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A Preliminary Results of Effectiveness of Cognitive Training Self-Management Program for Heart Failure Patients

Sun Hyoung Bae, PhD
College of Nursing·Nursing Research Institute, Ajou University, suwon, Korea, Republic of (South)
Jin-Hee Park, PhD, RN
College of Nursing.Research insititute of Nursing Science, Ajou University, Suwon, Korea, Republic of (South)

Purpose: purpose

A considerable number of heart failure patients experience cognitive impairment, and it affect quality of life. This preliminary study attempted to determine the effects of a cognitive training self-management program on cognitive functioning and self-care behavior.

Methods: methods

Twenty-eight patients were assigned to either a cognitive training self-management or waitlist condition. The 12-week cognitive training self-management program consisted with cognitive training and tailed self-care education, and counseling. Cognitive training emphasizes strategies and aims to facilitate adaptive coping and the development of realistic and optimistic attitudes toward cognitive decline. The program individualized face-to-face education through the use of a handbook, paper-and-pencil homework exercises, and telephone-delivered health-coaching sessions. Participants were assessed at baseline (T1), and the completion of the 12-week intervention (T2). Outcomes were assessed using the Montreal Cognitive Assessment (MoCA), the Korean version of the Cognitive Failures Questionnaire (CFQ), the self-Care of Heart Failure Index (SCFHI), and the Minnesota Living with Heart Failure Questionnaire (MLHFQ). Data were analyzed using repeated-measures ANCOVA with SPSS 23.0.

Results: results

Mean age of participants were 63.5 years old. Of the patients, 18 were male and 8 were diagnosed as ejection fraction reduced heart failure. When testing the homogeneity of the groups, there were no statistically significant differences between the groups for any of these characteristics and outcomes. In the intervention group, the mean score of CFQ was 27.18 at T1 and 25.00 at T2. The waitlist group showed the mean score of CFQ 28.00 at T1 and 31.87 at T2. Unlike the control group, the intervention group improved subjective cognitive impairment after intervention. According to repeated-measures ANOVA, CFQ of the patients in intervention group considerably reduced compared with control group ($F = 5.28$; $P = .031$).

Meanwhile, the mean score of MLHFQ of intervention group was 23.91 at T1 and 18.45 at T2. The waitlist group showed the mean score of MLHFQ 22.93 at T1 and 28.53 at T2. The quality of life of the intervention group was improved after intervention. The intervention group improved significantly over time compared to the waitlist group on the CFQ and MLHFQ scores. The CFQ and MLHFQ scores showed significant group × time interaction. However, there were no significant group × time interaction in the SCFHI and MoCA scores.

Conclusion: conclusion

These results suggest that the 12-week cognitive training self-management program improved the subjective cognitive functioning and disease specific QoL. There is no significant impact on self-

management in this study. However, since this study is a preliminary study, it is necessary to continue the study by expanding the target population.

Title:

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Keywords:

Cognitive function, Heart failure and Self-management

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Abstract Summary:

Self - management has been issue in terms of quality of life and prognosis in heart failure patients. There have been efforts to identify the obstacles of the self-management, such as cognitive impairment. Preventing cognitive impairment is needed to improving self-management and quality of life in heart failure patients.

Content Outline:

I. Introduction

Cognitive impairment (CI) is common problem in patients with heart failure (HF) and has been associated with poor outcomes. Poor self-management have been associated with poor outcomes and lower quality of life (QoL) in this population as well.

II. Body

Cognitive impairment (CI) is common in older adults with heart failure (HF). The prevalence of CI, between 25% and 75%, is higher among patients with HF than in those without. Numerous risk factors have been shown to contribute to CI in HF. Additionally, various pathophysiological mechanisms related to HF can contribute to cognitive decline. These conditions are not routinely screened for in clinical practice settings with HF populations, and guidelines on optimal assessment strategies are lacking. Validated tools and criteria should be used to differentiate acute cognitive decline (delirium) from chronic cognitive decline such as mild cognitive impairment and dementia.

In addition, Heart failure (HF) patients with cognitive impairment (CI) had poor abilities to carry out self-care, potentially resulting in higher in hospital readmission rates. Self-care in HF patients involves a complex cognitive decision-making process; however, the pathophysiology and symptoms associated with HF may have an adverse impact on cognitive functioning. Therefore, it is reasonable to consider the potential contribution of cognitive function on engagement in self-care in HF.

III. Conclusion

HF patients have difficulty with self-management and the influence of cognitive function needs to be considered when providing professional support for self-management in HF, with further research to determine the feasibility and acceptability of cognitive assessment in routine clinical care.

First Primary Presenting Author

Primary Presenting Author

Sun Hyoung Bae, PhD
Ajou University
College of Nursing· Nursing Research Institute
Associate Professor
Yeongtong-Gu,
suwon
Korea, Republic of (South)

Author Summary: 2015-present - Associate Professor, Ajou university, College of Nursing, Suwon, Korea. Sun Hyoung Bae has her expertise in evaluation and passion in improving the Nursing science and wellbeing. She has been involved in research team on cancer patients and cardiovascular disease patients, and has recently been conducting intervention studies to improve cognitive function in patients with heart failure.

Second Secondary Presenting Author

Corresponding Secondary Presenting Author

Jin-Hee Park, PhD, RN
Ajou University
College of Nursing. Research institute of Nursing Science
Professor
Suwon
Korea, Republic of (South)

Author Summary: Jinhee Park serves as a professor with the College of Nursing at Ajou University. In this position, she draws upon her previous experience in clinical nursing to educate and inspire the next generation of nurses.