Published in final edited form as:

Dimens Crit Care Nurs. 2012 ; 31(1): 46–52. doi:10.1097/DCC.0b013e31823a561c.

Explanatory Models of Heart Failure Etiology

Angela P. Clark, PhD, RN, CNS, FAAN, FAHA, Graham J. McDougall Jr, PhD, RN, FAAN, FGSA, Glenda Joiner-Rogers, PhD, RN, CNS, Sheri Innerarity, PhD, RN, FNP, CNS, Carol Delville, PhD, RN, CNS, Marty Meraviglia, PhD, RN, CNS, and Ashley Davila, MSN, CNS

Abstract

Chronic health failure is a leading cause of hospital readmissions and is reaching epidemic proportions in the United States. Explanatory models of illness can provide insight about how people with heart failure perceive their etiology of heart failure. Six themes were found in this descriptive, qualitative study to explore the perceived origin of heart failure in 50 participants. Forty percent of the people were unaware of why they had the diagnosis. Misconceptions and misinformation were common, including confusion about whether the symptoms themselves caused the disease.

Keywords

Chronic heart failure; Explanatory models of illness; Heart failure; Quality of life

The incidence of chronic heart failure (HF) is reaching epidemic proportions in the United States. Estimate of the direct and indirect cost of the disease in 2010 was calculated at \$39.2 billion.¹ Over 3 million ambulatory care and emergency department visits occur annually in the United States for HF care and exacerbations.² Living with HF is challenging for patients because of the disease trajectory and the complex regimens of care.³ Thus, communication between patients and family members with health care providers is critically important to arrive at the best treatment and quality-of-life decisions. Reported estimates of patient adherence with medical recommendations range from 15% to 93%.⁴ One meta-analysis reported an average nonadherence rate of 24.8% across 733 studies, with a 23.4% nonadherence rate in 129 studies of cardiovascular patients.⁵

One often overlooked aspect may be related to the patient's perception of his/her own health condition. Despite the emphasis given to health teaching and patient education in our professional culture, patients and family members often lack meaningful knowledge about their health condition. Zickmund and colleagues⁶ found that patients perceived physicians as withholding information. A useful process to contrast knowledge between professional providers and patients is looking at explanatory models of illness.

Address correspondence and reprint requests to: Angela P. Clark, PhD, RN, CNS, FAAN, FAHA, School of Nursing, The University of Texas at Austin, 1700 Red River, Austin, TX 78701 (apclark@mail.utexas.edu).

The authors have disclosed that they have no significant relationship with, or financial interest in, any commercial companies pertaining to this article.

Explanatory models of illness reflect an individual's subjective and personal understanding of their illness experience.⁷ They are concepts constructed to describe one's illness within a cultural context.⁸ Explanatory models focus on how people explain their illness condition—what meaning they ascribe to it. The area originated in the work of Arthur Kleinman,⁷ a Harvard anthropologist, who became interested in studying how chronic illness is experienced by people. Kleinman⁷ suggested that, by knowing explanatory models of illness, health care professionals can provide better care to help patients understand their condition, its consequences, and various treatment options.⁷ The model may provide a framework to evaluate the patient's understanding, which can be used to enhance communication between health care providers and the patient.⁹ According to Kleinman,⁷ explanatory models may contain any 1 or all 5 parts of an illness experience: (1) etiology, (2) time of symptom onset, (3) pathophysiology, (4) expected course of the illness, and (5) expected treatment and effectiveness.

People construct explanatory models to describe an illness within a cultural context, including factors such as illness responses and the experience and treatment of illness.^{8,10} Kleinman⁷ indicated that the basis of a person's explanatory model can draw ideas from multiple sources—professional, popular, and even folk sectors. Lip and colleagues¹¹ reported finding cultural differences in beliefs about control of one's health. In their study of 103 patients with HF, 64.7% (n = 22) of Indo-Asians felt God/fate controlled their health, whereas the majority of white subjects felt the physician was the greatest factor influencing their health. Ononeze and colleagues¹² found that prior knowledge of heart disease, social networks, and interactions with health care providers influenced how people described their heart disease illness. In other works, all health care providers must be aware of other cultures and adapt their teaching to that culture.

PURPOSE

The purpose of the qualitative study aimed to elicit how the participant perceived the etiology of their condition of chronic HF. This was 1 aspect of a study for adults/ older adults living with chronic HF who participated in a 9-month education-support intervention in the home setting to improve self-care. Indeed, critical care nurses, medical-surgical nurses, emergency nurses, and nurses in the outpatient settings may be interested in our findings.

METHODOLOGY

The theoretical basis for this explanatory model study was descriptive based on Kleinman's theory.^{7,8} Table 1 shows some of the tenets of his work. This study used a randomized controlled design testing the effectiveness of an education-support intervention for adults/ older adults with chronic HF. In this article, we report the results of the qualitative component of explanatory models. Participants were asked an open-ended question about the etiology of their HF at the beginning of the 9-month study. The interviewers wrote down the verbatim response given by the subject.

The participants were 50 adults with a diagnosis of classes I-III HF. Demographic data are shown in Table 2. Cultural differences may be reflected by both race and ethnicity information. Racial data about the sample indicated that 80% were white (n = 39); 18%, black/ African American (n = 9); and 2%, American Indian (n = 1). Ethnicity data showed: 24% Hispanic (n = 12), 74% not Hispanic or Latino (n = 37), and unknown 2% (n = 1). At the end of the study, a review of participants' medical records was conducted to validate data and to determine the state of their health and illness during the 9-month study period. The education level of participants was higher than expected, with 62% of the participants reporting some college courses, a college degree, or a graduate degree.

A qualitative method was the approach for this descriptive data. Thematic analysis was used to analyze the data.^{13,14} In this method, after data are collected, patterns are identified from either direct quotes or paraphrasing common ideas.¹⁵ Next, combining or cataloging related patterns into subthemes is done to piece together fragments of ideas. Thus, themes from participants are used to form a picture of their collective experience.¹⁶

FINDINGS

Several themes were identified as the cause of participants' HF: (1) multiple etiologies suspected, (2) lack of knowledge/misinformation, (3) symptoms as causation, (4) treatable risk factors, (5) untreatable risk factors, and (6) other heart conditions. Forty percent of the participants reported they were unsure or had not been told why they had HF. Some subjects named multiple possible causes including "not sure." Some reported the causes of HF to be their symptoms. Each of the subthemes is discussed and briefly interpreted. Eighteen percent of the sample was composed of blacks/African Americans (n = 9) who correctly identified hypertension as the cause of their HF. No sex differences were identified in the explanatory models described by participants.

Multiple Etiologies Suspected

Trying to account for the cause of HF was challenging for some participants who described up to 4 possible etiologies," often unrelated to the actual cause. An exemplar is a subject who gave these 6 etiologies: "not sure," shortness of breath," increased urine," irregular heart beat," virus," and "told had heart attack in the past." A similar finding was reported in a study of patients with fibromyalgia where all patients reported at least 3 factors that they believed had contributed to the development of their disease, including physical ailments with long-term pain, family history, specific personality types, and mental stress.¹⁷

Lack of Knowledge/Misinformation

This category included some unique attributions as the cause of HF, including diet pills, dental infection, septic shock, and pulmonary emboli. Forty percent (17/50) of subjects said they had never been told or did not remember ("not sure," "don't know," "not told," "no reason"). This high percentage of people who were unclear about the etiology of their HF was surprising, particularly responses indicating no insight. All had previously agreed to participate in a 9-month intervention study about living with HF. It is possible they had enrolled in the study to gain knowledge about their condition.

Two other studies reported similar findings. Results in the present study are slightly higher than those reported by Lip and colleagues¹¹ in their study of 103 patients with HF, where 34% were unaware of their primary diagnosis. In that study, 1 group had a significant variation, with 61.8% Indo-Asians lacking awareness of their diagnosis. In a study of the explanatory models for depression and postpartum depression, Niemi and colleagues¹⁸ reported a category called “cause not known” in their analysis. It included responses by both patients and health workers—almost half of the health workers and some of the mothers chose this category.

Symptoms as Causation

Several subjects described symptoms of HF or its pharmacological treatment as the etiology of their condition. Examples included “retaining water,” “increased urine,” and “shortness of breath.” Numerous symptoms are attributed to HF and are well known to clinicians. Many are potentially debilitating¹⁹ and include shortness of breath, edema, extreme fatigue, and sleep disturbances. Current evidence-based HF treatment includes pharmacotherapeutic agents that can cause further disabling symptoms such as dizziness. Thus, participants were unable to discriminate between cause (etiology of HF) and effect (symptom). Studies of explanatory models in other disease conditions also found this to be true, including a study of patients with irritable bowel syndrome (IBS). When asked about causes of IBS, participants answered in terms of agents that provoked flare-ups of symptoms, not the cause of the disease itself.²⁰

Treatable Risk Factors

Types of risk factors identified by the participants as the etiology of HF included stress, smoking, obesity, alcohol, cocaine, diabetes, salty diet, and lifestyle. Some of these can indirectly influence the development of HF. For this study, diabetes was coded as a treatable risk factor, based on current evidence that control of blood glucose can reduce cardiovascular morbidity.^{21,22} Some behaviors were modified by participants prior to the intervention (cocaine), and others were addressed in the education sessions as part of the intervention that followed (salty diet). Hypertension is discussed under Other Heart Conditions.

In an explanatory model study of 12 African American women with early-onset heart disease, women perceived that stress was the primary cause of their heart condition.²³ Stress was viewed as a condition that caused a bad heart, worsened it, and could cause chest pain and a heart attack. Hoke and colleagues²⁴ also reported stress as a perceived barrier in the illness representation of rural Mexican American women.

Untreatable Risk Factors

This category included responses as family history and chemotherapy. Family history of cardiovascular disease is considered as a risk factor for several forms of heart disease, and a parental history of premature cardiovascular disease is prognostic for both atherosclerosis and cardiovascular disease.¹ Adults with a parent or sibling who received a diagnosis of early-onset heart disease are at a 2-fold elevated risk for a cardiovascular event themselves.¹ Some chemotherapeutic agents can damage the myocardium and can lead to HF.²⁵

Other Heart Conditions

Several other heart conditions were correctly named as the etiology of HF. These included myocardial infarction, cardiomyopathy, arrhythmia, valve disease, and viral myocarditis. All of these can cause HF. Seventy-five percent of patients with chronic HF have antecedent hypertension.¹

DISCUSSION

Explanatory models have been used in a variety of health and illness states, including patients with diabetes, obesity, chronic obstructive pulmonary disease, fibromyalgia, tuberculosis, and chronic venous disease.^{9,10,17,20,24,26,27} Fewer were found for patients with cardiovascular diseases, including HF.^{19,27,28} It is likely that explanatory model features other than etiology are more important to patients. Kleinman⁷ described 4 other aspects that are important to interpret and understand the entire illness experience, including the symptom onset, pathophysiology, expected course of the illness, and expected treatment and effectiveness. In an explanatory model study of 51 patients with IBS, Casiday and colleagues²⁰ found that symptoms and treatment were more important than explaining etiology. However, although the information is important in the critical care setting, the critical care nurse must consider the stress a patient has in the intensive care unit as well as his/her ability to retain that information.

Explanatory models may help providers to evaluate the patient's understanding about his/her health and facilitate more meaningful communication and teaching. However, the nurses must be aware of cultural differences and adapt their teaching methods to meet the patient's needs. O'Connor and colleagues²⁶ reported what they termed *intriguing clues* from explanatory models in their study of 1109 patients with diabetes. The data suggested that patients between 45 and 64 years of age may have had explanatory models of diabetes that reduced their motivation to care for the disease.²⁶ Younger adults accessed care less frequently and often had explanatory models of diabetes that could interfere with effective and aggressive care.

Because knowledge is believed to influence a person's self efficacy,³ it is vital to strengthen the opportunities for patients to learn all they can about their illness and disease states. A major focus of patient education is to develop self-care abilities in patients and families, especially critical skills for those living with HF to improve patient outcomes.^{2,3} McSweeney and colleagues^{29,30} noted a high correlation between perceived causes of a myocardial infarction with the healthy behaviors that people used after the initial attack. In a study of open heart surgery patients, Hermele and colleagues³¹ found that the less patients believed they clearly understood their illness, the more psychological distress they experienced.

How to best measure explanatory models from the patient's perspective is a challenge for clinicians and researchers. No valid instrument was found to measure explanatory models for the present study; thus, the traditional method of using an open-ended question was utilized. Nunnelee and Spaner⁹ evaluated the usefulness of 1 instrument (n = 114), with 10 of 25 questions measuring the etiology of the disease aspect of Kleinman's 5 major

questions regarding the explanatory model of a person's illness. Subjects were allowed to answer with a "U value" for "not enough knowledge."^{7,8} Somewhat surprisingly, subjects responded with a large number of "U" answers and verbally told members of the research team that they had "no clue" or thoughts about many of the survey items. Such frequent use of the U value necessitated a rescaling of the instrument. She concluded that it needed further qualitative development and revision before continuing use.

One other instrument appears to have potential value. Haidet and colleagues³² developed and tested the CONNECT instrument that has both qualitative and quantitative properties to try to illuminate differences between patients and providers. They tested 267 patient-physician pairs. Statistically significant differences between patients and providers were found on all 6 dimensions of the instrument, including etiology. Findings showed that the instrument had good psychometric properties that may enable future researches to look at differences between patients and providers relative to explanatory models. Additional validity research is ongoing. No additional studies using the model were found.

Explanatory models are theoretical representations of the cultural expectations of health and illness.^{33,34} Most participants in the current study lacked accurate information about the etiology of their HF. However, of the 9 black/African Americans in the study, 4 correctly identified hypertension as the etiology of their condition. This finding was supported in the research by Evans.³³ She studied 20 black women with heart disease who were able to identify 11 causes of the condition. No sex differences in the themes were identified in the present study, but they may exist. Women are thought to experience HF differently from men.¹⁹ Most research studying people living with HF has predominately enrolled whites.³⁵ In a meta-analysis of posthospital HF care, only 10 of the 29 studies reported patients' race and ethnicity.³⁵ This study makes a unique contribution to the evidence for intervening with minority adults who have HF. The minorities in our sample had a retention rate of 100% in the 9-month intervention, with 9 Black/ African Americans, 1 American Indian, and 12 Hispanics.

IMPLICATIONS FOR PRACTICE

Because of the high hospitalization rate for people with either acute or chronic HF, critical care nurses have multiple opportunities to influence the knowledge of patients and family members about their health conditions including medical diagnoses. With an awareness of explanatory models of illness, health care providers can better assist patients' understanding about their conditions, its consequences, and various treatment options.

It is possible that some clinicians are hesitant to discuss specific information about disease conditions. In a study of patients with classes III-IV HF, one identified that a barrier to an open discussion of disease progression was unwillingness of providers to disclose poor prognosis information.³⁶ In addition to the patients, family members and providers were interviewed for the study—all showed a significant lack of understanding of HF and its symptoms.

Failure to address discrepancies between patients' and practitioners' explanatory models can disrupt the therapeutic process.⁸ In the Haidet and colleagues study³² of patients and

physician providers (267 pairs), patients reported greater fault for their own illness and fewer biomedical reasons for the cause of their illness. They also showed a greater preference for a partnership model with physicians. Zickmund et al⁶ found that perceived conflict of HF patients with their providers may be higher than suspected, and patients faulted poor physician communication skills and receiving insufficient medical information as interfering with the therapeutic bond.

CONCLUSION

Explanatory models illustrate the understanding that a person has of his/her illness experience and the meaning that it has for an individual. They are constructed to describe one's illness within a cultural context and may include any one of a variety of components, including etiology. Our awareness of them offers a unique opportunity to improve communication between patients and health care providers. The long-term follow-up component is best suited for the clinic, physician, or advanced practice nurse.

They represent 1 method that nurses can use to gain an understanding of the patient's perspective to guide culturally appropriate interventions.^{24,30} In the present study, explanatory models of etiology of HF provided insight to guide patient teaching about patients' health and to clarify misconceptions and beliefs. Remember, HF teaching can be done in multiple settings. Much of the information must be repeated several times for retention. Also, the nurse must be aware of the cultural differences.

Acknowledgments

This study was funded by NIH/NINR (R03NR009503) Health Promoting Self-care in People With Heart Failure (Dr Clark, principal investigator).

The authors thank Hsing-Mei Chen, PhD, RN; Shannon Patton, MSN, RN, CNS; and Janis Carelock, MSN, RN, CNS.

References

1. Roger VL, Go AS, Lloyd-Jones DM, et al. American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2011 update: a report from the American Heart Association. *Circulation*. 2011; 123:e000–e192.
2. Riegel B, Moser DK, Anker SD, et al. on behalf of the American Heart Association Council on Cardiovascular Nursing, Council on Clinical Cardiology, Council on Nutrition, Physical Activity, and Metabolism, and Interdisciplinary Council on Quality of Care and Outcomes Research. State of the science: promoting self-care in persons with heart failure: a scientific statement from the American Heart Association. AHA scientific statement. *Circulation*. 2009; 120(12):1141–1163. [PubMed: 19720935]
3. Yehle KS, Plake KS. Self-efficacy and educational interventions in heart failure: a review of the literature. *J Card Nurs*. 2010; 25(3):175–188.
4. Shi L, Liu J, Fonseca V, Walker P, Kalsekar A, Pawaskar M. Correlation between adherence rates measured by MEMS and self-reported questionnaires: a meta-analysis. *Health Qual Life Outcomes*. 2010; 8(99):1–7. [PubMed: 20053296]
5. DiMatteo MR. Variations in patients' adherence to medical recommendations: a quantitative review of 50 years of research. *Med Care*. 2004; 42(3):197–199. [PubMed: 15076818]
6. Zickmund SL, Blasiole JA, Brase V, Arnold RM. Congestive heart failure patients report conflict with their physicians. *J Card Fail*. 2006; 12(7):546–553. [PubMed: 16952789]

7. Kleinman, A. *The Illness Narratives: Suffering, Healing, and the Human Condition*. New York, New York: Basic Book, Inc; 1988.
8. Kleinman, A. *Patients and Healers in the Context of Culture*. Berkeley, CA: University of California Press; 1980.
9. Nunnelee JD, Spaner SD. Explanatory model of chronic venous disease in the rural Midwest: a factor analysis. *J Vasc Nurs*. 2000; 18:6–10. [PubMed: 11075089]
10. McEwen MM. Mexican immigrants' explanatory model of latent tuberculosis infection. *J Transcult Nurs*. 2005; 16(4):347–355. [PubMed: 16160197]
11. Lip GYH, Khan H, Bhatnagar A, Brahmabhatt N, Crook P, Davies MK. Ethnic difference in patient perceptions of heart failure and treatment: the West Birmingham Heart Failure Project. *Heart*. 2004; 90:1016–1019. [PubMed: 15310689]
12. Ononeze V, Murphy AW, MacFarlane A, Byrne M, Bradley C. Expanding the value of qualitative theories of illness experience in clinical practice: a grounded theory of secondary heart disease prevention. *Health Educ Res*. 2010; 24(3):357–368. [PubMed: 18515814]
13. Boyatzis, RE. *Transforming Qualitative Information. Thematic Analysis and Code Development*. Thousand Oaks, CA: Sage; 1998.
14. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006; 3:77–101.
15. Aronson J. A pragmatic view of thematic analysis. *The Qualitative Report*. 1994; 2(1) <http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html>.
16. Leininger, MM. Ethnography and ethnonursing: models and modes of qualitative data analysis. In: Leininger, MM., editor. *Qualitative Research Methods in Nursing*. Orlando, FL: Grune & Stratton; 1985.
17. Lempp HK, Hatch SL, Carville SF, Cho EH. Patients' experiences of living with and receiving treatment for fibro-myalgia syndrome: a qualitative study. *BMC Musculoskelet Disord*. 2009; 7(10):124. [PubMed: 19811630]
18. Niemi ME, Falkenberg T, Nguyen MT, Nguyen MT, Pate V, Faxelid E. The social contexts of depression during motherhood: a study of explanatory models in Vietnam. *J Affect Disord*. 2010; 124(1–2):29–37. [PubMed: 19854515]
19. Pierce C. Health promotion behaviors of rural women with heart failure. *Online J Rural Nurs Health Care*. 2005; 5(2) http://www.rno.org/journal/issues/Vol-5/issue-2/Pierce_article.htm.
20. Casiday RE, Hungin AP, Cornford CS, de Wit NJ, Blell MT. Patients' explanatory models for irritable bowel syndrome: symptoms and treatment more important than explaining aetiology. *Fam Pract*. 2009; 26(1):40–47. [PubMed: 19011174]
21. Bianchi C, Miccoli R, Daniele G, Penno G, Del Prato S. Is there evidence that oral hypoglycemic agents reduce cardiovascular morbidity/mortality? Yes. *Diabetes Care*. 2009; 32(2):S343–S348.
22. Iqbal N, Rubenstein AH. Does lowering of blood glucose improve cardiovascular morbidity and mortality? *Clin J Am Soc Nephrol*. 2008; 3:163–167. [PubMed: 18178783]
23. Warren-Findlow J. Weathering: stress and heart disease in African American women living in Chicago. *Qual Health Res*. 2006; 16(2):221–237. [PubMed: 16394211]
24. Hoke MM, Timmerman GM, Robbins LK. Explanatory models of eating, weight, and health in rural Mexican American women. *Hispanic Health Care Int*. 2006; 4(3):143–151.
25. Granger CB. Prediction and prevention of chemotherapy-induced cardiomyopathy: can it be done? *Circulation*. 2006; 114:2432–2433. [PubMed: 17146002]
26. O'Connor PJ, Desai JR, Solberg LI, Rush WA, Bishop DB. Variation in diabetes care by age: opportunities for customization of care. *BMC Fam Pract*. 2003; 4:16. <http://www.biomedcentral.com/1471-2296/4/16>. [PubMed: 14585101]
27. Russell CK, Geraci T, Hooper A, Shull L, Gregory DM. Patients' explanatory models for heart failure and COPD exacerbations. *Clin Nurs Res*. 1998; 7(2):164–188. [PubMed: 9633338]
28. Zerwic JJ, King KB. Perceptions of patients with cardiovascular disease about the causes of coronary artery disease. *Heart Lung*. 1997; 26(2):92–93. 96–98. [PubMed: 9090513]
29. McSweeney J, Allan JD, Mayo K. Exploring the use of explanatory models in nursing research and practice. *J Nurs Scholarsh*. 1997; 9(2):242–248.

30. McSweeney J. Explanatory models of a myocardial event: linkages between perceived causes and modified health behaviors. *Rehab Nurs Res.* 1993; 2(1):40–50.
31. Hermele S, Olivo EL, Namerow P, Oz M. Illness representations and psychological distress in patients undergoing coronary artery bypass graft surgery. *Psychol Health Med.* 2007; 12:580–591. [PubMed: 17828678]
32. Haidet P, O'Malley KJ, Sharf BF, Gladney AP, Greisinger AJ, Street RL Jr. Characterizing explanatory models of illness in healthcare: development and evaluation of the CONNECT instrument. *Pediatr Nurs.* 2010; 15(1):6–15.
33. Evans LK. Because we don't take better care of ourselves: rural black women's explanatory models of heart disease. *J Spec Pediatr Nurs.* 2010; 15(1):6–15. [PubMed: 20074109]
34. May KM, Rew L. Mexican American youths' and mothers' explanatory models of diabetes prevention. *J Spec Pediatr Nurs.* 2010; 15(1):6–15. [PubMed: 20074109]
35. Hammer JB. State of the science: posthospitalization nursing interventions in congestive heart failure. *Adv Nurs Sci.* 2005; 28(2):175–190.
36. Harding R, Selman L, Beynon T, et al. Meeting the communication and information needs of chronic heart failure patients. *J Pain Symptom Manage.* 2008; 36(2):149–156. [PubMed: 18599259]

Biographies

Angela P. Clark, PhD, RN, CNS, FAAN, FAHA, is an associate professor of nursing in adult health at the University of Texas at Austin and is a clinical nurse specialist in cardiopulmonary and diabetes care. She is a nurse researcher in the area of heart failure.

Graham J. McDougall, Jr, PhD, RN, FAAN, FGSA, is a professor of nursing at the University of Texas at Austin and is a gerontologist. He conducts research in the area of cognitive aging and health promotion.

Glenda Joiner-Rogers, PhD, RN, CNS, is an assistant professor of clinical nursing at the University of Texas at Austin. She is a gerontology clinical nurse specialist and division chair of Adult Health.

Sheri Innerarity, PhD, RN, FNP, CNS, is an associate professor of clinical nursing at the University of Texas at Austin and practices in a rural area of Texas.

Carol Delville, PhD, RN, CNS, is an assistant professor of nursing at the University of Texas at Austin and a clinical nurse specialist in adult health. She is a nurse researcher in the area of stress and heart disease with a focus on heart failure.

Marty Meraviglia, PhD, RN, CNS, is an associate professor of clinical nursing of nursing at the University of Texas at Austin and a clinical nurse specialist in adult health. She is a nurse researcher in the area of health promotion.

Ashley Davila, MSN, CNS, is a clinical nurse specialist in Austin, Texas. Her clinical practice focuses on patients with lipid disorders. She was the project director for this study.

TABLE 1**Highlights of Kleinman's^{7,8} Views on Explanatory Models of Illness**

-
- Illness has meaning.
  - It is clinically useful to learn how to interpret the patient's perspective on illness.
  - Interpreting the narratives of illness experience is a core task for health care professionals.
  - Illness does not equal disease.
  - Illness is the lived experience of monitoring body processes.
  - Symptoms and illness categories have powerful cultural significance.
-

TABLE 2 Demographic Characteristics of Participants (n = 50)^a

	%	n
Group		
Intervention	50	25
Control	50	25
Sex		
Male	48	24
Female	52	26
Race		
White	80	40
Black/African American	18	9
American Indian/Alaska Native	2	1
Ethnicity		
Hispanic or Latino	24	12
Not Hispanic or Latino	74	37
Unknown	2	1
Education		
Primary school	2	1
High school	36	17
Some college	23	11
College	17	8
Master's degree	11	5
PhD	11	5
Mean (SD)		
Age, y	62.4 (10.9)	
Time since diagnosis of HF, mo	67.7 (62.8)	

Abbreviation: HF, heart failure.

^a Some variables do not sum to a total sample of 50 because of missing values.