The Tele-Case-Management Program Improves Resilience, Symptoms Distress, Fatigue, and Depressive Symptoms in Heart Transplant Recipients

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Background
Patients with severe heart failure (NYHA Fc IV) without effective responses to medical therapy have to receive the treatment of heart transplantation. Although patients may prolong their life after undergoing heart transplantation, they need to take immunosuppressive drugs lifelong. How to strike a balance between avoiding infection and preventing rejection causes patients both physiological and psychological distress. Due to the special conditions after heart transplantation, telehealth care could provide immediately and timely care, and reduce the degrees of anxiety and depression for heart transplant recipients.

Methods
This study used experimental design with pretest, post-test. According to pretest of depression scores, we stratified and randomly assigned participants to the experimental group and control group. The heart transplant recipients in experimental group (n=31) received Tele-Case-Management Program intervention, and the recipients in control group (n=30) received the usual care. Each study participants was evaluated by Resilience Scale, Symptom Frequency and Symptom Distress Scale, Beck Depression Inventory-II Scale, and Fatigue Scale at pre- intervention (pre-test), and one-month and three-month follow-up. This study used independent t-test and chi-square test to evaluate the homogeneity of the characteristics between the two groups. The generalized estimating equation (GEE) was used to examine the effects of the Tele-Case-Management Program on the improvements of resilience, symptom frequency and distress, depressive and fatigue symptoms.

Purpose
The purposes of this study were to develop the Tele-Case-Management Program, and determine its effects on the improvements of the depressive and fatigue symptoms, resilience, and the symptom frequency and distress.

Results
The majority of participants were male (78.7%), with a mean age of 53.2 ± 12.28 years, and mean ejection fraction (EF) after heart transplant of 61.74 ± 10.04%. The participants receiving the Tele-Case-Management Program intervention showed significantly greater improvement than those in the control group in the symptom frequency (p= 0.029) and distress (p= 0.014), and depressive symptom (p=0.029) at one-month follow-up. Furthermore, the intervention effects on resilience (p= 0.001), symptom frequency (p= 0.001) and distress (p= 0.001), and depressive symptom (p= 0.001) were significantly improved in experimental group compared with control group at 3-month follow-up.

Conclusion
The Tele-Case-Management Program is able to improve resilience, symptom frequency and distress, depressive symptoms in heart transplant recipients.