

The use of m-health to improve self-care in patients with heart failure

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This invited commentary refers to ‘The long-term effect of an m-health tool on self-care in patients with heart failure—a pre-post interventional study with a mixed-method analysis’, by M. Liljeroos et al., <https://doi.org/10.1093/eurjcn/zvad107>.

In the present issue of the *European Journal of Cardiovascular Nursing*, a study was published that evaluated the effects of using an m-health tool on self-care behaviour after 3 and 12 months of usage in people with heart failure. Further, the study explored patients’ experiences and perceptions with the m-health tool.¹ This study is interesting for several reasons.

There has been an increase in the prevalence of heart failure over the last few decades, and since it is considered a chronic disease, it has a significant impact on self-care and quality of life. Patients with heart failure are frequently hospitalized, which implies a high social and economic impact in various countries, as well as a burden on national health systems.² Self-care includes three distinct but linked concepts: self-care maintenance, symptom perceptions, and self-care management.³ Factors related to self-care maintenance and management in patients with heart failure may include perceptions of heart failure symptoms, disease severity, treatment decisions, and continued cardiovascular disease maintenance and management strategies. The study of Liljeroos showed that the m-health tool could impact on self-care: self-care maintenance was improved by monitoring the participants through the application. The study also employed a monitoring questionnaire to help the participants reporting on the perceived symptoms. Further, the m-health tool helped the participants with self-care management, as it is stipulated as follows ‘...actively intervenes either by suggesting an increase of the dose of diuretics following a swift increase in weight and symptoms or by alerting the patient to contact the HF clinic’.¹

The authors use digital health technology at patient houses to improve patients’ self-care. The participants reported a sense of safety and security using the m-health tools.¹ This feeling can be considered one of the most frequently mentioned advantages of using digital health technology, because health professionals are monitoring the measurements remotely.⁴ Liljeroos et al. concluded that the m-health tool ‘significantly improved patients’ self-care behaviours after 3 months, but the effect did not persist after 1 year’.¹ A prior study on the experience of patients with a chronic condition with telemedicine showed that patients generally had positive experiences with m-health devices, but

some patients do not have enough motivation or discipline to monitor their chronic conditions, and thus they need external control and encouragement (from nurses or doctors).⁴ In another study,⁵ some barriers to self-care in heart failure patients related to personal factors such as lack of self-care knowledge, heart failure negative emotions, and the difficulty of changing habits were identified. These prior studies help to understand the conclusion obtained by Liljeroos to improve future research.

The Liljeroos study made use of a mixed-method analysis. Such an approach allows researchers to explore different perspectives, permitting a more panoramic view of the research landscape, observing the phenomenon from other points of view and with a greater degree of depth.⁶ Nursing research involves the systematic study of complex phenomena of the human responses to life and health transitions, most of them comprise subjective phenomena. Mixed methods can offer an integration of qualitative and quantitative approaches to generate new knowledge.^{7,8}

Heart failure has become a global pandemic, and research in self-care improvement is critical. Hence, discussing procedures, limitations, and opportunities is an enrichment process towards knowledge transfer, preventing associated complications and improving patients’ quality of life. Overall, the study by Liljeroos et al. highlights the potential of m-health tools to improve self-care maintenance in patients with heart failure. The study’s findings have important implications for healthcare providers and policymakers interested in developing interventions to promote self-care maintenance in patients with heart failure.

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Data availability

There are no new data associated with this article.

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