinary solutions that emphasize improved emotional intelligence and resilience to help heart disease patients manage stress. (Bergh, Udumyan, Fall, Almroth, and Montgomery, 2018).

AIM OF THE STUDY

The aim of this study is to:

- Assess the relationship between severity of symptoms, resilience and health-related quality of Life in Patients with Congestive Heart Failure

SUBJECTS AND METHODS**Technical Design:**

It comprise the research design, setting, subjects, and data-collecting tools.

Research Design

A descriptive correlational research design was adopted, which defined as a type of research design that explain the relationship between two or more variables without making any claims about cause and effect (Fowler, 2013).

Study Setting

El-Salam general hospital and Al-Nasr specialized hospital in Egypt of Health care Authority, were the hospitals where this research was conducted in the heart outpatient clinics, cardiac care units, general care units, cardiac catheterization units and post-cath care.

Subjects

purposive sample of 98 patients with CHF adult patients of both sexes who agreed to participate in the research with inclusion criteria patients who had been given a one-year congestive heart failure diagnosis were enrolled as study participants. And the exclusion criteria Patients with Psychiatric disorder, Obvious intellectual impairment.

The subject size was calculated according to the following estimation:

The sample population will be estimated via the following equation:

$$\text{Sample Size (n)} = \frac{Z^2}{\Delta^2} P (100 - P) \text{ (Dobson, 1984)}$$

Where:

P: The expected prevalence of Congestive heart failure among Egyptians is =36 % (*Elasfar, 2020*).

Z: A standard normal distribution percentile calculated with a 95% confidence level = 1.96.

Δ : The width of the confidence interval = 10.

$$\text{Sample Size (n)} = \frac{1.96^2}{[10]^2} 36 \times (100 - 36) = \mathbf{98} \text{ patients}$$

- The calculated sample size will be **98** patients. Because of the design effects (1.25), the projected non-participating rate (10%).

Tools of Data Collection

It was developed by the researcher through review of related and recent literature and aimed to assess the patients personal, and medical health data, symptoms and resilience, and health-related quality of life. It included four parts as the following:

Tool (I): patients' characteristics questioner

This tool includes two parts:

First part: characteristics of the studied patients

This part developed by the researcher and include questions related to personal data include: (patient code, age, sex, marital status, number of family members, level of education and occupational status).

Second part: past medical history and surgical history

This part includes past medical history as hypertension, diabetes mellitus, obesity, hyperlipidemia, coronary artery disease and atrial fibrillation and surgical history as heart bypass surgery, Open heart surgery, therapeutic catherization, Heart stenting and number of hospitalization due to congestive heart failure.

Tool (II): Anderson Symptom Inventory (ASI)

It was adopted from Reilly, Bruner, Mitchell, Minasian, Basch, Dueck, Cella & Reeve. 2013), it is the most widely used scale for assessing symptoms in patients with CHF and has been extensively used in the previous clinical researches. **It included two subscales as the following:**

First section was concerned with the existence and severity of 13 symptoms as pain, fatigue, nausea, disturbed sleep, shortness of breath, etc.

Second section was concerned with how much these symptoms affects CHF patients' daily activities as: mood, general activity, walking, work (including work around the house), relation with people and enjoyment of life.

It was verified in Arabic and all items had a satisfactory internal consistency (Cronbach's alpha was.85); (Nejmi, et al., 2010).

Scoring System

The ASI (Anderson Symptom Inventory) employs simple numeric rating scales ranging from 0 to 10, with 0 denoting no symptoms, 1-4 denoting mild symptoms, 5-7 denoting moderate symptoms, and 8-10 severe symptoms.

Tool (III): The resilience scale

The tool adapted from (Wagnild & Young. 2009) which consisted of 25 items to identify the degree of individual resilience with better understanding of ability to respond during times of adversity.

Scoring system:

The scoring system ranging from (1) strongly disagree (2-3) disagree (5-6) agree (7) strongly agree. The total score of the resilience (175).

Tool (IV): Patients' health-related quality of life

The instrument was modified by (Ware & Sherbourne. 1992). It was consisted of 40 items which is divided into four subgroups: physical (21 items), social (3 items), psychologic (12 items), spiritual (4 items)

Scoring system

40 Items of Short Form Survey were included. A high score signifies a more favorable condition of health since the preceding numerical values are reported in accordance with the scoring key. Additionally, each item is graded on a scale from 0 to 100. The total score of the patients' health-related quality of life. Higher scores indicate better health status, and a mean score of 50 has been articulated as a normative value for all scales.

II. Operational Design

It consists of a preliminary phase that addresses tool dependability, validity, a pilot study, and field work.

Preparatory phase

It began with a review of recent literature about congestive heart failure in numerous studies and a theoretical aspect utilizing books, research papers, the internet, and journals. Examining the official websites of organizations like American College of Physicians Journal Club (ACP) , Pub Med, the Cochrane Library, Ebesco. Also, the

process of obtaining the preliminary approval of the medical directors of the chosen institutions began.

Validity

The researcher translated into Arabic the Anderson Symptom Inventory, the Resilience Scale, and the Patients' health-related Quality of Life. To ensure that the study tools are being measured and checked for translation, supervisors and a jury of nine experts in medical surgical nursing and cardiologists then reviewed the study tools to ensure their clarity, relevance, comprehensiveness, understanding, and applicability. Changes were made on the advice of the experts. Within a two-week timeframe, this phase was completed.

Reliability

Through the use of Alpha Cronbach reliability analysis the results showed that each instrument had moderate to high reliability and included reasonably homogeneous items.

Tools	Alpha Cronbach
Anderson Symptom Inventory (ASI)	0.897
The resilience scale	0.955
Patients' health-related quality of life (40-Item Short Form Survey)	0.918

Pilot study

It was carried out on ten cases, which represented 10% of the whole sample, and were chosen at random after the study's tools were adjusted and reviewed, and were therefore omitted from the study's overall sample. To ensure the viability, applicability, and objectivity of the research instruments, , and the modifications were done.

Field work

Once the researcher has gained approval from the directors of the mentioned study settings,; the researcher met each patient individually to explain the purpose and the

nature of the study in order to gain their cooperation before data collection. Data collection covered a period of 3 months starting from the first of April 2022 to the 30 June 2022. The days of interviews were four days a week during the morning shift from nine in the morning(9.00am) until one in the afternoon (1.00pm).

The structured questionnaire tool was used to assess the patients' characteristics, medical-health data history, and severity of CHF symptom, the degree of their resilience, and their health-related quality of life.

III. Administrative Design

Before beginning any phase of the study, the vice dean for post-graduate studies , researches and the dean of the nursing faculty provided formal consent to employ the study. This approval was delivered to the region of the study that was chosen for the study (El-Salam general hospital and Al-Nasr specialized hospital). To get permission to include the CHF outpatients in the current study, the directors of the aforementioned setting were approached and notified. After a concise and thorough description of the research's purpose and goals, CHF outpatients who participated in the trial also signed an agreement. The researcher also gave the responders the assurance that their replies would be kept private and that the data would only be utilized for legitimate scientific purposes.

IV. Ethical Considerations:

The following are some of the ethical research issues in this experiment: Before beginning the study, the Scientific Research Ethical Committee in the Faculty of Nursing at Port Said University gave its clearance. Before beginning the study, the hospital directors had to approve the research. The researcher made the participants aware of the study's objective and purpose. The confidentiality and maintenance of the subject data's anonymity were guaranteed to the researcher. Patients gave their informed permission and were given the option of participating or not in the trial. They also had the freedom to leave the study at any moment without facing any repercussions.

V. Statistical Design

The statistical design comprises the subsequent components: Coding of data is the process of assigning labels or categories to the information collected during research or

analysis. The researcher encoded the data and formatted it in a way that was suitable for computer input. The statistical package for social science, commonly referred to as SPSS, version 20, was utilised to analyse the data. The study employed descriptive statistics to analyse the data. The qualitative data was evaluated using frequency and percentages, whereas the quantitative data was assessed using averages and standard deviation. The examination and interpretation of data using statistical methods. The Chi-square statistical test was employed to perform comparisons among categorical data. The chi-square test should be utilised when the expected count of cells with a value of less than 5 is greater than 20%.

RESULTS

The current study results showed that 30.6% of the studied patient aged from 50<60 years, 62.2% of them were male, and 79.6% of them were married. Also, 39.8% of them had 1<3 family members, 42.9% of them had a secondary stage, 60.2% of them did not have work.

Table (1) revealed that 80.6% of the studied patients had severe symptoms related to "pain" and "fatigue (tiredness) at its worst" also 77.5% of them had severe "disturbed sleep", 75.5 % of them had "shortness of breath" and 76.5 % of them had "feeling sad respectively . While 20.4% of them had moderate "a dry mouth at its worst" and 17.3% of them had mild "vomiting".

Table (2) Displayed the frequency distribution of the examined patients according to level of resilience revealed that 41.8% of the studied patients were highly opposed to the statement "It's okay if there are people who don't like me." While 27.5% of the patients in the study disagreed with the statement "I usually manage one way or another," 21.4% of them did so occasionally. 67.3% of studied patients concurred that they "have self-discipline" and "usually take things in stride." According to the study, 32.6% of the patients strongly agree that "I am friends with myself."

Table (3) illustrated that regarding physical activities during atypical day, the lowest mean was (1.153±.304, 1.254±.682, 1.352±.783 &1.783±.682) related to " Bathing or dressing yourself", " Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports", " Moderate activities, such as moving a table, pushing a vacuum cleaner, blowing, or playing golf" and " Walking more than a mile (60

minute approximately" respectively. Concerning general health related quality of life and compared the general health, the highest mean was $(2.983 \pm .602)$ related to "bodily pain have you had during the previous period". While the lowest mean was $(2.294 \pm 1.931 \ \& \ 2.437 \pm 1.682)$ related to "your health Compared to one year ago is:" and "In general, would you say your health is" respectively. Regarding general health perception, the lowest mean was $(2.126 \pm .204 \ \& \ 2.176 \pm .782)$ related to "My health is excellent" and "I am as healthy as anybody I know" respectively. In addition for problems with your work or other regular daily activities as result of your physical health the highest mean was $(1.932 \pm .699, \ 1.936 \pm .250 \ \& \ 1.872 \pm .993)$ related to "Cut down the amount of time you spent on work or other activities", "Accomplished less than you would like" and "Had difficulty performing the work or other activities (for example, it looks extra effort)" respectively.

Table (4) Showed that the highest mean was $(3.431 \pm 1.884 \ \& \ 3.172 \pm .282)$ related to "pain interfere with your normal work (including both work outside the home and housework)?" and "physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups" respectively. While the lowest mean was $(2.738 \pm .012)$ related to "mental or emotional well-being gotten in the way of your social interactions (such as going out with friends or family, etc.)".

Table (5) revealed that the highest mean was $(2.752 \pm .382, \ 1.829 \pm .026 \ \& \ 1.793 \pm .438)$ related to be a very nervous person, Didn't do work or other activities as carefully as usual and cut down the amount of time you spent on work or other activities" respectively. On other hand the lowest mean was $(1.829 \pm .026, \ 2.153 \pm .622, \ 2.283 \pm .581, \ 2.376 \pm .441 \ \& \ 2.315 \pm .592)$ respectively related to feel calm and peaceful, felt full of vitality, had a lot of energy, felt tired and been a happy person respectively.

Table (6) demonstrated that the highest mean was $(4.143 \pm .202)$ related to "personal beliefs give you strength to face difficulties and disease" and the lowest mean was $(2.242 \pm 2.931 \ \& \ 2.724 \pm .928)$ related to "personal beliefs give meaning to your life" and "you think your life has meaning" respectively. "

Table (7) illustrated that there were statistically significant relation between severity and interfering of patient symptom and their age. Also there were significant relation between severity and interfering of patient symptom and their sex and number of

Table (8) demonstrated that, across all study patients , there was a statistically substantial negative correlation between overall resilience and symptom severity and interference. Furthermore, there was a statistically significant negative link between overall health-related quality of life and the intensity, interference, and number of patients investigated. The cases' overall health-related quality of life and resilience in general also showed a statistically significant favorable link.

Table (1): Frequency distribution of the studied patients according to the severity of their symptoms

Item	Non		Mild		Moderate		Severe	
	No	%	No	%	No	%	No	%
chest pain at its worst	0	0.0	11	11.2	8	8.2	79	80.6
fatigue (tiredness) at its worst	0	0.0	10	10.2	9	9.2	79	80.6
nausea at its worst	0	0.0	15	15.3	13	13.3	70	71.4
disturbed sleep at its worst	2	2.04	11	11.2	10	10.2	76	77.5
feeling of being distressed (upset) at its worst	0	0.0	14	14.3	12	12.3	72	73.4
shortness of breath at its worst	0	0.0	6	6.1	18	14.4	74	75.5
problem with remembering things at its worst	2	2.04	15	15.3	15	15.3	66	67.3
problem with lack of appetite at its worst	2	2.04	13	13.3	16	16.3	67	68.4
feeling drowsy (sleepy) at its worst	0	0.0	14	14.3	19	19.4	65	66.3
having a dry mouth at its worst	0	0.0	10	10.2	20	20.4	68	69.4
feeling sad at its worst	2	2.04	9	9.2	12	12.3	75	76.5
vomiting at its worst	0	0.0	17	17.3	25	25.6	44	44.8
numbness or tingling at its worst	0	0.0	13	13.3	15	15.3	70	71.1
Total mean scores (Mean ± SD)	5.95±4.39		11.35±6.19		22.98±3.39		65.21±4.33	

Table (2): Frequency distribution of the studied patients according to resilience

Items	Strongly disagree		Disagree		Sometimes		Agree		Strongly agree	
	No	%	No	%	No	%	No	%	No	%
When I make plans, I follow through with them	2	2.04	14	14.3	18	18.4	44	44.9	20	20.4
I usually manage one way or another.	2	2.04	21	21.4	17	17.3	44	44.9	14	14.3
I am able to depend on myself more than anyone	8	8.16	13	13.2	17	17.3	38	38.7	22	22.4
Keeping interested in things is important to me.	0	0.0	11	11.2	18	18.4	47	47.9	22	22.4
I can be on my own if I have to.	9	9.02	11	11.2	18	18.4	46	46.9	14	14.3
I feel proud that I have accomplished things in life.	2	2.04	5	5.1	19	19.3	48	48.9	21	21.4
I usually take things in stride.	6	6.02	11	11.2	9	9.2	57	58.2	15	15.3
I am friends with myself.	0	0.0	6	6.1	14	14.3	46	46.9	32	32.6
I feel that I can handle many things at a time.	10	10.2	16	16.3	11	11.2	44	44.9	17	17.3
I am determined.	0	0.0	10	10.2	27	27.5	54	55.1	7	7.1
I seldom wonder what the point of it all is.	1	1.0	9	9.2	15	15.3	53	54.1	7	7.1
I take things one day at a time.	2	2.04	11	11.2	12	12.3	50	51.1	23	23.5
I can get through difficult times because I've experienced.	0	0.0	6	6.1	16	16.3	52	53.1	24	24.5
I have self-discipline.	2	2.04	3	3.1	15	15.3	66	67.3	12	12.3
I keep interested in things.	0	0.0	13	13.2	19	19.4	52	53.1	14	14.3
I can usually find something to laugh about.	0	0.0	7	7.1	25	25.5	51	52.1	15	15.3
My belief in myself gets me through hard times.	0	0.0	4	4.1	25	25.5	48	48.9	21	21.4
In an emergency, I'm someone people can generally rely on.	0	0.0	9	9.2	20	20.4	49	50	20	20.4
I can usually look at a situation in a number of ways.	2	2.04	15	15.3	28	28.6	40	40.8	11	11.2
Sometimes I make myself do things whether I want to or not.	10	10.2	12	12.	21	21.4	51	52.1	4	4.1
My life has meaning.	0	0.0	7	7.1	21	21.4	44	44.9	26	26.5
I do not dwell on things that I can't do anything about.	0	0.0	11	11.2	13	13.3	43	43.9	31	31.6
When I'm in a difficult situation, I can usually find my way out of it.	2	2.04	18	18.4	29	29.6	40	40.8	9	9.1
I have enough energy to do what I have to do.	15	15.3	23	23.5	18	18.4	28	28.6	14	14.2
It's okay if there are people who don't like me.	41	41.8	9	9.2	17	17.4	29	29.6	2	2.04
Total mean scores (Mean ± SD)	7.65±2.05		14.21±3.93		22.65±3.21		55.21±5.12		11.23±4.49	

Table (3): Frequency distribution the studied patients' health-related quality of life regarding physical activities

Physical activities	Min	Max	Mean± SD
Physical activities during atypical day			
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	1	3	1.254±.682
Moderate activities, such as moving a table, pushing a vacuum cleaner, blowing, or playing golf	1	3	1.352±.783
Lifting or carrying groceries	1	3	2.14±.185
Climbing several flights of stairs	1	3	2.301±.872
Climbing one flight of stairs	1	3	2.227±.983
Bending, kneeling, or stooping	1	3	1.946±.519
Walking more than a mile (60 minute approximately)	1	3	1.783±.682
Walking several blocks (30 minute approximately)	1	3	2.123±.717
Walking one blocks (15 minute approximately)	1	3	2.63±.682
Bathing or dressing yourself	1	3	1.153±.304
Health-related quality of life and the general health			
In general, would you say your health is	1	5	2.437±1.682
your health Compared to one year ago is:	1	5	2.294±1.931
How much bodily pain have you had during the previous period?	1	6	2.983±.602
General health perceptions			
I seem to get sick a little easier than other people	1	5	3.294±.375
I am as healthy as anybody I know	1	5	2.176±.782
I expect my health to get worse	1	5	3.125±.395
My health is excellent	1	5	2.126±.204
During the previous period, you had any of the following problems with your work or other regular daily activities as result of your physical health?			
Cut down the amount of time you spent on work or other activities	1	2	1.932±.699
Accomplished less than you would like	1	2	1.936±.250
were limited in the kind of work or other activities	1	2	1.637±1.642
Had difficulty performing the work or other activities (for example, it looks extra effort)	1	2	1.872±.993
Total mean	21	74	38.372±3.693

Table (4): Frequency distribution of the studied patients'health-related quality of life regarding social activities

Social activities	Min	Max	Mean± SD
During the previous period, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?	1	5	3.172±.282
How much did pain interfere with your normal work (including both work outside the home and housework)?	1	5	3.431±1.884
How frequently have your mental or emotional well-being gotten in the way of your social interactions (such as going out with friends or family, etc.)	1	5	2.738±.012
Total mean	3	15	8.332±1.593

Table (5): Frequency distribution of the studied patients'health-related quality of life regarding psychological status

Psychological status	Min	Max	Mean± SD
Feeling full of vitality	1	6	2.153±.622
Being a very nervous person	1	6	2.752±.382
Feeling so down in the dumps that nothing can cheer you up	1	6	2.839±1.97
Feeling calm and peaceful	1	6	1.829±.026
Having a lot of energy	1	6	2.283±.581
Feeling downhearted and blue	1	6	2.638±1.967
Feeling worn-out	1	6	2.729±.823
Being a happy person	1	6	2.376±.441
Feeling tired	1	6	2.315±.592
During the previous period, have you had any of the following problems with your work or other regular daily activities as result of any emotional problems (such as feeling depressed or anxious)?			
Cut down the amount of time you spent on work or other activities	1	2	1.793±.438
Accomplished less than you would like	1	2	1.638±.967
Didn't do work or other activities as carefully as usual	1	2	1.829±.026
Total mean	12	60	22.929±1.326

Table (6) Frequency distribution of the studied patients' health-related quality of life regarding spiritual status

Spiritual status	Min	Max	Mean± SD
your personal beliefs give meaning to your life	1	5	2.242±2.931
your life has meaning	1	5	2.724±.928
your personal beliefs give you strength to face difficulties and disease	1	5	4.143±.202
your personal beliefs help you in understanding life's difficulties and coping with illness	1	5	3.214±.982
Total mean	4	20	11.826±1.826

Table (7) Relationship between the studied patients characteristics and severity and interfering of their symptoms with patients health-related quality of life

Personal characteristics	Mild (n=11)	Moderate (N=22)	Severe (N=65)	X ²	P – value
Age in years					
40<50	1	4	5	69.103	.005**
50<60	4	6	20		
60<70	5	0	21		
70<80	1	10	18		
80-90	0	2	1		
Sex					
Male	8	18	35	6.052	.049*
Female	3	4	30		
Marital Status					
Married	9	20	49	2.477	.290
Unmarried	2	2	16		
Number of family					
1-<3	5	5	29	25.029	.034*
3-<5	6	2	21		
5-<7	0	10	13		
7-8	0	5	2		
Qualification					
Illiterate	2	2	4	4.379	.650
Read and write	1	3	13		
Secondary stage	6	8	28		
University	2	9	20		
Work					
Yes	4	12	23	2.580	.275
No	7	10	42		

(*) Statistically significant at p<0.05.

(**) statistically significant at p<0.01

Table (8) correlation matrix between total symptom severity, total resilience and total health-related quality of life for patients with congestive heart failure

Studied variables	Total severity and interference of the symptom		Total Resilience		Total of health related quality of life	
	R	P	R	P	R	P
Total of severity and interference of the symptom	-----	-----	-.296	.003**	-.399	.000**
Total Resilience	-.296	.003**	-----	-----	.451**	.000**
Total of health-related quality of life	-.399	.000**	.451	.000**	----	-----

DISCUSSION

Maintaining resilience and good health-related quality of life (HRQOL) was as important as survival to most patients living with congestive heart failure (CHF). Patients with congestive heart failure had markedly impaired resilience and HRQOL compared with other chronic diseases as well as healthy population. Resilience and health-related quality of life reflected the multidimensional impact of a clinical condition and its treatment on patients' daily lives. Patients with congestive heart failure experienced various physical and emotional distress symptoms. These symptoms limit patients' daily physical and social activities and result in low HRQOL (Naderi & Van Steenburg, 2018).

The present study revealed that patients were very or constantly bothered by their symptoms and these symptoms were found to interfere with patients' daily activities and their enjoyment of life. The symptoms reported by the patients in this study were also similar to those in previous studies conducted by Potka, Prokop, Migaj, Straburzyska-Migaj, and Grajek (2017) who reported that most of the patients with CHF had severe symptoms regarding chest pain and shortness of breath and the severity of symptoms depended on the body's ability to adjust to the decreased cardiac output. Initial signs and symptoms reflected the ventricle of the heart that was experiencing dysfunction. Also, their study which focused on the symptoms received a high prevalence rating, shortness of breath, fatigue, and pain were the most common symptoms experienced by CHF patients.

The current study demonstrated that patients had positive resilience. Compared to the past, the majority of studied patients were more determined, competent, and accepted of their chronic illness (CHF) and current state of health. Their competence enabled them to maintain concentrate on their objectives, enhances their inner fortitude, and removed

weakness. The current study was compatible with Movahedimoghadam et al., (2022), who found that improving resilience decreased the severity of shortness of breath and edema in patients who had CHF and led to a better life. In addition, the highest mean of participants' agreement was in handling situations calmly. This study was in the same line with Lee, Tung, Peng, Chen, Hsu & Huang. (2020), who found that the majority of participants agreed with handling their situations calmly and had competence .

The current study revealed that patients' health-related quality of life regarding physical activities was normal in usual mild daily activities and their disease doesn't affected by these mild activities such as bathing and dressing themselves. But the moderate and vigorous activities such as running, lifting heavy objects, participating in strenuous sports and walking more than 60 minute approximately wasn't as usual as daily activities performance because of congestive heart failure. Concerning general health related quality of life and compared to the general health, bodily pain was the most common cause that affected on health-related quality of life and general health . In general health, the current study revealed that patients with congestive heart failure and their perception to their general health was really affected according to the nature of their disease so they believed in their general health became lower than the past because of their age and the nature of their disease . according to their disease the patient had problems in their work and their regular daily activities especially in spending much more time in doing this activities which didn't take long time in the past and they had difficulty in performing their work or other activities most of time they described that as an extra effort. This might be due to that vigorous activities were restricted in cardiac patients due to fatigue and general weakness. Also, this might be due to that with time the human body coping mechanism decreased and the body became weaker than before. As well as this might be due to that work and activities required high efforts in which congestive heart failure patients not able to make high efforts. This study was compatible with Sygit et al., (2020), they revealed that their health compared to one year ago somewhat worse now than one year ago. Also This study was in the same line with Sygit et al., (2020), who revealed that regarding activities most of patients had limitations in vigorous activities, such as running, lifting heavy objects, participating in strenuous sports. Also this study was in the same line with Reddy et al., (2022), who reported that most of studied patients agreed with limitation of their work or other activities followed by spending much more time in doing activities than the past. Also this study was in the

same line with Alisherovna et al., (2022), they revealed that most of studied patients agreed with their limitations in the work or other activities according to their disease.

The current study revealed that pain interfered with social activities such as normal work including both work outside the home and housework. Also physical health and emotional problems interfered with their normal social activities with family, friends and neighbors. While the emotional well-being gotten in the way of their social interactions such as going out with friends or family This might be due to that pain causes patient distress and fatigue which interfered with patients' normal work and this might be due to that congestive heart failure affected on patient's ability to engage in social interactions as a result of fatigue, discomfort and sometimes feelings of distress. This result was compatible with Perrotti et al., (2019) who revealed that bodily pain followed by physical health or emotional problems interfered with their normal social activities with family, friends, neighbors. Also this result was compatible with Mhesin et al., (2022), who reported that most of patients agreed with pain interfered with their normal work including both work outside the home and housework. Also this result was compatible with Davranovna et al., (2022), who reported that regarding social activities of studied patients most of them agreed with their expectations of their health get worse followed by their physical health or emotional health interfered with their social activities.

The current study indicated that the studied patient's most psychological status was feeling nervous that affected on their health-related quality of life and also they don't work on their activities carefully and usually took much more time than the past. But on other hand they felt calm and peaceful some of time this might be due to that congestive heart failure patients understood their condition well which helped them make better decision and feel better. This result was compatible with Freedland et al., (2021) who studied improving health-related quality of life in heart failure and reported that the majority of studied patients agreed with some of the time they feel calm and peaceful. In contrast with this result Heo et al., (2020) who studied prediction of heart failure symptoms and health-related quality of life at 12 months from baseline modifiable factors in patients with heart failure and reported that most of studied patients agreed with feeling as a very nervous person.

The current study showed that spiritual status especially the personal beliefs of studied patients gave them strength to face their difficulties and their disease. they thought slightly that their personal beliefs gave meaning to their life. this might be due to their spiritual and personal beliefs helped them in improving their health-related quality of life and influenced patients decisions and actions. This study was in the same line with Baert et al., (2018), who reported that the majority of studied patients agreed with their personal beliefs gave them strength to face their difficulties and disease. Also this study was compatible with Bahall et al., (2020), who studied health-related quality of life among patients with cardiac disease and revealed that the majority of studied patients agreed with their personal beliefs give meaning to their life.

As regard to relationship between the studied patients ' socio-demographic characteristics and total level of severity and interfering of their symptoms with patients health-related quality of life the current study illustrated that there were significant relation between severity and interfering of patient symptom and their age, sex and number of family. This might be due to that with older age the patient physiological processes, activity tolerance and compensation mechanisms decreased. This study was in the same line with Mhesin et al., (2022), who reported that the severity of symptoms interfering with patients health-related quality of life because of their old age physiological processes and their activity intolerance .

The current study showed that there was an opposite correlation between the severity of the symptoms and the patient's resilience, as the severity of symptoms interfered with their coping with their disease, which was called resilience. Also there was an opposite correlation between studied patient's severity of the symptoms and their health-related quality of life. In addition, that there was a positive correlation between the studied patients' resilience and their health-related quality of life. This might be due to that resilience improved patients coping strategies which improved patient's health-related quality of life. The current study also was in agreement with Kordestani, (2018), who revealed that resilience was positively correlated with patients' health-related quality of life the study results included a significant difference in health-related quality of life and its indicators among patients with congestive heart failure . Also, there was a significant difference between health-related quality of life, general health, physical health, psychological dimensions, There was a significant difference in psychological resilience among CHF patients and healthy individuals. This study was supported by

Chow, (2021), who revealed that resilient patients may adopt more adaptive perceptions about their heart condition, which may help them adopt a more positive health behaviour, leading to better HRQOL

CONCLUSION

According to the results of the current investigation, it is often ended that:

Across all patients assessed, there was a statistically significant negative association between overall resilience and the intensity and interference of the symptoms. Furthermore, there was a statistically significant negative link between the interference and intensity of the symptom and the overall health-related quality of life of the research subjects'patients. Moreover, there was a statistically significant positive link between patients' overall health-related quality of life and overall resilience.

RECOMMENDATIONS

- Provide congestive heart failure patients with needed pamphlets, posters, and booklets, including instructions that contain information about disease therapy, diet schedule, medication, lifestyle changes, etc.
- Preparation of qualified nurses to increase awareness towards challenges that result from CHF for patients and their families through participation in specific educational courses that are related to health-related quality of life aspects.
- Developing and providing intervention programmes to enhance social support can lead to improved health-related quality of life for patients because of their long-term and chronic illnesses that affect their resilience.
- Follow up by Egypt health care authority hospitals in port-said governorate by tele-communication.

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العلاقة بين حدة الاعراض، المرونة وجودة الحياة لمرضى فشل القلب الاحتقاني

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¹ أخصائى تمريض بمستشفى النصر التخصصى بمحافظة بورسعيد؛ ² أستاذ تمريض الباطني والجراحي بكلية التمريض جامعة بورسعيد؛ ³ أستاذ مساعد تمريض الباطني والجراحي بكلية التمريض جامعة بورسعيد.

الخلاصة

يحتاج المرضى الذين يعانون من فشل القلب الاحتقاني إلى قبول التغيير الصحي للتعامل الإيجابي مع الأعراض المزمنة والحفاظ على جودة الحياة المتعلقة بالصحة لضمان بقائهم على قيد الحياة. **الهدف:** تقييم العلاقة بين حدة الأعراض والمرونة وجودة الحياة المتعلقة بالصحة للمرضى الذين يعانون من قصور القلب الاحتقاني. **المواضيع والطريقة:** التصميم: تم استخدام التصميم الوصفي الارتباطي. **المكان:** مستشفى السلام العام ومستشفى النصر التخصصي التابعتان لهيئة الرعاية الصحية المصرية بمحافظة بورسعيد. **المواضيع:** عينة هادفة مكونة من 98 مريضاً من المرضى البالغين من كلا الجنسين الذين يعانون من مرض فشل القلب الاحتقاني الذين وافقوا على المشاركة في البحث وفقاً لمعايير الدراسة التي تضمنت المرضى الذين تم تشخيصهم بفشل القلب الاحتقاني لمدة عام واحد. **الأدوات:** استبيان خصائص المرضى، وجرى أعراض أندرسون، ومقياس المرونة، وجودة الحياة المتعلقة بالصحة، **النتائج:** غالبية المرضى (66.3%) كان لديهم مستوى شديد من حدة وخطورة الأعراض التي تتداخل مع حياة المرضى، كما كان 42.9% منهم يتمتعون بمستوى عالٍ من المرونة وكان لدى غالبيتهم (75.5%) مستوى متوسط من إجمالي جودة الحياة المرتبطة بالصحة. **الاستنتاج:** هناك علاقة سلبية بين حدة الأعراض التي يظهرها المريض ومستوى مرونته العام، يدعمها بذلك التحليل الإحصائي. علاوة على ذلك، تم تسجيل علاقة سلبية بين حدة الأعراض التي يعاني منها المرضى وجودة حياتهم المرتبطة بالصحة بشكل عام. كما تم تسجيل علاقة إيجابية ذات دلالة إحصائية بين المرونة بشكل عام وجوده الحياة المرتبطة بالصحة بشكل عام التوصيات: تصميم وتنفيذ البرامج التثقيفية التي تعمل على تحسين جودة حياة المرضى المرتبطة بالصحة حيث أن فشل القلب الاحتقاني يؤثر على قدرتهم على المرونة.

الكلمات المرشدة: قصور القلب الاحتقاني، جودة الحياة المرتبطة بالصحة، المرونة، شدة الأعراض.