Determinants of health perception among congestive heart failure patients

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Abstract

Congestive heart failure patients trend to functional decline and Re-hospitalization. Perception of health is a key to help CHF patients to adapt and manage their signs and symptoms. The objective of this predictive study was to examine correlated and predicting factors of health perception among congestive heart failure patients. A sample was 196 heart failure patients follow up at outpatient department. Instrument was a package of interviewing questionnaire including demographics, health perception, health behaviors, stress management, and depression. Data were analyzed using descriptive, Pearson’s correlation, and Stepwise Multiple Regression. The results found that the majority of sample was male (56.0%), age average 57.31 years old (SD. = 15.60), married status (90.0%), employee (53.5 %), monthly incomes > 10,000 Baht (75.5%), living with CHF < 5 years (83.0%), and experienced re-admission once (74.02%). Stepwise Multiple Regression revealed that determinants of health perception included daily activity (Beta = .260, p =.002), adaptation (Beta = .250, p = .002), and psychological and emotional (Beta = .150, p=.031). Total variance explained 29.5%. The research results suggested that health care providers should develop program to promote health outcomes based on determinants of health perception both physical and mental health of CHF patients.

Keywords: congestive heart failure, health perception, influencing factors
Introduction

Chronic heart failure (CHF) is a leading cause of both morbidity and mortality globally as well as in Thailand. The prevalence of CHF patients were reported high prevalence, such as the United States reported 5.7 million in 2012 and re-hospitalization 19.1% (Mozaffarian et al., 2016; Swindle, et al., 2016). In Thailand, the incidence was reported that the rate of congestive heart failure had been increasing from 237.9 to 306.4 per 100,000 and admission in the hospital from 394.6 to 465.5 per 100,000 (Ministry of Public Health, 2552 B.E)

CHF is a chronic condition of heart disease characterizing inability of the heart to pump enough blood to meet tissue requirements for oxygen. It can result from heart function and other clinical situations that alter myocardial performance (Yancy et al., 2016). Not only is the cardiovascular system damaged in long term period, but it affect to individual physical and mental health by producing signs and symptoms along the progression of the disease. The severity of CHF usually presents of dyspnea, weak, tired, and unable to perform usual life. CHF patients usually confront of acute exacerbation and re-admit in the hospital hospitalization (Riegel, Cason, & Glaser, 2000; Rockwell & Riegel, 2001). CHF is a chronic illness, without return pathology, then it can affect to individual, family, and society by related complications, mortality, and high health care cost.

The goal of taking care CHF patients focuses on control of signs, symptoms, and its severity (Smeltzer et el., 2010; Yancy et al., 2016) as well as promote self-management ability and individual quality of life (Lee, Yu, Woo, & Thompson, 2005). Several strategies help CHF patients controlled and manage illness severity such as daily health assessment to find early severe signs and symptoms, healthy eating (especially eat low salt and low fat diet, limit drinking water per day), and adhere to medical treatment (Colonna et al., 2003). However, several studies indicated that health perception is a key to promote those strategies of assessing early signs and symptoms and then alter their health behaviors.

Health perception is an individual subjective related to extend to which one rate one’s health and uses as a basic to manage his or her health status. If people perceive themselves as unhealthy, they might find a method to alter to get better health. When patients and health care provider have similar perceptions of the patient’s condition, this may augment and use as a key to promote better patient health outcomes. Patient health
perception can empower patients to make decisions and follow recommendation to manage their health with any patient specific health concerns.

Factor related to perceived health including physical health (e.g. functional status, disease burdens) (Coelho, et al., 2005, Heo, Doering, Widener, & Moser, 2008) psychological factors (e.g. stress, coping, depression) (Bekelman et al., 2007; Nekouei et al., 2013), and health behaviors (e.g. nutrition, exercise, stress management, adherence to treatments) (de Melo Ghisi, 2014; Van der Wal et al., 2007), and others (e.g. social support, environment factors) (Bennett, Perkins, Lane, Deer, Brater, & Murray, 2001). Therefore, the objective of this study was to examine determinants of health perception among CHF persons. The results would be used to improve patient self-management, health outcomes, and quality of life.

Methodology

Population and sample

Population included people who were diagnosed with congestive heart failure living in Chonburi, Thailand. A sample consisted of 196 congestive heart failure patients who followed up at outpatient department of Queen Savangvatana Memorial hospital. The inclusion criteria were 1) been diagnosed with CHF at least three months 2) no serious signs or critical situation, 3) good conscious, and 4) be able to communicate in Thai language.

Measurements

The instruments were developed by the researcher team including personal information, illness and medical history sheet record; health related quality of life, health behaviors. Furthermore, Zung depression scale (1965), back translated into Thai version by Thanee (2004) was used in this study. All questionnaires were validated by five experts and evaluated for internal consistencies with similar sample characteristics, the results showed Cronbach alpha greater than .70 and in this study Cronbach alpha ranged .70-.91.

Ethical considerations

The research proposal was approved by the Institutional Review Board of Burapha University and Queen Savangvatana Memorial hospital. Data collection was precise to IRB protocols through the project.
Data collection

After obtaining permission to collect data from director of the setting, the researchers and research assistants screened participants who volunteer and met the inclusion criteria. The participants were informed about the project, asked to sign consent forms, then completed the package of questionnaires. Illness and medical history was tracked from patient records and interview each participant.

Data analyses

Data cleaning and managing were done before analyses. Descriptive statistics, Pearson’s correlation, and Multiple Regressions were used to analyze data.

Results

Majority was male (56.0%), mean age 57.31 years old (SD. = 15.60), married (90.0%), employer (53.5%), monthly incomes averaged 10,000 baht (75.5%), had been diagnosed with CHF less than 5 years (83.0%), mean illness duration 42.42 months (SD. = 66.27), and readmission once (74.0%).

Factors related to health perception positively included functional ability (r = .487, p <.001), adjustment to illness (r = .462, p <.001), mental health and emotion (r = .365, p <.001), physical activity (r = .320, p <.001), stress management (r = .218, p =.001). However, there were found negative factors related to health perception including eating behavior (r = -0.291, p <.001) and depression (r = -.126, p=.039) as shown in table 1.

Table 1 factor related to health perception (n=196)

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
<td>Functional ability</td>
<td>.487</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Adjust to illness</td>
<td>.462</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Mental health and emotion</td>
<td>.365</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Eating behavior</td>
<td>-.291</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Physical activity</td>
<td>.320</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Stress management</td>
<td>.218</td>
<td>.001</td>
</tr>
<tr>
<td>Medical adherence</td>
<td>-.115</td>
<td>.054</td>
</tr>
<tr>
<td>Depression</td>
<td>-.126</td>
<td>.039</td>
</tr>
<tr>
<td>Functional ability</td>
<td>.487</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Finally, Multiple Regression by Stepwise method suggested that three variables could predict health perception including functional ability (Beta = .260, p = .002), adjustment to illness (Beta = .250, p = .002), and mental health and emotion (Beta = .150, p = .031). The total variance explained 29.5%. As shown in table 2 and 3.

Table 2 Predictions of health perception (n=196)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>2.076</td>
<td>.749</td>
<td>2.774</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>Functional ability</td>
<td>.051</td>
<td>.260</td>
<td>3.099</td>
</tr>
<tr>
<td></td>
<td>Adjust to illness</td>
<td>.148</td>
<td>.250</td>
<td>3.200</td>
</tr>
<tr>
<td></td>
<td>Mental health and emotion</td>
<td>.004</td>
<td>.150</td>
<td>2.176</td>
</tr>
</tbody>
</table>

Table 3 R, R², and Change Statistics of health perception model (n=196)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R</th>
<th>Change Statistics</th>
<th>Sig. F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>.487a</td>
<td>.238</td>
<td>.234</td>
<td>.238 60.457 1 194 &lt;.001</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>.527b</td>
<td>.277</td>
<td>.270</td>
<td>.040 10.625 1 193 .001</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>.543c</td>
<td>.295</td>
<td>.284</td>
<td>.017 4.736 1 192 .031</td>
<td></td>
</tr>
</tbody>
</table>

A= Constant, Functional ability
B= Constant, Functional ability, Adjust to illness
C= Constant, Functional ability, Adjust to illness, Mental health and emotion

Discussion

The results showed that CHF persons perceived their health and interpreted their health as in a good level (mean 7.32, SD = 1.41; range 1-10). Perception of health as in a good level might be based on their ability and their some personal characteristics. First, participants might positive view of their experience of illness. Their records indicated that they had been diagnosed by CHF less than 5 years (mean 42.42 month, SD = 66.27) and average re-hospitalization only one time. This might indicated that they might experience less severe signs and symptoms of CHF. The more severity of illness, the more frequency of exacerbation and re-hospitalization. Furthermore, they reported that their daily activities at
a high level (mean 32.31, SD 7.05; range 11-40). This might indicated that they could still take care themselves. The impacts of disease might little involve their activities and might less suffer their life. Moreover, they also reported that they could adjust to illness (Mean 12.45, SD 2.34; range 7-14).

The results also showed that predicting factors including functional ability, adaptation to illness, and mental health and emotion. The results of this study showed that both physical and mental health influence their health perception. Functional ability could influence health perception because participant can be clearly valuated by themselves (Chin, Zhang, & Rathouz, 2003; Coelho, et al., 2005). If they independently taking care themselves, they could evaluate that they were still healthy. Although, the participants would not directly evaluate their adjustment to illness and mental health and emotion, self-report discovered that they gained adaptation to illness as well as adjust to psychological and emotional health. The results of this study were supported by several studies (Coelho, et al., 2005; Morgan, Villiers-Tuthill, Barker, & McGee, 2014; Paukert, LeMaire, & Cully, 2009).

In conclusion, health perception was important for CHF patients. The predicting factors of health perception including functional ability, adjust to illness, mental health and emotion of CHF patients should use to help CHF patients to manage their health and illness, improve health outcomes, and enhance quality of life.

References


