ORIGINAL ARTICLE

SOCIAL SUPPORT AND SELF-CARE MANAGEMENT AMONG PATIENTS WITH CHRONIC HEART FAILURE

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ABSTRACT

Patients with chronic heart failure suffer from undesirable effects in their daily activities. Effective self-care management in conjunction with social support gives improved the wellbeing of patients with chronic heart failure. This study determines social support and self-care management among patients with chronic heart failure. A cross-sectional study was conducted at the Cardiology Clinic in Hospital Serdang, Selangor from April 2014 to June 2014. A questionnaire consisting of demographic characteristics, MOS Social Survey and Self-Care Heart Failure Index (SCHFI) was distributed to a total of 113 respondents. The results show moderately high level of social support (3.51±0.89) and level of self-care management (160.49±44.39). For instance, social support and self-care management were not statistically significant with the demographic characteristics (p>0.05). There was a positive correlation between social support and self-care management (r=0.263, p<0.05) and the findings suggest that social support should be considered a predictor in self-care management of patients with chronic heart failure.

***Keywords**: social support, self-care management, patient(s), chronic heart failure*

INTRODUCTION

Chronic heart failure (CHF) is one of the most common chronic conditions affecting patients with cardiovascular disease. CHF occurs when the heart is unable to pump blood at a rate to meet the needs of various organs of the body[1] and this is the most concerned problem among CHF patients[2]. Furthermore, the non-pharmacological management includes self-care reinforcement on maintaining health in daily activities and cautions on warning signs and symptoms of worsening CHF[3]. For instance, self-care management refers to the individuals' responsibilities for healthy lifestyle behaviours required for human development to function and cope with the health condition[4]. Effective self-care management has shown significant effects on the reduction of hospital readmission due to CHF, decreases in mortality rate, and improved quality of life[5].

Social support can be defined as a process of interacting with others[6] comprised of emotional and informational support, tangible support, affectionate support, and positive social interaction[7]. Social support may influence a person's physical and psychological wellbeing. High level of self-care management is an important correlation of social support and due to this, family members should play a greater part in clinical care with regards to improving patient's health status[8]. Moreover, social support can lead to the improvement of several health conditions and wellbeing, helping people to cope with various situations, making them feel better about themselves by raising self-esteem, and improving their ability or competency to perform task neede[9]. Besides that, good family support and care can enhance medication adherence among CHF patients[10]. Supportive relationships have been known to help managing outcomes for persons with CHF[11]. Therefore, social support propositions of interpersonal relationships are recognised to influence adherence to health behaviours and enhancing self-confidence[12].

However, how patients with CHF in the local population perceive their social support level and how effective social support level influences their self-care management are still inadequately known. It is hoped that the outcome of this study can be used as a guideline for further research, especially in health education or health promotion programmes for patients with CHF. To this end, this study determines the level of social support and self-care management followed by correlating social support and self-care management among patients with CHF.

METHODS

This is a cross-sectional study conducted in Cardiology Clinic, Hospital Serdang, Selangor, which is one of the referrals of the Cardiac Centre in Malaysia under the Ministry of Health, Malaysia. Convenient sampling was used and data were collected from 14th April 2014 to 4th June 2014. The calculation of the sample size was made by Raosoft Sample Size Calculator[13] with the estimated power of 95% and the margin error of 5%. Initially, approximately 150 respondents were invited to participate in this study. However, only 113 patients participated. The inclusion criterion of this study was a patient diagnosed with CHF and was able to understand, read, and write in Bahasa Melayu and English. Data were analysed with descriptive and inferential statistics.

Study instrument
The questionnaire consisted of three sections (Section A, Section B, Section C). Section A was the demographic questionnaire comprising age, gender, ethnicity, educational level, marital status, employment status, and disease duration.

In Section B, the questions were adapted from the MOS Social Support Survey[7], which contained 19 questions rated on a 5-point response scale and divided into 4 functional support scale, emotional/informational support, tangible support, affectionate support, and positive social interaction. Likewise, questions in Section C were adopted from the Self-Care of Heart Failure Index (SCHFI version 6.2)[14]. SCHFI is a self-report measure comprising 22 items rated on a 4-point response scale and is divided into 3 subscales namely self-care maintenance, self-care management, and self-care confidence, consisting of 10 maintenance items, 6 management items, and 6 confidence items.

A pilot study was performed and involved 30 patients with CHF. The internal consistency of the MOS Social Support and SCHFI were 0.9136 and 0.848 respectively. A reliability coefficient (alpha) of 0.70 or higher is considered acceptable reliability[15].

Ethical Consideration
The study was carried out with approval from the Research Ethics committee, Faculty of Health Sciences, Universiti Teknologi MARA (UiTM) [ID: 600-FSK (PT.5/2)], the National Medical Research Register (NMRR) with NMRR ID NMRR-13-1562-18044 as well as the Centre of Clinical Research in Serdang Hospital. All information was kept confidential. A detailed explanation was given to respondent and a written information consent was obtained prior to this study.

RESULT

Demographic characteristics
From the total of 113 respondents (Table 1), the majority of the CHF patients were male (n= 79, 70%) with a range of age of 58.09±11.1, Malay (n=67, 59.3%), with a secondary level of education (n=66, 58.4%), married (n=97, 85.5%), retired (n=39, 34.5%) and most of the patients were diagnosed with heart failure less than 5 years ago (n=94, 83.2%).

Level of social support
In Table 2, the level of social support was calculated based on the MOS survey with four subscales (each range score 1-5). The highest score observed is under emotional/informational support subscale (3.56±0.90), followed by positive social interaction (3.48±1.00), tangible support (3.45±0.98), and the lowest subscale score is affectionate support (3.39±1.05). The overall support score for MOS survey obtained from the study is 3.51±0.89, which can be considered a moderately high level of social support among the patients with CHF.

Level of self-care management
In Table 4, the level of self-care among the respondents based on the SCHFI survey was obtained with the use of 3 subscales. The possible score for each subscale is 100, where the higher score indicated the higher degree of self-care. The highest score was referred to self-care management subscale (62.04±19.59), followed by self-care maintenance subscale (49.37±16.70) and self-care confidence subscale (46.88±19.46). The overall self-care heart failure index (SCHFI) score is 160.49±44.39 (possible score is 300). It can be considered a moderately high level of self-care management.

Relationship between demographic characteristics and outcome measures (social support and self-care management)
The results of independent t-test and ANOVA did not show any significant relationship between social support and self-care management with demographic characteristics of patients with CHF ($p>0.05$).

Correlation between social supports and self-care management
There is a significant positive correlation between overall social support and self-care management ($r= 0.263$, $p= 0.005$).

Table 1: Demographic characteristics of patients with chronic heart failure (n=113)

Variable	Frequency (n)	Percent (%)
Age, years (Mean±SD)	58.09±11.1	
20-39	6	5.3
40-59	51	45.1
60-79	55	48.7
> 80	1	0.9
Gender		
Male	79	69.9
Female	34	30.1
Ethnicity		
Malay	67	59.3
Chinese	17	15.0
Indian	27	23.9
Others	2	1.8
Education level		
Primary	30	26.5
Secondary	66	58.4
Tertiary	15	13.3
Others	2	1.8
Marital status		
Single	9	8.0
Married	97	85.8
Divorced	7	6.2
Employment status		
Employed	28	24.8
Self-employed	15	13.3
Retired	39	34.5
Unemployed	31	27.4
Disease duration, years (Mean±SD)	3.76±4.70	
< 5	94	83.2
6-10	7	6.2
11-15	7	6.2
> 16	5	4.4

Table 2: Subscales score of social support among patients with CHF (n=113)

Items	Mean±SD
Emotional/ informational support	3.56±0.90
Tangible support	3.45±0.98
Affectionate support	3.39±1.05
Positive social interaction	3.48±1.00
Overall MOS	**3.51±0.89**

Table 3: Subscales score of self-care management among patients with CHF (n=113)

Items/subscales	Mean±SD
Maintenance	49.37±16.70
Management	62.04±19.59
Confidence	46.88±19.46
Overall SCHFI	**160.49±44.39 (Min: 41.12, Max: 260.62)**

DISCUSSION

Demographic characteristic among patient with CHF

The study found that the mean age of patients diagnosed with CHF was 58 years with most of the patients retired and unemployed. Likewise, the average age of Asian patients with heart failure was 60 years and could be younger in conjunction with higher rate of diabetes and hypertension[16]. This study identified that the majority of the sample were male respondents having secondary education, married, and Malay. Previous studies also found that Malay male patients were among the highest proportions in cardiovascular risk and heart failure cases[17].

For instance, most the patients were diagnosed with having CHF less than 5 years. This finding showed that the possibility of life expectancy among patients with CHF is not more than 5

years. One study showed that 30-40% of patients diagnosed with heart failure died within a year[18]. This emphasises the need for further detailed studies to better understand the situation in Malaysia.

Table 4: Correlation between mean score of MOS and mean score of SCHFI among patients with CHF (n=113)

	SCHFI
	r (*p* value)
MOS	0.263 (0.005)*

**p* value = <0.05

Level of Social Support among patient with CHF

Overall, most of the patients in this study had a moderately high level of social support. The result was almost consistent with a previous study carried out on CHF patients[19-20]. For instance, emotional or informational support was found to be the highest score among other social support subscales. Moreover, there was a possibility for the strong emotion support to be able to release some of the emotional burden in helping patients to manage their self-care. Emotional or informational support could be associated with better self-care maintenance and considered a lead for better self-care management[21].

Affectionate supports were found among the lowest rating among social support subscale. In the context of Malaysian culture, individuals seldom show their love and affection to their loved ones. A previous study found that South Asian participants scored significantly lower on affectionate support than the Caucasian counterparts[22]. CHF patients with more affectionate support had better self-rated in health and those with more positive interaction were found to have fewer depressive symptoms[23]. In fact, family/caregiver and friends motivated the patients to share information with them in order to improve their health status[20,24]. Furthermore, patients with CHF stated that they had limited communication with health practitioners and lacked correct information. They indicated the failure of physicians to communicate with them by claiming that "the doctor always keeps thing to themselves, seldom provides them any information, and they just do their job"[10].

Therefore, as a healthcare provider, special interpersonal skills in self-care management program need to be developed, in which patients with CHF need to be educated properly by making rapport with them so that they can feel a sense of belonging and appreciation. The healthcare provider also needs to strengthen and change psychological attributes that are more effective as compared to a general teaching in self-care management skills[25]. Open-ended discussions, active listening, and showing empathy will all improve patients' health, satisfaction, and compliance with the current treatment.

Level of self-care management among patient with CHF

The results revealed that the patients with CHF had a moderate level of self-care management. In contrast, self-care management was poor in heart failure patients in other countries [26-28]. For each scale, the majority of patients with CHF obtained high scores in self-care management, followed by self-care maintenance, and self-care confidence as the lowest scale. The results showed that the patients with CHF were less confident to perform self-care management. Similar with other local studies, most patients were not confident in self-managing chronic disease and wished a healthcare provider would guide them in the healthcare services[29]. It can be suggested that healthcare providers need to develop the confidence level among patients with CHF to look into themselves so that their self-care confidence in disease management will improve. Besides, a specific health education program will be able to enhance self-care management among patients with CHF, to minimise the patients' deterioration and readmission, as well as improve their quality of life[10,28].

In contrast, previous studies showed that self-care management was the highest in the US population, where self-care maintenance was highest in Australia, and self-care confidence was the highest scale among the Mexicans[14]. Other studies also found that patients with CHF scored the highest in self-care confidence, followed by self-care maintenance, and lastly self-care management among ethnic minorities[27].

Relationship between demographic characteristics and outcome measures (social support and self-care management)

The result show no relationship between social support and self-care management with demographic characteristics of patients with CHF. However, previous studied indicated that the demographic and clinical characteristic were associated with self-care management[19]. Thus future research is needed to determine other variables that may be related to social support and self-care management among patients with CHF such as financial situation[20] and cohabitation[21].

Correlation between social support and self-care management

The result showed that social support was positively correlated with self-care management. This means that if the social support received by the patients with CHF was high, then the self-care management would be better. Similarly,

previous studies found that CHF patients with a high level of social support reported significantly better in self-care management[19,21,30-31].

Other than that, family and friends were hoped to have important relationships to mortality and morbidity with CHF patients and the support would positively influence adoption and maintenance of health behaviour[32]. Furthermore, a few studies showed the supportive environment was important to create positive feelings and to improve self-care management in patients with CHF[10,12,27].

Family and friends were urged to play an important role in assisting patients with CHF to maintain positive self-care management, where social support appeared to influence self-care management. The role was implemented by assisting with maintaining treatment regimens and by participating in the decision-making process related to the management of CHF symptoms[30].

The limitation of the study is the short period for data collection due to the number of sufficiently qualified subjects and the convenient sampling was seen to be potentially bias for self-selection[33]. The non-response rate was high due to the environmental factors. The clinic was considerably inconvenient, noisy, and congested with many patients and relatives. There were also respondents who had more than one appointment with other doctors. However, this study is considered adequate to provide an overview of social support and self-care management among patients with chronic heart failure.

CONCLUSION

Revealed from this study, social support and self-care management were moderately high, where there had no significant relationship between social support and self-management with demographic characteristics. Furthermore, social support was positively correlated with self-care management among patients with CHF. A cohort study or qualitative study are recommended in future to understand the influence of social support and self-care management among patients with CHF.

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Conflict of interest
None

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