Testing a brief guided reflective intervention to improve self-care in patients recently hospitalized with heart failure
Kristen A. Sethares, PhD, RN, CNE
Marilyn E. Asselin, PhD, RN, BC
College of Nursing
University of Massachusetts Dartmouth, No. Dartmouth, Ma

Background

- Self-care of heart failure includes actively recognizing, interpreting and treating HF symptoms (Riegel & Dickson, 2008).
- Structural changes in the brains of heart failure (HF) patients may lead to mild cognitive impairment that limits the ability to learn self-care behaviors (Pressler, 2008; Woo et al., 2009).
- Mild cognitive impairment includes changes in memory, attention and concentration, all skills critical to learning self-care (Bennett et al., 2005; Pressler et al., 2010; Stanek et al., 2009).
- Information giving, without reflection on actions, does not ensure learning of self-care.
- Reflection changes learning into an active process with the patient as the center of the intervention (Johns, 2006).
- By using Gibb’s reflective cycle, patients can think about their own past experiences with symptoms, express their ideas in their own words and generate new understandings (Kim, 1999; Jarvis, 1992).

Self-care of heart failure model

- Riegel & Dickson, 2008
Gibb’s reflective cycle

- Action Plan: If it’s an event, what would you do?
- Reflection: What were you thinking and feeling?
- Conclusion: What did you learn from the event?
- Action: What can you do to change or make the experience better?

Research questions

1. How do heart failure patients describe their self-care in general and during periods of exacerbation?
2. What is the effect of a structured reflection intervention on self-care scores?
3. To what extent is structured reflection useful to heart failure patients in gaining insights into self-care decisions?

Methods

- IRB approval was received at the university of the investigators and the hospital where subjects were enrolled.
- Informed consent was obtained during enrollment.
- This mixed methods study recruited adults hospitalized with an acute exacerbation of HF in the previous 2 weeks.
- Quantitative data collection on demographic variables was done at enrollment.
- Self-care data was collected at the initial home visit one week after hospitalization before beginning the interview.
- Interviews were completed in the patient’s home about recent symptom self-care experiences guided by Gibb’s reflective cycle one week after hospitalization. All interviews were audiorecorded and transcribed verbatim.
- One month after the initial visit, an assessment of the feasibility of the reflective intervention was evaluated qualitatively through an interview and quantitatively with the SCHFI.
Instruments

- Cognitive status was measured with the Montreal Cognitive Assessment Tool (MoCa)
  - scores range from 0-30
  - < 26 mild cognitive impairment
- Self-care maintenance and management were measured with the Self-Care of HF instrument (SCHFI)
  - scores ≥ 70 demonstrate adequate self-care
  - reliabilities:
    - self-care maintenance = .74
    - self-care management = .88
- Demographic variables included:
  - age, gender, ethnicity, income, education, work status, HF etiology and past medical history

Sample

- Convenience sample of 10 people with an acute exacerbation of HF
  - 60% systolic HF, 70% with mild cognitive impairment
- English speaking
- HF diagnosis verified with Framingham Criteria

Sample characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>70.6 (11.3)</td>
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</tr>
<tr>
<td>Educational level (yrs)</td>
<td>13.6 (4.2)</td>
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<tr>
<td>MoCa score</td>
<td>22.9 (4.3)</td>
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<tr>
<td>Baseline self-care maintenance</td>
<td>69.9 (15.8)</td>
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<tr>
<td>Baseline self-care management</td>
<td>48.1 (18.7)</td>
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<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>6 (60)</td>
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</tr>
<tr>
<td>Marital status</td>
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</tr>
<tr>
<td>married</td>
<td>8 (80)</td>
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</tr>
<tr>
<td>Income level</td>
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<tr>
<td>≤ $20,000/year</td>
<td>8 (80)</td>
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**Data analysis**

- Data were entered into SPSS 21.0
- Descriptive statistics were computed on all demographic variables
- A paired t test was run to determine changes in self-care scores from baseline to one month
- Qualitative data were analyzed using content analysis. Key statements were grouped into themes and these themes were analyzed across participants.

**Quantitative Results**

- 70% of patients in this study demonstrated mild cognitive impairment one week after hospitalization
- Self-care maintenance and management scores at baseline were below the level recommended as adequate (69.9 vs 47.2, respectively)
- One month after intervention, self-care maintenance (Mn 79.6) and self-care management (Mn 63.9) scores improved ($t = -1.56, p = .18$ and $t = -2.36, p = .07$, respectively)
- Management scores still remained below suggested levels for adequate self-care

**Qualitative results**

- **Learning**
  - “What happens with symptoms with me when I start to not feel well, I have a hard time catching my breath. If I get up and have to catch my breath, it starts in my lower diaphragm and… my feet will swell, my wrist will swell, this one here tends to blow up a little bit more…” (7).
- **Maintaining vigilance**
  - “Gee, how come I get out of breath all the time… It’s because I was walking… Then, when I had to take care of my dog, every time I bent down, I’d be out of breath and I couldn’t walk. I said, “It’s the… dog that’s killing me. That’s why my leg won’t get any better…” (8).
- **Treating self**
  - “I tried to address some problems, some symptoms that I was having and was not happy with… I was taking the metformin… the breathing was even worse when I took my dosage of metformin. The difficulty breathing was extremely intense and I said “There’s got to be something wrong.” So… I took myself off of the metformin… even if it’s only for a couple of days, let me see if it makes a difference…” (23)
Qualitative results

- Recognizing mortality
  - "I'm thinking of my mother and I'm saying to myself, 'Am I going in the same direction as my mother? Am I going to repeat what she's been through?" is that the way I'm going to die?...enough, especially when I watched her die and I saw her struggling for breath. I remember seeing her, visiting her when she was living at my sister's house and having a terrible time breathing. That kept flashing in my mind. I thought to myself: 'God, I'm just like my mother... All things are flaxen back.' (20)

- Appreciating life
  - "I notice more things now than I ever did before...I never had time before...I don't have the aggressive when I'm driving. You change with all these things and you see things...I was looking out there at that water with all the boats and the houses – it's flat calm, like a mirror – the day is very sunny, and I'm just so happy to be alive...I find looking...I just really appreciate this day." (20)

- Considering family
  - "Well, I know I was getting sick...I cannot get all those cares...my symptoms, the timing was horrible...In the holiday season, with family here and you have to watch the kids...my wife also runs a full service restaurant located downtown, she becomes extra busy when it's holiday time...so you can't add extra stress to her because she's already going through extra stress...I'm getting more and more down...saying I can't spend time in the hospital now because I need to be here and, of course, I should have gone. I always pull myself on the back burner." (20)

Conclusions

- The findings suggest that patients can benefit from a brief guided reflective intervention for the purposes of understanding symptom experiences.
- A number of patients reported not being able to link symptoms, particularly shortness of breath, with the heart, and this has been previously reported in the literature.
- Guided reflection has been used for years to assist adult learners but has not been previously used in the adult HF population.
- The findings of this feasibility study suggest it is a useful and easy to implement intervention in the home setting.
- A pressing need exists to develop innovative nursing interventions that assist the HF patient to recognize symptoms.

References