Health Related Quality Of Life In Heart Failure Patients: A Prospective Study

Elayabhaarathe Thangaraj[1], Harish K B[2], MadavaKousik C M K[2] , Leena V[3] , Thomas Alexander[4].

1. Corresponding author, Pharm-D, KMCH college of Pharmacy.
2. Author, Pharm-D, KMCH college of pharmacy.
3. Assistant Professor, KMCH college of Pharmacy.
4. Consultant interventional cardiologist, Kovai Medical Centre and Hospital.

ABSTRACT

Background: Heart failure is a clinical syndrome where the heart is not pumping enough blood when compared to normal circumstances. We aimed to ascertain the health-related quality of life among heart failure patients. Secondly, we wished to assess the knowledge, assessment, and practice of heart failure patients.

Aim: In this study, we assessed the Health-Related Quality of Life in Heart Failure patients.

Materials and methods: In this prospective study conducted 49 Heart Failure were included. Data collected were coded in SPSS software for statistical analysis. The correlation between KAP and HRQOL was assessed with Pearson correlation. A P-Value of 0f < 0.05 was considered statistically significant

Results: About 49 patients were included in the study. 78% of the population was male and 22% were females. The patients had moderately to poor Health-Related Quality of Life in all domains. However, most of the patients had poor scores in the physical dimension. In this study assessing the knowledge of heart failure patients, only 4% of the patients had their knowledge graded well.

Conclusions: The results of our study imply patients have a moderately poor health-related quality of life overall and poor physical dimensional scores. HRQOL was found to have a direct positive relationship with Knowledge, Attitude, and Practice.

Key Words: Heart failure, Health-related quality of life, Knowledge, attitude, practice

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I. INTRODUCTION:

The term "heart failure" makes it sound like the heart is no longer working at all and there's nothing that can be done. Heart failure means that the heart isn't pumping as well as it should be. [1] It is by definition a failure to meet the systemic demands of circulation.[1]

The classification of Heart Failure is based on symptoms and calculatedEjection Fraction of the left ventricle (LVEF). Heart failure due to left ventricular dysfunction is categorized into

- Heart failure with preserved ejection fraction (HFpEF): Ejection Fraction is greater than or equal to 50%.
- Heart failure with mid-range EF(HFmrEF)Ejection Fraction is between 41%-49% as per European guidelines and 40%-49% as per US guidelines.
- Heart failure with reduced EF: Ejection Fraction less than40% [2]

Defining it as a global pandemic,64.3 million people are estimated to suffer from HF worldwide in 2017. Due to the improved survival following diagnosis and availability of evidence-based treatments, the prevalence of HF is expected to increase [3].Being a highest prevalent disorder worldwide, it has high morbidity and mortality rate. It has an estimated prevalence of 26 million people worldwide and contributes to increased healthcare costs worldwide [4].

HRQL, defined by Schipper and associated as "The functional effect of an illness and its consequent therapy upon a patient, as perceived by the patient"[5]. Being the simple and Inexpensive, HRQOL is useful in Characterizing symptom severity and patient's prognosis with heart failure.It differs considerably among different regions, with marked lower quality of life in Africa than elsewhere [6].

Knowledge attitude and practice surveys initially originated in the field of family planning and population research, is now widely employed in investigation of health-care related behaviors. They help in analyzing the knowledge, myths, attitude towards the disease and behaviors related to specific disease condition. [7]

This study assessed the Health-Related Quality of Life and Knowledge, Attitude and Practice of Heart Failure patients and additionally, we analyzed the correlation between the same.

II. MATERIALS AND METHODS:

The present Prospective Study was conducted in the Department of Cardiology in a multi-specialty hospital in Coimbatore located in Tamil Nadu, India. The ethical approval was obtained from the Ethical Committee of the institution with approval number EC/AP/947/07/2022 dated 13th July 2022. The study was conducted for 6 months, from July 2022 to December 2022. The HRQoL questionnaire, license, and scoring pattern for the Minnesota Living with Heart Failure Questionnaire (MLFHQ) were obtained from the University of Minnesota and KAP questionnaire was formulated. Patients were individually scored based upon their answers for the questionnaire.

We included both male and female patients above the age of 18-years and who has been diagnosed with heart failure at least 6 months before the inclusion. We excluded patients who were health care workers as they would have an adequate knowledge about Heart Failure.

A total of 57 patient's met the inclusion criteria but only 49 patientscompleted the study because of practical difficulties and 8 patients were considered drop-outs from the study.

Statistical Analysis:

The statistical analyses were performed using Micro Soft excel 2019 software and SPSS V .6 Software. The P-value<0.05 was considered statistically significant. Paired student t-test was used to check the glycemic variability before and after treatment with both combination therapies.

III. RESULTS:

In our prospective study, a total of 57 Heart Failure patients were included and patients were individually scored based upon their answers to the questionnaire. Of these, 49 patients completed they study. Men have a higher incidence of heart failure, but the overall prevalence rate is similar in both sexes since women survive long after the onset of heart failure [8].

The patient baseline demographics and baseline characteristics are presented in Table 1. Overall, the mean age of the population was 61.6 ± 10 years, with that 30% lying in the age group of 60 to 70 years, male participants were dominant (78%). 69% of the patient population had reduced ejection fraction (EF<40%) and hence were classified as NYHA class III. They had marked limitations of physical activity, comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea [9].

Table 1: Patient demographics

Variables	Patient population (n = 49)
Age (years(±SD)	61.6±10
Male (n (%))	38 (78%)
Female (n(%))	11 (22%)
Ejection Fraction% (n (%))	
21%-30%	34(69%)
31%-40%	10(20%)
41%-50%	4(8%)
51%-60%	1(2%)

Health Related Quality of Life endpoints are presented in Table 2. The mean HRQoL scores obtained by the patients is 53±3.15 (Mean ±SEM) for a total score of 105. The physical domain items (2, 3, 4, 5, 6, 7, 12, 13) and the emotional dimensional items have been identified by simple factor analysis; and may be scored by simple summation to further characterize the effect of heart failure on a patient's life.

The patients had moderately to poor Health-Related Quality of Life in all domains. However, most of the patients had poor scores in the physical dimension.

This result is similar to the report from Ewnetu T et.al which studied the HRQoL among HF patients from an outpatient setting in Ethiopia [10]

Table 2:Health Related Quality of Life endpoints

Assessment		No. of patients	Percentage of patients	Mean± SEM
Health Related Quality of	Good	5	10%	53.65 ± 3.51
	Medium	13	27%	

Life.	Poor	31	63%	

Knowledge, attitude and practice endpoints are presented in Table 3. Patients had anMean (SEM) score of 4.28 (± 0.24), 6.46 (± 0.17), 10.69 (± 0.33) for a total score of 9, 8 and 16 for Knowledge, Attitude and Practice respectively.

Table 3. Knowledge attitude and practice endpoints.

S.no	KAP Assessment		No. of patients	Percentage of patients	Mean± SEM
1	Knowledge	Poor	15	31%	4.28 ± 0.24
		Medium	32	65%	
		High	02	4%	
2	Attitude	Poor	00	0%	6.46 ± 0.17
		Medium	08	16%	
		High	41	84%	
3	Practice	Poor	01	2%	10.69 ± 0.33
		Medium	21	43%	
		High	27	55%	

IV. DISCUSSION

In our study, a total of 49 patients were scored based on their responses to the questionnaire, the mean Health Related Quality of Life score was 53.65 and Knowledge, Attitude and Practice scores were 4.28, 6.46 and 10.69 respectively.

The KAP and HRQoL scores obtained by the male and female patients had no significant changes. HRQoL score had a P-value of 0.958 and KAP scores had a P-value of 0.978, 0.275 and 0.843 respectively. It's represented in table 4

Table 3. representing no significant difference in KAP and HRQoL scores.

	Gender	Mean	Std. Deviation	Std. Error Mean	t value	Significance
Knowledge	Male	4.29	1.859	.302	0.028	0.978
	Female	4.27	1.272	.384		
Attitude	Male	6.37	1.261	.205	1.105	0.275
	Female	6.82	.874	.263		
Practice	Male	10.66	2.571	.417	0.199	0.843
	Female	10.82	1.250	.377		
HRQOL	Male	53.5526	25.64065	4.15946	0.052	0.958
	Female	54.0000	21.90434	6.60441		

When patients were spited based of the age group as "below 60 years", "60-70years" and "above 70years"; The patients above 70 years were found to gain higher scores on HRQOL total, PD total, and ED total and followed by 'below 60years' and '60-70years' but **without significant difference.**

Health-related quality of life (HRQOL) score was found to have a direct/positive relationship with Knowledge (r = 0.359*), Attitude (r = 0.496**), and Practice (r = 0.564**) indicating that as Knowledge, Attitude and Practice increases it may cause an Increase in HRQoL and vice-versa. It's represented in the following table 5

Table 3. representing no significant difference in KAP and HRQoL scores.

		HRQOL
HRQOL	Pearson Correlation	1
	Sig. (2-tailed)	
	N	49
Knowledge	Pearson Correlation	**.359**[*]

	Sig. (2-tailed)	.011
	N	49
Attitude	Pearson Correlation	**.496**[**]
	Sig. (2-tailed)	.000
	N	49
Practice	Pearson Correlation	**.462**[**]
	Sig. (2-tailed)	.001
	N	49

This result is different to the report from Ahmad Hisham et.al which studied knowledge, attitude, self-care practice and Health Related Quality Of life among Heart Failure Patients in a Malaysia tertiary hospital [11].

This HRQoL in Heart Failure patients is typically limited by the gradual progressive nature of the disease and patients age. We are not aware of treatment for heart failure regarding it's effect on patients quality of life and

V.   CONCLUSION

In conclusion, despite having a good attitude and moderate practices, only 4% of the patients had good knowledge. The findings of the study indicate that patients have a moderately poor health-related quality of life overall and a poor physical dimensional score. There was no statistical difference between the KAP and HRQoL scores obtained by males and females. HRQoL was found to have a direct positive relationship with Knowledge, Attitude and Practice.

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