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A Motivational Counseling Approach to Improving Heart Failure Self-Care

Mechanisms of Effectiveness

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Background: Self-care is an integral component of successful heart failure (HF) management. Engaging patients in self-care can be challenging. **Methods:** Fifteen patients with HF enrolled during hospitalization received a motivational intervention designed to improve HF self-care. A mixed method, pretest posttest design was used to evaluate the proportion of patients in whom the intervention was beneficial and the mechanism of effectiveness. Participants received, on average, 3.0 ± 1.5 home visits (median 3, mode 3, range 1–6) over a three-month period from an advanced practice nurse trained in motivational interviewing and family counseling. Quantitative and qualitative data were used to judge individual patients in whom the intervention produced a clinically significant improvement in HF self-care. Audiotaped intervention sessions were analyzed using qualitative methods to assess the mechanism of intervention effectiveness. **Results:** Congruence between quantitative and qualitative judgments of improved self-care revealed that 71.4% of participants improved in self-care after receiving the intervention. Analysis of transcribed intervention sessions revealed themes of 1) communication (reflective listening, empathy); 2) making it fit (acknowledging cultural beliefs, overcoming barriers and constraints, negotiating an action plan); and, 3) bridging the transition from hospital to home (providing information, building skills, activating support resources). **Conclusion:** An intervention that incorporates the core elements of motivational interviewing may be effective in improving HF self-care, but further research is needed.

KEY WORDS: heart failure, mixed methods, motivational interviewing, naturalistic decision-making, patient education, self-care

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Self-care is a critical component of therapy for persons with heart failure (HF). Patients must manage numerous medications, follow a low sodium diet, and routinely monitor their body weight to detect early signs of fluid retention. Those who do not follow the treatment plan and initiate self-care remedies for early signs and symptoms are more likely to be hospitalized for an acute exacerbation.[1,2]

In spite of the effectiveness of self-care in maintaining patients in a stable state, few master HF self-care. It may be that HF is too complex; understanding the diagnosis and treatment regimen requires that patients learn the links between behavior and physiology. Illness factors may impair their ability to learn HF self-care; many persons with HF have some impairment of cognition.[3] Depression is now recognized as exceedingly common in this population.[4] Most have other comorbid illnesses, and many of these illnesses cause the same symptoms, making it difficult for patients to distinguish symptoms of HF from those of other illnesses.[5]

Another reason why so few patients excel at HF self-care could be the manner in which self-care is taught. The didactic educational approach used in routine clinical practice may be insufficient to encourage patients to undertake the level of HF self-care required to influence outcomes. Based on this premise, we hypothesized that a motivational counseling approach would effectively stimulate patients to engage in HF self-care. In a pilot study of intervention efficacy, we identified individual patients in whom the intervention produced a clinically significant improvement in HF self-care. A qualitative assessment of taped interviews was used to identify the mechanism by which the intervention produced its effect. The purpose of this article is to describe the intervention and the mechanisms by which it influenced HF self-care.

Background

Patient education is acknowledged as an essential component of chronic HF management.[6] However, increased knowledge is not necessarily associated with improved treatment adherence and those who comply with recommendations are not necessarily knowledgeable about why they do so.[7] This conundrum may reflect the varied goals of and methods used by the clinicians who educate patients.

A review of the published studies of HF patient education interventions reveals that most were designed to enhance self-care by increasing HF knowledge and understanding,[8–10] changing perceptions about the costs and benefits of self-care,[11] and helping patients to identify and achieve their personal goals.[12–14] The technique used to achieve these goals was usually individualized patient or patient and family teaching,[8–11,14] but group educational sessions[12,13] and mailed written materials[15,16] were also used.

Although most of these interventions have proven to be effective in clinical research, there remains a significant subset of patients with HF in whom such approaches are ineffective. Counseling techniques such as motivational interviewing have been shown to produce potent behavioral change even in challenging substance abuse and dependence populations as well as those with health problems requiring modifications in diet and exercise.[17,18] Motivational interviewing emphasizes the humanistic proposition that people are naturally motivated for growth and self-direction. With unconditional positive regard (acceptance), accurate empathy, a collaborative approach, and genuineness, people will eventually actualize their full potential to live a fulfilling life.[19–21] Using an adapted brief form of motivational interviewing, we developed an intervention intended to motivate self-care even in patients with significant barriers and little inherent motivation. In this study, we assessed the mechanisms by which this intervention created behavioral change or "change talk," the conceptual opposite of resistance to change.

Conceptual Model

Decision-making is a critical component of HF self-care. Daily decisions are needed about lifestyle choices, symptom management, and treatment options. The intervention developed for this study was based on the naturalistic decision-making framework, which explains that in real world settings people make decisions that are meaningful and familiar to them based upon the interaction between the person, the problem, and the environment.[22] Naturalistic decision-making is a sequential process

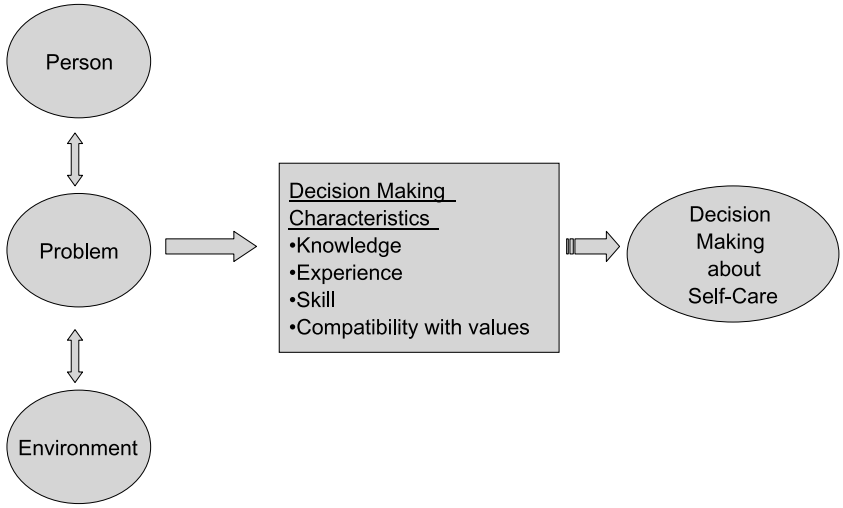

FIGURE 1. *Conceptual model of the manner in which laypersons make decisions regarding self-care.*

whereby decision rules are used to match a context specific problem with a decision and an action.

Self-care, according to a naturalistic decision making framework, is situation and context specific, influenced by knowledge about and experience with decision-making in the particular context, skill to act on the decision made, and the compatibility of the decision and action with values. Facilitating self-care involves exploring how the empirical information available at the time shapes self-care decision-making, presumably through its influence on decision-making knowledge, experience, skill and values (Figure 1).

The intervention tested in this study can be linked to the naturalistic decision making framework by its specific effect on the patient's knowledge about and experience with a decision making situation, skill to act on the decision made, and the compatibility of the decision and action with values. The intervention, described below, was designed to strengthen decision making about self-care. A motivational approach was augmented by engaging the family as supporters in behavioral change whenever possible. Once engaged, participants were taught essential self-care skills and helped to overcome barriers.

Methods

A mixed methods, pre-test posttest design was used for this study. Self-care was defined as a naturalistic decision-making process involving the choice of behaviors that maintain physiologic stability (self-care maintenance) and the response to symptoms when they occur (self-care management).[23] Using both quantitative and qualitative data, we identified individual patients in whom the intervention produced a clinically significant improvement in HF self-care (Figure 2). Then, qualitative methods were used to assess the mechanism by which the intervention influenced HF self-care. These procedures are detailed below.

Study participants were screened and enrolled during an acute care hospitalization. Baseline data were collected within 5.7 ± 4.6 days (range 0 to 19) after hospital discharge and before beginning the intervention. All participants received the counseling intervention during the first three months following hospital discharge. The intervention was provided primarily during home visits and augmented by telephone calls as needed. The number of intervention sessions needed was estimated to be 6 to 9 but the number actually provided was left to the discretion of the nurse providing the intervention. Intervention sessions were audiotaped.

Sample

To be included, patients had to have a confirmed diagnosis of HF, be able to speak and read English, and be cognitively oriented as measured with the Clock Drawing test.[24] Those with a severe, uncorrected hearing impairment were excluded because of anticipated difficulty with the intervention. A sample of 24 patients was enrolled during a HF hospitalization but only 15 patients completed the 3-month study. Nine patients were lost to follow-up due to death (n = 2), admission to hospice (n = 3), withdrawal (n = 1), and inability to contact (n = 2); one other patient developed idiopathic intracranial hypertension and was withdrawn by the investigator. All of these losses occurred early after hospital discharge. Audiotaped interview data were unavailable from one patient due to tape recorder malfunction.

Intervention

The intervention was designed to emphasize motivation, skill building, and support as the prime

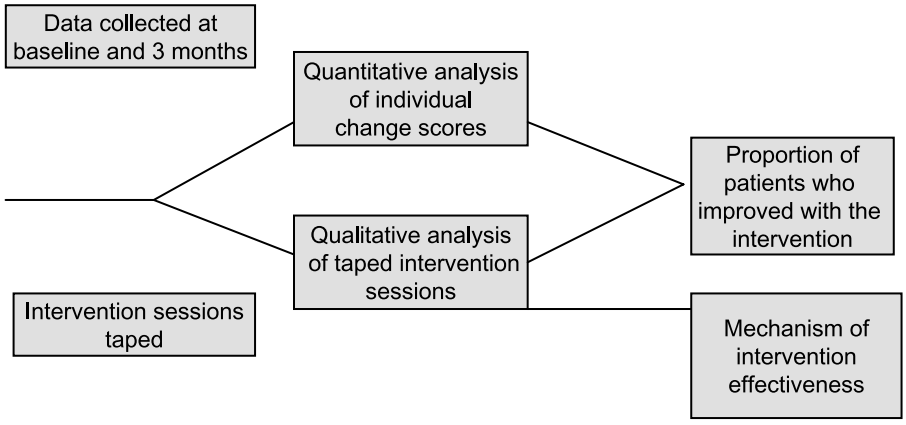

FIGURE 2. *Timeline of the research method used.*

methods of influencing self-care behavioral intentions. Motivation for self-care was enhanced through the style of communication used and by decreasing barriers. Skill building was developed with knowledge and practice. Support was enhanced by engaging the family in the intervention.

The motivational approach used was patient-centered, directive but non-confrontational, and designed to help patients increase their intention to change behavior by exploring and resolving ambivalence about change. Change was viewed as a continuous process in which ambivalence and setbacks are expected and accepted as normal and human.[25,26] Through active listening and open-ended questions, patients were helped to identify the importance of change and to increase their confidence that they could achieve it.[25]

The basic principles behind the motivational approach emphasized collaboration, identification of resources, and autonomy (versus provider authority). Emphasizing autonomy was intended to place patient choice and personal responsibility for change and outcomes at the center of the strategy.[25] Each patient's stage of change, readiness, willingness, and ability to make change was continuously assessed and clinical interventions were tailored accordingly. It was assumed that change would be attempted only if the patient was confident about being successful.[27–29]

Four strategies were used to enhance motivation. The first approach was to develop discrepancy or create a state of dissonance between the patient's broader goals and values and his/her current behaviors. The second was to support self-efficacy or foster the belief that change is possible and s/he can succeed. The third was to intentionally and skillfully roll with resistance and avoid lecturing or arguing by accepting ambivalence and patient choice. The last strategy was to express empathy by maintaining a genuinely accepting, non-judgmental, and curious stance with extensive use of reflective listening.[25]

The purpose of these strategies was to help avoid unwittingly fostering entrenchment in a resistant, defensive position. Directly confronting patients leads to resistance.[30] So, instead of directly confronting or educating patients about "realities" or "truths" that they may not see, the nurse communicated support and acceptance to generate mutual trust. The intention was to free patients from the need to defend against the anxiety created by the imbalance or discrepancy between their goals and behavior. This approach was used to provide patients with an opportunity to work through ambivalence and make choices as to what should change and how change should take place. The nurse was taught to remain a collaborator rather than the leader of the process. The respect and genuine belief in the patient's ability to mobilize resources, inherent to this therapeutic stance, are thought to foster intrinsic, lasting motivation for change.

Procedure

A team of experts trained one experienced advanced practice nurse (APN) in the motivational approach and family counseling. The training included assigned readings, discussions with experts, and eight intense role-playing sessions. Role-playing in the motivational approach was used to illustrate the pitfalls of lapsing into the traditional expert/learner roles often assumed by nurses. Training with common scenarios such as resistance to change and patient priorities other than health built a repertoire of appropriate responses for use during the intervention interviews. These tutorials were audiotaped for use after the intervention interviews began. Training in family counseling emphasized methods of facilitating constructive, noncritical communication within families. Role-playing how to respond to overprotective and critical family members prepared the APN to deal with well-established interpersonal dynamics that can sabotage the intervention and interfere with behavioral change. This process was used to develop fluid and genuinely patient-driven responses.

Participants received, on average, 3.0 ± 1.5 home visits (median 3, mode 3, range 1–6) from the APN over the three-month period. Most patients also received a follow-up phone call as the interaction was winding down. The intervention sessions in the home were audiotaped, transcribed verbatim, analyzed by one investigator using *Atlas* software and augmented with field notes and personal stories from the APN delivering the intervention.

Measurement

Self-care was measured using the *Self-Care of HF Index* (SCHFI),[23] which captures the following components of self-care (a) maintenance or adherence behaviors that prevent an acute exacerbation of HF (eg, daily weighing); (b) the patient's ability to recognize symptoms when they occur; (c) independent and interdependent self-care treatments implemented by the patient (eg, taking an extra diuretic for shortness of breath); (d) ability to evaluate the effectiveness of the treatments implemented; and (e) confidence in the ability to perform self-care. The SCHFI contains 15 items measured on a four-point Likert-type scale. Three subscales measure self-care maintenance or adherence behaviors, self-care management or decision-making in response to

symptoms, and self-care confidence. Self-care confidence items address the patient's perceived ability to engage in each phase of self-care (recognize symptoms, evaluate symptoms, treat symptoms, and evaluate effectiveness of treatments tried). Scores on each subscale are standardized as a percentage to make intuitive sense to the user. Total SCHFI scores are obtained by adding subscale scores, so scores can be as high as 300. Higher scores indicate better self-care. Coefficient alpha for SCHFI was .77 in a sample of 760 HF patients[23] and .71 in this sample. Construct validity has been demonstrated through factor analysis.

In addition to the SCHFI, knowledge about HF was measured with *Representations,* which provides an indicator of patients' mental image or representation of HF based on the Common Sense Model of Illness framework.[31] Scores on *Representations* can range from 14 to 56; higher scores indicate higher knowledge.

Analysis

Specific criteria for identifying individual patients in whom the intervention produced a clinically significant improvement in HF self-care were developed *a priori*. One investigator evaluated quantitative SCHFI and knowledge data and another one analyzed the qualitative data using content analysis (see Figure 2). The investigators were blinded to each other's assessment of intervention effectiveness until each of their component of the analysis was complete.

For the quantitative assessment, SCHFI subscale scores were calculated according to the published method. Change scores were derived for each individual participant by subtracting the pretest score from the posttest score for each SCHFI subscale and the total SCHFI score. Individuals were classified as having improved if their score on at least one of the SCHFI subscales increased 8 points or more from pre-test to post-test, a cut-point based on the results of prior research.[32] Change in group score over time was not used in this analysis because the intention was to identify the proportion of participants that improved rather than the mean group improvement over time.

The qualitative data were processed through careful review of interviews and their verbatim transcriptions and analyzed to identify themes and patterns.[33] Paradigm and exemplar cases were identified to illustrate reports of behavioral change and change talk. Reports of behavioral change reflect evidence of new self-care behavior. Comments about self-care maintenance (eg, daily weight monitoring, checking ankles, exercising) and self-care management practices (eg, decision-making in response to a change in symptoms) were coded as reports of behavioral change.

Change talk, the "conceptual opposite" of resistance to change, was coded when comments reflected intrinsic motivation for change.[25] Utterances in one of four categories: (a) disadvantages of the status quo (current, dysfunctional behaviors), (b) advantages of change, (c) optimism about change (as opposed to resistance or focusing on the difficulties of change or lack of confidence about changing), and (d) intention to change (desire, willingness, commitment to changing) reflected change talk.

To identify reports of behavioral change and change talk, clusters of data from the interview transcripts were labeled into brief headings. Codes derived from this process were linked to intervention components to obtain the coding categories. In the first stage of analysis, the coding categories remained general, descriptive in nature, and linked to items on the quantitative self-care measure to provide descriptive evidence of intervention effectiveness. In a subsequent stage of the analysis, new codes emerged and coding categories were revised after persistent engagement with the data. Summarization of coding categories was performed across cases and subsequently cross-classified.

TABLE 1 Demographic and Clinical Characteristics of the Sample (N = 15)

Age	59.7 (±13.3)
Female	9 (60%)
Race	
African American	7 (46.7%)
Caucasian	8 (53.3%)
Marital Status	
Married	3 (20%)
Single	5 (33.3%)
Divorced or separated	3 (20%)
Widowed	4 (26.7%)
Education	
Grade school	2 (13.3%)
High school	7 (46.7%)
Business school	2 (13.3%)
Some college	2 (13.3%)
Graduate school	2 (13.3%)
Heart failure is new (diagnosed ≤ 2 months ago)	3 (20%)
Working outside the home for pay	2 (13.3%)
Annual income < $15,000 (n = 13)	4 (30.8%)
Comorbidity level	
Low comorbidity level	5 (33.3%)
Moderate comorbidity level	6 (40%)
High comorbidity level	4 (26.7%)
Systolic HF	11 (73.3%)
NYHA functional class	
Class II	10 (66.7%)
Class III	3 (20%)
Class IV	2 (13.3%)

TABLE 2 Individual Level Change Scores Over the Three Month Interval (N = 15)

Participant	Self-Care Maintenance	Self-Care Management*	Self-Care Confidence	Total SCHFI scores*	HF Knowledge
1	16.68	†	33.36	†	7.0
2	29.19	†	12.51	†	6.0
3	8.34	29.19	16.68	54.21	−1.0
4	16.68	16.68	12.51	45.87	1.0
5	8.34	12.51	−4.17	16.68	2.0
6	4.17	†	−4.17	†	†
7	−8.34	†	12.51	†	−1.0
8	00	−29.19	−8.34	−37.53	2.0
9	−12.51	12.51	−8.34	−8.34	00
10	−8.34	†	8.34	†	5.0
11	20.85	†	12.51	†	−2.0
12	−8.34	29.19	8.34	29.19	2.0
13	8.34	00	00	8.34	00
14	−4.17	12.51	−4.17	4.17	−2.0
15	−12.51	−12.51	−12.51	−37.53	00

*Scores on this subscale are not computed if patients report no shortness of breath or ankle swelling in the prior month.
†First or last score in the pair missing.

Methodological rigor of the qualitative analysis was maintained through an audit trail, periodic debriefing with the primary investigator and the co-investigator expert in motivational interviewing, the APN delivering the intervention, and discussions with colleagues knowledgeable about HF self-care. Reliability was measured by consistency of interpretation and coding.[34] An audit trail of process and analytic memos and coding books was maintained to support the credibility of the analysis. Once all the quantitative and qualitative data had been analyzed, the investigators assessed congruence between the two evaluations.

Results

The sample of 15 was predominately female (9/15, 60%), white (8/15, 53.3%), high school educated (7/15, 46.7%), and experienced with HF (80%), defined as having been diagnosed with HF more than 2 months prior (Table 1). Functional limitations were mild in most (NYHA class II 10/15, 66.7%). There was quantitative evidence of improvement in HF self-care in 12 of 15 (12/15, 80%) (Table 2) and qualitative evidence of behavioral change or change talk in 12 of 14 (86%) participants (one tape malfunctioned). Congruence on the categorization of having improved or not, based on the quantitative and qualitative evidence, was found in 71.4% (10 of 14). Three with evidence of significant improvement in their SCHFI subscale scores failed to verbalize either behavioral change or change talk. One participant who reported self-care behavioral change had no change in his SCHFI scores over time.

Mechanisms of Intervention Effectiveness: Communication Style

In analyzing how the intervention was effective and what strategies were most successful in stimulating self-care behavioral change and change talk in these participants, core communication skills of motivational interviewing (eg, reflective listening) were identified in the taped interventions.

Reflective listening was used to understand how patients viewed HF, their motivations for change, the effects of the illness on their lives: "*I've always been a mover. I've always been shaker… and it's just really…it bewilders me right now…I don't know what my future is and I don't know where I'm going...*" explained a 54-year-old man. Reflections were used by the APN to acknowledge the impact of HF: "*You have been given a big bomb shell in your life.*"

One 61-year-old women described her life-threatening experience of pulmonary edema *("flash flood"): "…they told me, 'this time you might not make it'…You can feel the fluid coming…It is the*

TABLE 3 Summary of the Intervention

- Communication
  - Reflective listening
  - Expressing empathy
- Making it Fit
  - Acknowledging cultural beliefs
  - Overcoming barriers and constraints
  - Negotiating an action plan
- Bridging the transition from hospital to home
  - Providing information
  - Building skills
  - Activating support resources

most frightening thing you have ever gone through in your life… Suffocating, like really dying." She acknowledged, *"I don't ever want that to happen again so if I have to change my whole way of eating… I am living with it." "…I want to get better. Get back to my old self… This is for my benefit. My benefit"* (exemplary of change talk). Reflective listening helped the APN to understand fears and provide affirmation: *"You have already become aware that, when you get those symptoms, you need to take care of it and you have … You are in charge now."* The collaborative style of motivational interviewing was made explicit with comments such as: *"I really am very honored that you trust me to speak so frankly with me."*

Self-disclosure was used by the APN to establish rapport, express **empathy,** and build the relationship.[35] The APN revealed feelings and personal elements of her own life relating to the patient's issue at hand: *"I cooked myself some soup the other day…. I love it (soup) too… I try to practice what I preach…"* To another patient she said: *"It's hard to do (not worry). And I see it both on a professional and a personal level because there's a member in [my] family who's got serious heart problems."*

Strategies unique to this nursing intervention were making it fit and bridging the transition from hospital to home (Table 3). The specific approaches were individualized based upon the participant's knowledge, experience, skill, and values.

Mechanisms of Intervention Effectiveness: Making It Fit

Making it fit involved helping patients adapt to life with HF using mutually agreeable, practical and often creative solutions. Three major approaches were used to achieve this goal: acknowledging cultural beliefs, overcoming barriers and constraints, and negotiating an action plan.

Acknowledging cultural beliefs occurred when the APN worked to understand how patients' beliefs and behavioral norms influenced their self-care practices. For many of the African Americans (AA) in this study, spirituality was an essential part of their life. A direct connection between God's plan and their health was expressed in several ways: *"I am never going to put the doctors over the Lord. Just like I tell them, the medication helps, or therapy, it helps but it is still God's grace that I am still here…"*

The **barriers and constraints** that these patients faced were daunting and sometimes overwhelming and exhausting to the APN. For example, one patient had no heat in her home in the winter. Helping patients overcome their barriers communicated true concern, which facilitated the intervention. For example, one patient feared missing her appointment at the HF clinic because the taxi failed to arrive, so the APN drove her to the clinic. Another patient was in respiratory distress when the APN arrived but refused to go to the hospital because the visiting nurse was coming to give her an Epogen shot. The APN administered the injection and then was able to convince the patient to seek care for her respiratory distress.

Unfulfilled basic needs presented barriers to many patients and the APN helped patients get their medication prescription refills, schedule appointments, and procure supplies (eg, glucometers, blood pressure monitors, scales). *"There are (internet sites)[that can] put you in touch with the manufacturers… the manufacturers have really good programs [to get low cost prescription refills]."* To another patient the APN said: *"I got you a blood pressure cuff. I was cleaning out some of my stuff and I found one I had gotten from a drug company so I have it in the car for you."* Ensuring that basic needs for HF self-care were met allowed the patient to concentrate on behavioral change.

Depression emerged as a recurrent barrier to active self-care, so empathy was an especially critical component of the intervention. The APN said to one patient:*"It [depression] just sucks the life right out of you… It's hard to find the energy just to deal with everyday life. And you've got a lot on your plate."*

Negotiating an action plan often involved the low sodium diet. A 70-year-old woman lamented at the beginning of the intervention: *"The food, the food, oh lord, I just can't get used to not seasoning this or seasoning that, now that is really hard because when you get used to eating one way, it is hard to change…Everything I want to eat, they are like you can't eat this, you can't eat that and that is what discourages you…I can't eat greens…"* The APN was able to negotiate a diet plan that included the patient's favorite foods. *"Would you have the self control to have a really small portion?"* And the patient agreed: *"…I could have some, that would be fine. I think it would do me just fine if I could just have some…I think it will go a long ways to keep me on the right track."*

Mechanisms of Intervention Effectiveness: Bridging the Transition

Techniques used to bridge the transition from hospital to home were information giving, building self-care skills, and activating support resources.

Information giving involved providing essential information when needed and correcting misconceptions. Patients described how the exhaustion, fear of dying, and powerlessness over even basic needs such

as bathing and toileting during hospitalization left them unable to focus on in-hospital instructions. Others reported inadequate discharge instructions: *"They just give me the pills and said, "Here take these"…I did not get the Lasix right away and it was only 20 mg anyway."* After another admission, this patient stated: *"They told me not to have any canned foods, no canned soups and no lunch meats... I didn't have any canned foods and lunch meats… I had pizza and hot wings and Pepsi Cola…"* After discussions with the APN, this patient relayed, "*I am reading the labels and everything and Dr. (name) told me that if I did go out, because I watch everyday with the salt and sodium, and if I do go somewhere and eat one day, it won't be that bad because I am taking my Lasix…I will go on watching everything that I eat and drink."*

Misconceptions about HF were common. Some patients thought that exercise was harmful or that increasing fluid would help "flush them out". Others pondered their symptoms, attributing feelings of fatigue, sleepiness, and difficulty breathing to "old age" or "being out of shape". One patient had been "fired" from her cardiologist's practice for noncompliance. In reality, she had written the word "sodium" on her shopping list and told her children to watch out for it, not understanding that sodium was salt. Information giving focused on these misconceptions, explaining things in a neutral, understandable manner. Consistent with the motivational approach, after information was delivered, conclusions and choices about the next course of action were left up to the patient. In a discussion about low salt cooking, the APN suggested: *"One thing you can do to reduce it (salt) is to just run some water over it… and rinse it (salt) off that way."* The patient was amenable to this option: *"yeah.. I can rinse them off…."* She instructed her children to buy frozen vegetables in the future.

Skill building was an essential component of bridging the transition across settings: *"Let's go into your kitchen and read some labels…"* This approach often resulted in reports of behavioral change: "*Well, I got rid of those can goods. I don't eat that anymore,"* reported a 70-year-old woman at a follow up visit. Affirmation was used to encourage new skills: *"You are the expert on you"* and *"You had the courage to call the doctor."*

Role-playing was used sometimes to practice using newly acquired information, sometimes to help problem solve, and sometimes to enhance skills and confidence in those skills by providing familiarity with a helpful course of action. For example, in the case of a 61-year-old man who described an increase in weight and a sensation of abdominal fullness in the prior week but failed to take action, the APN first described the mechanisms behind fluid accumulation, diet and sodium restriction, and what happens with symptoms that are ignored. Then they role-played a future scenario (*"What if you (had) those same symptoms (another) day, what would you do?"*) where the patient was able to perform self-care based on the information previously provided. Role-playing was used with this patient because he had demonstrated readiness to change and now he needed skill in doing so.

In another situation, a patient wanted to discuss how to tell his friends and family about his deteriorating heart condition, a priority for him. The APN asked: *"Suppose I was one of your close friends, what would you say to me? What could you say to me?"* The patient tried to explain his condition, "*Well, I think I would start first with explaining the extent…the significance of (HF)…and because of (these reasons)… there isn't a whole lot they can do about it...the fact is that you are at risk and there's not a lot that can be done to change that situation.*" The APN responded: *"So, (patient name) are you telling me that you're dying?"* Then the APN worked through additional dialogue as the "friend," responding: *"I don't want to talk about it"*. The patient was given options on how to keep the conversation going rather than his initial response: *"You don't want to talk about it. Well, alright we won't talk it then."* The APN suggested: *"Could you come back and say, but I have a need to talk about it?"*

Activating social resources involved encouraging family members to join intervention sessions. *"Who is around the house or the neighborhood to give you a hand with things?"* When social norms interfered with patients' intentions to engage in self-care, family counseling skills were used to negotiate a plan that would increase support and decrease overprotection. For example, one wife discussed her fears of allowing her husband to engage in exercise: *"It's hard on him. This house isn't low to the ground like most homes. It's got what…five, six steps out back and four out front and I think that it's too soon... to go up and down the steps…"* In subsequent sessions the APN negotiated a compromise that would alleviate the spouse's fears enough to encourage the patient to increase his exercise:

APN: Is there anything he could do … and not have you so worried?

Wife: He could go walking.

Patient: I keep trying to get her to walk with me.

Wife: Well, I would if I thought I could make it up there and back, but I can't.

APN: What about doing part of it?

Wife: …A lot of times I'll walk halfway…

APN: … that would be something good for you both to do (together).

Discussion

The motivational intervention described in this article influenced intention to perform HF self-care by making it fit patients' lives, helping them transition from the hospital to the home, and affirming their ability to become responsible for and competent in self-care. Although it may seem obvious that health-related behavioral changes need to fit realistically into a patient's life, health care professionals commonly expect that patients will instead modify their lives in order to accommodate their new health needs. In this intervention, instead of simply prescribing needed changes in a provider-centered fashion, the APN used a patient-centered approach. She listened to and empathized with patients' disclosures about how HF affected them and their motivational difficulties. She assessed concrete barriers that made it difficult to engage in self-care, brainstormed solutions with patients, and negotiated plans that accommodated their beliefs, values, and priorities.

Reflective listening, affirmation, and collaboration were at the core of this intervention. The APN listened carefully to patients' motivations, including their fears, and collaborated with them in the developmental process of learning how to make decisions about self-care. The patients led the discussion; in an empathic fashion, the APN followed their lead. This type of an approach is unusual in health care encounters. Paterson[36] argues that empowerment is a myth in health care, "disguising and sometimes justifying paternalistic practices" (p.575). Paterson found, using qualitative data from research with persons with chronic diabetes, that instead of truly collaborating with patients, health professionals are reluctant to acknowledge patients' expertise. They discount experiential knowledge, withhold information, and expect compliance. Her findings illustrate the difficulty that busy health professionals have in accommodating patients as partners. Yet, true experts in self-care learn to make effective and astute modifications in their treatment based on their bodily cues, pattern recognition, and experience.[37] This level of expertise is not learned through compliance with someone else's specific directions, but through body listening, trial and error.

This component of the intervention was similar to the mutual goal setting[14] and behavioral management[13] interventions used by others. In those approaches, nurses help HF patients examine their values and develop a plan to achieve their personal HF goals.

Another major component of the intervention involved facilitating the transition from hospital to home. Transitional care is recognized as an effective method of improving outcomes in chronically ill elders,[38] including those with HF.[39] In this component of the intervention, the APN gave information, built skills in HF self-care, and activated supporters. These interventions are consistent with those described by Naylor and Bowles[40] in a secondary analysis of data from their transitional care studies. In their research, the APNs emphasized surveillance and teaching (eg, when to call for help). They facilitated communication with other team members, monitored the diet, and made sure that patients had their prescriptions, transportation, and follow-up appointments.

The most obvious limitation of this study was the small sample size, which was further compromised by significant loss of participants and recording device mechanical failure. Most of these patients had been discharged from the critical care unit of a major tertiary care center. Enrollment of patients from less acute settings probably would have minimized the loss of participants. Another limitation was the use of a single nurse to provide the intervention. Until the intervention is taught to other nurses and tested in another sample, we will not know if it was the individual providing the intervention or the intervention itself that was effective.

Although motivational interviewing has been used in other areas of health care for several years, this approach has not been widely adopted in the care of persons with HF. Only two studies of a motivational approach, both intended to encourage exercise in persons with HF, were located.[41,42] The results of the current study exploring the manner in which the intervention was effective suggest that this motivational approach is consistent with nursing's philosophy of care and builds upon our long-standing traditions. Further research is needed to test this novel intervention.

REFERENCES

1. Bennett SJ, Huster GA, Baker SL, et al. Characterization of the precipitants of hospitalization for heart failure decompensation. *American Journal of Critical Care*. 1998;7:168–174.
2. Tsuyuki RT, McKelvie RS, Arnold JM, et al. Acute precipitants of congestive heart failure exacerbations. *Arch Intern Med*. 2001;161(19):2337–2342.
3. Bennett SJ, Sauve MJ. Cognitive deficits among patients with heart failure: A review of the literature. *J Cardiovasc Nurs*. 2003;18(2):219–242.
4. Freedland KE, Rich MW, Skala JA, Carney RM, Davila-Roman VG, Jaffe AS. Prevalence of depression in hospitalized patients with congestive heart failure. *Psychosom Med*. 2003;65:119–128.
5. Carlson B, Riegel B, Moser D. Self-care abilities of patients with heart failure. *Heart Lung*. 2001;30(5):351–359.
6. Stromberg A. The crucial role of patient education in heart failure. *Eur J Heart Fail*. 2005;7(3):363–369.

7. Ni H, Nauman D, Burgess D, Wise K, Crispell K, Hershberger RE. Factors influencing knowledge of and adherence to self-care among patients with heart failure. *Arch Int Med*. 1999;159:1613–1619.
8. Martensson J, Stromberg A, Dahlstrom U, Karlsson JE, Fridlund B. Patients with heart failure in primary health care: effects of a nurse-led intervention on health-related quality of life and depression. *Eur J Heart Fail*. 2005;7(3): 393–403.
9. Jaarsma T, Halfens R, Tan F, Abu-Saad HH, Dracup K, Diederiks J. Self-care and quality of life in patients with advanced heart failure: the effect of a supportive educational intervention. *Heart Lung*. 2000;29(5):319–330.
10. Krumholz HM, Amatruda J, Smith GL, et al. Randomized trial of an education and support intervention to prevent readmission of patients with heart failure. *J Amer Coll Cardiol*. 2002;39:83–89.
11. Sethares KA, Elliott K. The effect of a tailored message intervention on heart failure readmission rates, quality of life, and benefit and barrier beliefs in persons with heart failure. *Heart Lung*. 2004;33:249–260.
12. Schreurs KM, Colland VT, Kuijer RG, de Ridder DT, van Elderen T. Development, content, and process evaluation of a short self-management intervention in patients with chronic diseases requiring self-care behaviours. *Patient Educ Couns*. 2003;51:133–141.
13. Shively M, Kodiath M, Smith TL, et al. Effect of behavioral management on quality of life in mild heart failure: a randomized controlled trial. *Patient Educ Couns*. 2005;58:27–34.
14. Scott LD, Setter-Kline K, Britton AS. The effects of nursing interventions to enhance mental health and quality of life among individuals with heart failure. *Appl Nurs Res*. 2004;17:248–256.
15. Serxner S, Miyaji M, Jeffords J. Congestive heart failure disease management study: A patient education intervention. *Congestive Heart Failure*. 1998;4:23–28.
16. Shah NB, Der E, Ruggerio C, Heidenreich PA, Massie BM. Prevention of hospitalizations for heart failure with an interactive home monitoring program. *Amer Heart J*. 1998;135:373–378.
17. Burke BL, Arkowitz H, Menchola M. The efficacy of motivational interviewing: a meta-analysis of controlled clinical trials. *J Consult Clin Psychol*. 2003;71:843–861.
18. Dunn C, Deroo L, Rivara FP. The use of brief interventions adapted from motivational interviewing across behavioral domains: a systematic review. *Addiction*. 2001; 96:1725–1742.
19. Rogers CR. *Client-centered therapy*. Boston: Houghton-Mifflin; 1951.
20. Rogers CR. Toward A Modern Approach To Values: The Valuing Process In The Mature Person. *J Abnorm Psychol*. 1964;68:160–167.
21. Maslow A. Neurosis as a failure of personal growth. *Humanitas*. 2001;3:153–170.
22. Lipshitz R, Klein G, Orasanu J, Salas E. Taking stock of naturalistic decision making. *J Behav Decision Making*. 2001;14:331–352.
23. Riegel B, Carlson B, Moser D, Sebern M, Hicks F, Roland V. Psychometric Testing of the Self-Care of Heart Failure Index. *Journal of Cardiac Failure*. 2004.
24. Riegel B, Bennett J, Davis A, et al. Cognitive impairment in heart failure: issues of measurement and etiology. *Amer J Crit Care*. 2002;11:520–528.
25. Miller WR, Rollnick S. *Motivational interviewing: Preparing people for change*. 2nd ed. New York, NY: US: Guilford Press; 2002.
26. Prochaska JO, DeClemente CC, Norcross JC. In search of how people change: Applications to addictive behaviors. *American Psychologist*. 1992;47:1102–1114.
27. Bandura A. *Self-efficacy: The exercise of control*. New York: Freeman; 1997.
28. Jones RA. *Self-fulfilling prophecies: Social, psychological and physiological effects of expectancies*. Hillsdale, NJ: Erlbaum; 1997.
29. Parker MW, Winstead DK, Willi FJ. Patient autonomy in alcohol rehabilitation. I. Literature review. *Int J Addict*. 1979;14:1015–1022.
30. Miller WR, Benefield RG, Tonigan JS. Enhancing motivation for change in problem drinking: a controlled comparison of two therapist styles. *J Consult Clin Psychol*. 1993;61:455–461.
31. Albert N. *dissertation abstracts*. Kent University; 2005.
32. Riegel B, Carlson B. Is individual peer support a promising intervention for Persons with heart failure? *Journal of Cardiovascular Nursing*. 2004;19(3):174–183.
33. Sandelowski M. Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Res Nurs Health*. 2000;23(3):246–255.
34. Byrne M. Data Analysis strategies for qualitative research. *AORN Journal*. 2001;74(6):904–905.
35. Hill CE. *Helping skills: Facilitating exploration, insight, and action*. 2nd ed. Washington, DC: American Psychological Association; 2003.
36. Paterson B. Myth of empowerment in chronic illness. *J Adv Nurs*. 2001;34(5):574–581.
37. Thorne SE, Paterson BL. Health care professional support for self-care management in chronic illness: insights from diabetes research. *Patient Educ Couns*. 2001;42(1): 81–90.
38. Naylor MD. Transitional care of older adults. *Annu Rev Nurs Res*. 2002;20:127–147.
39. Naylor MD, Brooten DA, Campbell RL, Maislin G, McCauley KM, Schwartz JS. Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. *J Am Geriatr Soc*. 2004;52(5):675–684.
40. Naylor MD, Bowles KH, Brooten D. Patient problems and advanced practice nurse interventions during transitional care. *Public Health Nurs*. 2000;17(2):94–102.
41. Brodie DA, Inoue A. Motivational interviewing to promote physical activity for people with chronic heart failure. *J Adv Nurs*. 2005;50(5):518–527.
42. Beswick AD, Rees K, Griebsch I, et al. Provision, uptake and cost of cardiac rehabilitation programmes: improving services to under-represented groups. *Health Technol Assess*. 2004;8(41):iii–iv, ix–x. 1–152.