Self-Care Related Factors in Patients with Heart Failure

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Introduction

Heart failure is a complex syndrome and requires the patient to engage in long-term self-care activities, in order to stabilize the condition. American Heart Association has issued a scientific statement advocating self-care as one of heart failure treatment modalities. Self-care adequacy has been viewed to have great influence in determining the heart failure outcomes. Identifying correlates of self-care is important to help patients engage in better self-care practice.

Purpose

The purpose of this study was to analyze the correlates of self-care in patients with heart failure.

Research design

◎The study used a questionnaire survey with a non-probability sampling for the data collection.

- A convenience sample of 71 inpatients with a confirmed diagnosis of HF (ICD 428).

Instruments

◎Dutch heart failure knowledge scale (DHFKS): 0-15, higher scores indicate better HF knowledge. Cronbach's α for this current study was 0.88.

◎Self-care heart failure index (SCHFI): 0-100, higher scores indicate better self-care. Cronbach's α for the domains of the SCHFI in the current'study were as follows: self-care maintenance, 0.74; self-care management, 0.68; and self-care confidence, 0.92.

◎Data analysis included t-tests, one-way ANOVA, and Pearson correlation methods.

Result

◎The demographic and disease characteristics of participants are summarized in Tables 1.

◎The results showed significant positive correlations among self-care maintenance, self-care management, and self-care confidence (r = .50 to r =.63, p< .001).

◎Self-care maintenance was significantly positively correlated with the DHFKS scores, heart failure duration, admission frequency, and number of comorbidities.

◎Self-care management was significantly positively correlated with the DHFKS scores, admission frequency, and number of comorbidities.

◎Self-care confidence was significantly positively correlated with the DHFKS scores (r =.46, p< .001) and admission frequency.

Table 1 Distribution and comparison of demographic and disease variables between self-care variables (n=71)

Variables	n (%)	S-C maintenance Mean ± SD	S-C management Mean ± SD	S-C confidence Mean ± SD
Age				
< 65years	23 (32.4)	43.04 ± 20.25	31.35 ± 30.56	39.40 ± 32.02
> 65 years	48 (67.6)	50.27 ± 16.91	28.96 ± 24.06	40.31 ± 24.51
p-value		p = 0.118	p = 0.721	p = 0.896
Gender				
Female	44 (62.0)	47.34 ± 16.12	26.66 ± 22.55	36.52 ± 25.34
Male	27 (38.0)	48.88 ± 21.54	34.74 ± 30.93	45.72 ± 28.95
p-value		p = 0.732	p = 0.245	p = 0.164
Years of education				
Illiterate	24 (33.8)	45.97 ± 18.54	24.79 ± 21.19	32.43 ± 23.80
≦6 years	24 (33.8)	49.58 ± 14.19	31.88 ± 28.70	39.85± 25.49
> 6 years	23 (32.4)	48.26 ± 21.92	32.65 ± 28.35	48.11 ± 30.11
p-value		p = 0.791	p = 0.527	p = 0.137
Marital status				
Had spouse	39 (54.9)	49.91 ± 18.50	28.62 ± 25.83	46.05 ± 27.03
Single	32 (45.1)	45.52 ± 17.89	31.09 ± 26.87	32.67 ± 25.33
p-value		p = 0.316	p = 0.694	p = 0.036
Living status				
Live along	5 (7.0)	49.33 ± 19.06	54.00 ± 16.73	33.36 ± 22.59
With familly	66 (93.0)	47.82± 18.32	27.89 ± 25.88	40.52 ± 27.32
p-value		p = 0.860	p = 0.030	p = 0.570
Residential type				
Not require stair climbing	24 (33.8)	52.91 ± 18.66	39.17 ± 24.79	49.81 ± 27.41
require stair climbing	47 (66.2)	45.39 ± 17.67	24.91 ± 25.74	35.02± 25.56
p-value		p = 0.100	p = 0.029	p = 0.028
Occupation				
Occupational	11 (15.5)	36.66 ± 15.99	17.09 ± 21.10	38.92 ± 29.84
No occupation	44 (62.0)	49.84 ± 18.04	29.84 ± 25.18	39.55 ± 28.41
Out of work due to illness	16 (22.5)	50.41 ± 18.37	38.13 ± 29.71	42.05 ± 21.77
p-value		p = 0.081	p = 0.121	p = 0.942
Economic				
poor	15 (21.1)	46.44 ± 16.83	35.33 ± 24.82	38.18 ± 28.78
enough	56 (78.8)	48.33 ± 18.72	28.23 ± 26.50	40.51 ± 26.39
p-value		p = 0.724	p = 0.354	p = 0.768
NYHA				
II	31 (43.7)	46.88 ± 18.48	21.48 ± 25.70	31.21 ± 25.18
III	40 (56.3)	48.75 ± 18.24	36.13 ± 24.95	46.84 ± 26.56
p-value		p = 0.672	p = 0.018	p = 0.014
Type of HF				
Diastolic	21 (28.6)	47.14 ± 17.42	22.29 ± 23.86	35.21 ± 29.44
Systolic	18 (25.4)	53.14 ± 22.56	32.39 ± 26.19	42.01 ± 25.81
Combine	32 (45.1)	45.52 ± 15.92	33.13 ± 27.32	42.05 ± 26.31
p-value		p = 0.360	p = 0.301	p = 0.629

Table 2 Correlation analysis of continuous variables (n=71)

Variables	Mean ± SD	1	2	3	4	5	6	7	8
S-C[a] maintenance (1)	47.93± 18.23								
S-C management(2)	29.73 ± 26.14	.50***							
S-C confidence (3)	40.02 ± 26.94	.55***	.63***						
DHFKS[b] (4)	6.14 ± 4.3	.27*	.64***	.45***					
Age(5)	69.31 ± 11.75	.22	-.03	-.05	-.22				
HF duration (6)	3.38 ± 4.16	.30*	.17	.22	-.05	.22			
Admission frequency (7)	2.20 ± 3.84	.38**	.44***	.36**	.34**	.07	.23		
LVEF[c] (8)	54.08 ± 22.06	.03	-.26	-.13	-.19	.22	.19	-.17	
Number of comorbidity	7.17 ± 3.15	.35**	.26*	.22	.08	.30*	.16	.46***	.12

Note 1. [a] Self-care [b] Dutch Heart Failure Knowledge Scale; [c] Left ventricular ejection fraction.
Note 2. * p< .05, ** p< .01, *** p< .001.

Conclusion

◎Admission frequency and HF knowledge were important correlates of the three self-care variables. The more admission frequency, the better HF knowledge and the better self-care the patient had. Improving patients' knowledge is therefore a task which brooks no delay.

◎Nurses should discuss with patients about the home self-care suitable for them by using case sharing or successful case referral.

◎Families of the patients should also be included in health education program to facilitate them in giving patients psychological support and improving patients' self-care abilities.

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