

Evaluation of Technology Acceptance and Self-Care Behaviors Among Patients Using
Standardized Text-Messages or Phone-Based Interventions

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On my honor I pledge that I have neither given nor received any unauthorized assistance on this paper. May 5, 2020, Jennifer Nguyen.

Abstract

Background: mHealth monitoring platforms can drastically improve patient care. The Nurse Navigator Check-In Service (NNCIS) is a two-way automated text-message or phone-call service with a web service platform that enables patient-provider communication. While the use of mHealth can be beneficial, it is important to evaluate the patient's intention on using technology and their self-care behaviors to determine the intervention's effectiveness.

Methods: This human subject research project surveyed patients with heart failure using an adapted Technology Acceptance Model (TAM) and used pre- and post- European Heart Failure Self-care Behavior Scales (EHFScBS) before and after using the NNCIS for 4-6 weeks.

Results: Of the total five enrolled adult patients with heart failure, 60% were male, 60% were treated for heart failure for 0-2 years, and ages ranged from 51-80. The project found that patients believed that using the NNCIS would make managing their HF easier, 4 (80%) agreed and 1 (20%) strongly agreed. All patients reported intending to use NNCIS to manage their heart failure, 3 (60%) agreed and 2 (40%) strongly agreed. Overall, from pre-test to post-test there was self-reported improvement in one patient, but scores assessing self-care behaviors in the other patients with heart failure worsened or did not change post-intervention. The majority of patients' scores did not improve after using the NNCIS, 3 (60%) worsened, 1 (20%) no change, and 1 (20%) improved.

Conclusion: It is promising that patients believe mHealth can help them make managing their HF easier and that they intend on incorporating mHealth platforms into their at-home chronic disease care. However, other mHealth platforms should be trialed to optimize patient self-care compliance and usability.