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Gender differences in health perceptions and meaning in persons living with heart failure

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OBJECTIVE: The goal of this study was to determine whether gender differences exist in health perceptions, psychosocial adjustment to illness, and concerns related to illness in patients with heart failure (HF).

DESIGN: Thirty-two patients (50% women) from a single outpatient HF clinic were asked to complete standardized tools to assess health perceptions and psychosocial adjustment to illness. Open-ended questions were used to obtain data on concerns related to HF.

RESULTS: The women had higher health perceptions than men did; they also demonstrated better psychosocial adjustment to illness. The qualitative data further suggest that women ascribed more positive meanings to their illness than men did.

CONCLUSION: The current study underscored the importance of gender differences in health perceptions related to HF. Patient teaching and counseling can be tailored to address the gender-specific concerns of men and women suffering with this condition to improve patient outcomes. (Heart Lung@ 2001;30:167-76.)

Advanced heart failure (HF) is the final outcome of many cardiovascular disorders, including hypertension, coronary heart disease, valvular heart disease, and congenital heart disease. Despite recent improvements in survival related to newer therapies, HF remains a condition with a generally poor prognosis and a mortality rate as high as 30% in 6 months to 1 year.¹⁻⁴ Persons with HF experience psychologic distress, decreased cognitive function, reduced social functioning, and recurring troublesome symptoms that lead to diminished quality of life. Normalization is an important defense for these patients⁵⁻⁶; therefore, effective treatment strategies are likely to be those that improve health perceptions,⁷ support psy-

chosocial adjustment to illness,⁸ and maintain and stabilize the patient's limited functional abilities.⁹

Pender¹⁰ underscores the importance of establishing measures of health based on the participant's point of view that are consistent with contemporary models of health and seek to include the participant's input in assessing health. Because health status, life satisfaction, and happiness are subjective assessments of what the patient perceives as important, health perceptions involve patients' assessments of the impact of the illness and its treatment on their ability to function in everyday life. They reflect the person's value systems, beliefs, and perspectives.⁹ Incongruence between perceived and actual health is important in that it is the rating of perceived health status that has been shown to correlate strongly with the risk of morbidity and mortality among patients with HF^{7,9} and other patient populations.¹¹⁻¹³

Several researchers have previously studied health perceptions^{6,14} and psychosocial adjustment to illness in patients with HF.^{5,8,15} Patients with HF have been shown to have the poorest health perceptions compared with other groups of

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patients.¹⁴ Similarly, Grady and colleagues⁶ found that health perceptions were the second independent predictor of life satisfaction ($R^2 = 0.076$) among patients with advanced HF awaiting heart transplantation. In addition, psychosocial adjustment to illness was highly correlated with measures of quality of life including self-reported functional status, depression, and hostility^{5,8} and increased morbidity.¹⁵

Although gender has been studied extensively as a risk factor in HF,¹⁶⁻¹⁷ it has not been examined as a variable contributing to psychosocial outcomes. Previous researchers²⁻⁴ clearly demonstrated the importance of assessing health perceptions when caring for persons with HF, but the impact of gender differences was not central to their research. Furthermore, previous studies on quality of life in patients with HF have had more men than women.⁵⁻⁶ Therefore, the generalizability of findings on health perceptions and psychologic outcomes to women is limited. Given the increasing number of women with HF¹⁸ and their longer survival,¹⁹ it is important to characterize the HF experience for women.

The purpose of this descriptive, comparative study was to examine health perceptions of patients with HF. The study was designed to explore whether gender differences exist in (1) sociodemographic and clinical variables; (2) health perceptions and psychosocial adjustment to illness; and (3) concerns and meaning ascribed to illness. The study also described the relationship between health perceptions and psychosocial adjustment to illness among patients with HF. Although medical treatment may be similar for men and women, health perceptions and psychosocial adjustment to illness may differ between genders. An understanding of the difference in concerns and demands of illness experienced by men and women may improve health outcomes by providing health care workers with information needed to plan interventions specific to the needs of both genders.

METHODS

Study subjects and data source

The convenience sample included 32 persons (50% women) with a primary diagnosis of HF who were receiving care at a single outpatient HF clinic. Patients were included in the study if they were alert and oriented, able to understand English, and they agreed to give informed consent. Patients were excluded if they had major or acute physical

or psychologic traumas including surgery, major stressors, major injuries, personal losses, or substance abuse within the previous 6 months before data collection. Potential subjects were also excluded if they lacked the cognitive capabilities or psychiatric stability to respond to the data collection procedures. Purposeful selection of subjects was done to obtain equal representation of men and women.

Procedures

Institutional Review Board approval for protection of human subjects was received before contact was made with patients. Patients signed an informed consent during their routine clinic visit. Sociodemographic data (eg, gender, age, race, income, education, marital status, and employment status) and health history specific to the HF (eg, New York Heart Association class, number of years since HF diagnosis, type of ventricular dysfunction, left ventricular ejection fraction) were obtained from patient self-reports and medical records. After this preliminary data collection, a home visit was scheduled with the patient within 1 week of the clinic visit. Four instruments were used to gather data from patients. The questionnaire packet containing these instruments was handed to patients at the clinic and they were asked to complete them before the visit.

The purpose of the visit was to conduct the face-to-face interviews in the privacy of the patients' own homes to explore perceptions of their health with HF. These interviews were guided by 2 broad questions: (1) How has your condition affected your life? and (2) How do you feel about your illness? All interviews were recorded on audiotape and transcribed verbatim.

Instruments

Standardized measures of health perceptions were obtained by using the Health Perception Scale of the Medical Outcomes Study Short-Form General Health Survey.²⁰ The Health Perception Scale contains 5 items on 5-point response scales. Overall health perception scores were obtained by reversing the 2 negatively worded items, transforming the scores to a 0-100 scale, and taking the mean for all 5 items. The total score was standardized to allow for comparisons with the general US population.²¹ A higher score is indicative of more positive health perceptions. Reliability and validity have been established in patients with HF.²¹ In the present study, the internal consistency reliability of the Health Perception Scale was .87.

Patients were also asked to rate their overall health satisfaction on a visual analog scale designed for the study as a second measure of health perception. The scale is similar to the thermometer used to measure valuation of health for the European Quality of Life Scale.²² Subjects were asked to place an "x" on the scale to indicate how they rated their own health satisfaction during the last 24 hours. Possible scores on the scale ranged from 0-10, with 0 indicating worst health satisfaction and 10 indicating best health satisfaction as perceived by the patients. The reliability of the European Quality of Life Scale in previous studies with chronically ill patients was .86.²² Furthermore, scores on the visual analog scale in the current sample were correlated to the Health Perception Scale scores ($r = 0.651, P = .000$).

Psychosocial adjustment to illness was measured by using 3 subscales of the Medical Outcomes Study Short-Form General Health Survey²⁰: Mental Health Scale, Vitality Scale, and Physical Functioning Scale. The Mental Health Scale and Vitality Scale contained 5 and 4 items, respectively, on 6-point response scales, and the Physical Functioning Scale contained 10 items on a 3-point response scale. As with the Health Perception Scale, total subscale scores were obtained by reversing negative items, transforming the scores to a 0-100 scale, taking the mean of all items in the subscale, and computing normative scores (standardization). The internal consistency reliability for the Mental Health Scale, Vitality Scale, and Physical Functioning Scale were .86, .88, and .90, respectively, for the current study.

Additional factors that potentially influence psychosocial adjustment to illness are meanings attributed to illness and neuroticism. These factors were measured in the study by using the Constructed Meaning Scale²³ and the Neuroticism Scale from the Eysenck Personality Questionnaire.²⁴ The Constructed Meaning Scale measures the perceived meaning that persons give to their illness. It is a self-report measure that includes statements that refer to impact of the illness on the person's sense of identity, on interpersonal relationships, and on the person's sense of what the future holds.²³ The scale has 8 items on a 4-point scale. The total score is obtained by reversing negative items and summing the scores for the 8 items. The highest possible score on the scale, 32, is indicative of the most positive meaning, whereas the lowest score of 8 indicates a negative sense of meaning. Reliability and validity testing of the scale have been carried out among patients with cancer.²³ The total internal

consistency for the Constructed Meaning Scale in the current study was .72. The Neuroticism Scale, which measures intensity of neuroticism, has been previously used in patients with HF²⁵ and consists of 9 items scored as "0" if not present or "1" if present. Item scores are added to get the total neuroticism score with the highest score, 9, indicating highest degree of neuroticism. The internal consistency for the Neuroticism Scale in the current study was .80.

Analysis

Descriptive statistics and measures of frequencies were used to characterize the study population. Analysis of variance was used to compare gender differences in patient characteristics and mean scores on the various measures of health perceptions and psychosocial adjustment to illness. Correlations between health perceptions and the variables chosen to operationalize psychosocial adjustment to illness were obtained by using Pearson product moment correlation coefficients. The significance level was set *a priori* at $P \leq .05$. Reported P values reflect a Bonferroni adjustment, which was used to minimize the chance for type I error from multiple comparisons.

Content analysis of linguistic data was used to identify common themes. Themes and concepts emerged as a result of an iterative process of interviewing, reading, coding, rereading, and recoding interviews. Two investigators reviewed and coded the transcripts independently. Trustworthiness and rigor were strengthened by close and frequent validation of data between the 2 coders. This collaboration kept the investigators grounded to the purity of the findings and minimized tainting from personal biases. Coded data were clustered into related categories. The categories were examined for similarities and differences, and similar concepts were reduced to enhance generalizability. In analyzing data related to the meaning that patients ascribed to their illness, analysis focused on identifying positive and negative themes. All responses by the subjects were counted and tallied. Credibility, which is determined by the perceptions of the persons who lived the experience, was established by continued and prolonged exposure of the investigators to the answers of the respondents.

RESULTS

Quantitative data

The sample consisted of 32 persons (50% women) representing whites (65.6%), African Americans

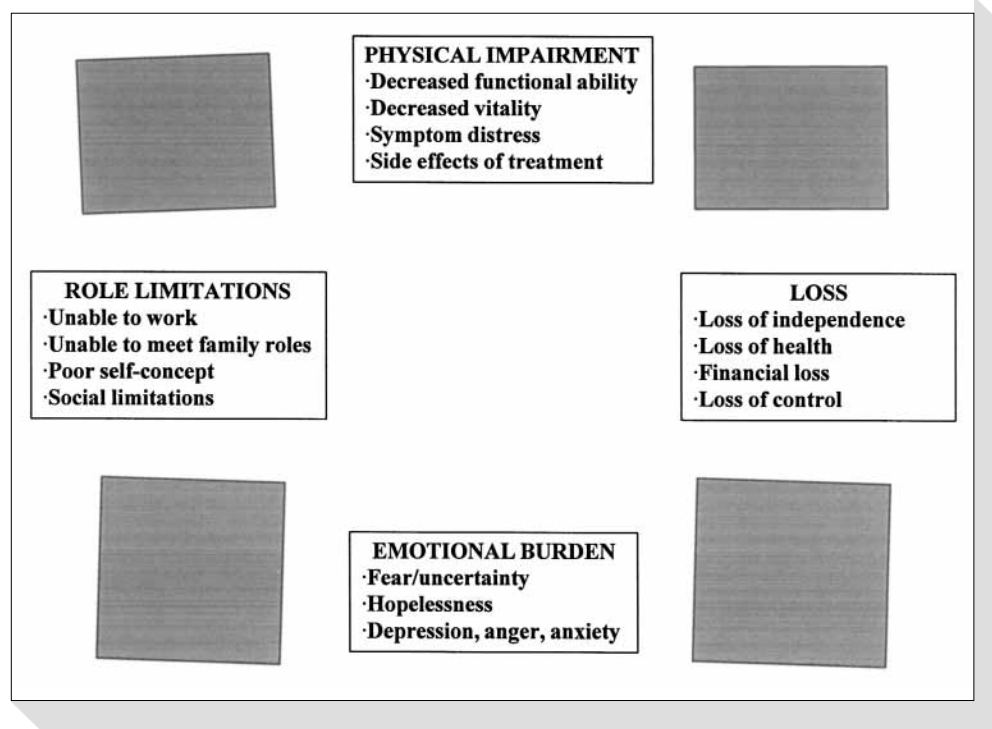


Fig 1 Patients' perceptions regarding the impact of HF on their lives.

(21.9%), and Asians (12.5%). Their sociodemographic and clinical characteristics are described in Table I. The men were younger than the women in the sample ($P = .05$) and more likely to be employed ($P = .03$). On all other characteristics, no significant differences were identified.

Table II provides the total scores on the variables of interest for both men and women. Women had significantly higher scores on measures of health perception ($P = .01$) and constructed meaning ($P = .04$), one of the components of psychosocial adjustment to illness. Other measures of psychosocial adjustment to illness were higher in women but not significantly different from those of the men. In univariate analysis, health perceptions were significantly and positively correlated with health satisfaction, vitality, and physical functioning. Health perception was significantly and negatively related to neuroticism (Table III).

Qualitative data

Impact of illness. Four major themes—physical impairment, role limitations, loss, and emotional burden—emerged from the data analysis of responses to the first question, which asked participants to describe the impact that HF had on their lives (Fig 1). The responses of both men and women reflected myriad physiologic and psychological stressors associated with HF.

Physical impairment Patients with severe HF usually had substantial and progressive symptoms that were debilitating. Both men and women expressed their resentment toward the physical impairment imposed on them by the condition. A male patient described his functional limitations in the following excerpt.

I've always been a big, strong guy and in the last 5 years I am 90% less physically active than I used to be. You know, I would really love to do what I was doing 10 years ago when I had a construction business and I could lift 200 to 300 pounds and go up the stairs with great big pieces of glass, or about 15 years ago I used to be able to run; I was working out and running 5 miles a day.

In addition to decreased functional ability, the men and women in the study commonly expressed concerns related to decreased vitality and symptom distress. One woman stated,

It slowed me down enormously. When I wasn't used to it, I was a go, go, go! On the roof... cleaning up... anything cleaning... dust, dust, dust. I have to calm down. That's the hardest thing I would say. I haven't got the pain, but I am tired. My upper body's weak and my legs are weak. I was always a go-go. I'm not used to this. Nothing was too high for me, whatever it is I had to do I would do, but I can't do it anymore.

Table I

Demographic and clinical characteristics of patients with HF by gender

Characteristic	Total (N = 32)	Men (n = 16)	Women (n = 16)
Age (mean ± SD)	52.03 ± 12.12	47.94 ± 11.42	56.13 ± 11.73
Years with HF (mean ± SD)	5.9 ± 6.08	5.0 ± 4.98	6.61 ± 7.06
Ejection fraction (mean ± SD)	26.69 ± 11.46	26.06 ± 11.65	27.31 ± 11.61
Race (%)			
White	65.6	62.5	68.8
African American	21.9	18.8	25
Asians	12.5	18.8	6.3
Marital status (%)			
Married	65.6	68.8	62.5
Not married	34.4	31.2	37.5
Employment status (%)			
Employed	37.5	56.3	18.8
Retired	56.3	37.5	75
Education (%)			
Some high school	12.5	12.5	12.5
High school graduate	21.9	25	18.8
Some college	37.5	25	50
College graduate	18.1	37.6	18.8
HF etiology (%)			
Idiopathic	37.5	18.8	56.3
Ischemic	28.2	50.1	6.3
Dilated	31.3	31.3	31.3
NYHA classification (%)			
Class 1	12.5	18.8	6.3
Class 2	28.1	37.5	18.8
Class 3	46.9	31.3	62.5
Class 4	12.5	12.5	12.5
Type of dysfunction (%)			
Systolic	75	87.5	62.5
Diastolic	25	12.5	37.5

NYHA, New York Heart Association.

Several patients also mentioned side effects of treatment as a factor that contributed to physical impairment. They described how medications sometimes made them feel even weaker and too tired to do anything.

Role limitations Accepting and learning to cope with changes in lifestyle patterns were challenges that many of the participants had to face. Physical limitations hindered their accomplishment of personal and professional goals. Patients often found themselves unable to work and take on active roles in their families. A young woman in her mid-30s expressed her frustrations related to the impact that HF had on her career and on her role as a mother.

I am at the prime of my career so this is a big roadblock. I also wanted to have more children, but

have been advised otherwise. Even when I want to spend more time with my son, I get so easily tired that it gets very frustrating for me. I have been able to make a job change in order to be able to accommodate my limitations, but even stress wears me out easily.

Depending on the severity of the illness and the underlying etiology of the syndrome, patients were faced with varying degrees of disability and decline and consequently changes in self-concept. One patient provided a clear explanation of how she felt differently about herself since her illness with HF and how her social life had changed.

I just wanted to always be alone by myself. I didn't want to be a burden to my family and friends. I know they always wanted to make things easier for me, but it made me feel like an invalid. So to avoid

Table II

Gender differences in health perceptions and factors influencing psychosocial adjustment to illness

Perception or factor	Men (n = 16) (mean ± SD)	Women (n = 16) (mean ± SD)	f	P
Health perceptions	25.17 ± 18.57	44.86 ± 22.64	7.233	.012
Health satisfaction	5.00 ± 2.58	6.37 ± 1.96	2.876	.100
Mental health	57.29 ± 23.66	69.04 ± 17.70	2.53	.122
Neuroticism	3.31 ± 2.44	3.19 ± 2.69	0.019	.891
Meaning	19.56 ± 3.67	22.19 ± 3.33	4.489	.042
Vitality	25.20 ± 22.44	33.80 ± 17.56	1.457	.237
Physical functioning	38.50 ± 29.04	40.68 ± 25.49	0.051	.822

making anyone feel bad, I just withdrew from the world—I stopped attending get-togethers or outings, and tried to find solitude in my own little corner.

Loss Although patients with HF tried to achieve normalization, they were often discouraged by worsening changes. They were overburdened with the functional limitations (physical impairment) and psychologic consequences (role limitations) that were associated with the illness. One of the male subjects expressed frustration related to his loss of independence and health and also to the financial burden associated with being ill with HF.

It was kind of a rude awakening. When I first started passing out, it really changed the way I have to do things. I can't drive. I had to have friends take me to the doctor and sometimes I felt like a nuisance. Right now they have me on full disability so I'm not working, which is harder on my brain to comprehend. I've worked all my life, so the hardest part is boredom or trying to find something to do. It also means that I have to rely on disability, which is never enough. I feel frustrated.

The loss of control expressed by the same patient was also a recurring theme in many of the other interviews.

The fear of the ICD [internal defibrillator] going off is possibly more of a handicap than anything else. I can explain to you that it is there to keep me alive, but the fear is when it goes off will it continue to go off or will I pass out and if I do will help arrive on time or will I die? The control is out of my hands.

Emotional burden Two recurring themes in the interviews were fear of death and feelings of hopelessness. These themes were not measured by items in the standardized tools. A female patient expressed her fears, uncertainty, and loss of hope in this statement.

I'm afraid that I will die before I even get a new heart. I have been faced with all the odds against me. Sometimes I get hopeful that the medications will help me feel better, but it's just hoping. Hoping and knowing are 2 different things.

A male patient similarly stated,

It's so hard to be always out on the limb. ...never knowing whether you'll live through another day. I have been on the heart transplant list for several years now and the rules constantly change... I don't even know if I'll live long enough to get my new heart.

Finally, many participants shared strong feelings of depression, anger, and anxiety in response to their illness. An elderly woman stated,

Sometimes I think I have done my best, and yet I feel even worse. There are good days and bad days, and on those bad days I feel so much in the dumps. It takes so much energy from me to get started again on the right track. My family always cheers me on, but sometimes even that doesn't help. The big push needs to come from within me.

A male patient shared his frustrations related to his illness when he said, "It is frustrating to have heart failure and challenging to have to deal with the disabilities that come with it."

Meaning ascribed to illness. When subjects were asked to describe how they felt about their illness, they shared the meaning that illness had for them. Finding meaning is primarily a cognitive process that occurs in response to specific situations and events; it is a central factor in the process of social adjustment to everyday existence.²³ In the current study, the patients described both positive and negative expressions of meaning (Table IV). Patients described the illness as a challenge that they had to overcome and also as a value—one that has made them stronger. Consequently, finding positive meaning facilitated an acceptance of

Table III
Correlational matrix for the key variables (N = 32)

Variable	1	2	3	4	5	6	7	8
1 Health perceptions								
2 Health satisfaction	.651†							
3 Mental health	0.322	.518†						
4 Neuroticism	-.354*	-.451†	-.422*					
5 Level of meaning	0.254	.369*	.371*	-.484*				
6 Vitality	.692†	.749†	.525†	-.387*	.288			
7 Physical functioning	.620†	.621†	.535†	-.328	.190	.778†		
8 Gender	.441*	.296	.279	-.025	.360*	.215	.041	

*P < .05.

†P < .001.

the lifestyle changes required. On the other hand, patients also described illness as a weakness and as an enemy. Patients who felt that the illness was a weakness were left with negative feelings of resignation. Those who referred to it as an enemy expressed strong feelings of resentment and anger against this condition that had forced them to make lifestyle changes that were against their personal values and traditions.

After tallying responses related to meaning ascribed to illness, patients were categorized as having either predominately positive meanings or predominately negative feelings (Table V). Some of the patients ascribed both positive and negative meaning to their illness and were categorized as "combined."

Men in the sample ascribed greater negative feelings related to their illness than women did. One young male shared his own perceptions of HF.

I guess the frustration is that I'm 23 years old. I can't deal with people in my age group, go to clubs, have drinks, things like that, and go out and eat. I really can't do that because I have to watch what I put into my body. I have to watch the clock to see what time I need to take my medications all throughout the day. Socially I don't do as much as I used to. It's a lot of boredom. Most people who have this illness are in their 60s, 70s... whatever. They've had a chance to live out their lives, whereas my life is just beginning. It's like they are putting brakes on you and saying "STOP" and that's really frustrating. It makes me angry and sad and sometimes I take it out on my parents, but I can't help feeling scared and helpless. Why did it have to be me?

A second man stated,

Illness is an enemy that I have to fight. For me it's an inside job. It's something I need to do for me,

Table IV
Gender differences in the meaning ascribed to illness*

Meaning	Men	Women
Positive meaning		
Illness as a challenge	9	10
Illness as a value	7	6
Negative meaning		
Illness as a weakness	3	3
Illness as an enemy	7	4

*Some patients ascribed more than 1 meaning to their illness; therefore, the number of responses exceeds the number of patients interviewed.

Table V
Total counts for positive, negative, or combined feelings related to HF for each patient by gender (N = 32)

Meaning	Men (n = 16)	Women (n = 16)
Positive	6	11
Negative	3	3
Combined	7	2

not necessarily to control my illness, because there is no control over the illness itself. There are things I can do to help myself.

Women in the sample expressed acceptance of their condition and also described how they learned to cope with HF. One woman stated,

It is a challenge, but we all know what is best for us. It is sometimes hard for us to understand. We need to struggle to find inner meaning in all our trials and tribulations. I know that things will never be the same in my life again and I have accepted that. We can only make the best of what we have left in life to live.

Another woman described how she had turned to spirituality as a coping mechanism.

I have given value to my life after I found out about my illness. It has made me learn to be grateful that I have been given a second chance to live. I feel that I can overcome the challenge through my guidance with the Lord. I feel that things are in His hands.

Gender differences were also evident in patients' coping patterns. Men in this sample used coping strategies that were more emotion-focused, fatalistic, and, at times, evasive. Women, on the other hand, used more optimistic coping strategies. Many of the women saw their illness as a second chance to live and were hopeful about the future. One woman described her coping mechanism in this manner: "I want to live. I want to feel better and I pray each day for strength to make it through the day. That's about all I can do is keep praying and hoping."

DISCUSSION

The current study demonstrates gender differences in health perceptions and the meaning of illness. The women perceived their health as better than the men perceived their health. The women also constructed a more positive meaning to their illness than did the men. This finding was substantiated by the interview data that clearly showed that the women found positive meaning in illness whereas many men were mixed in their response. Patients reported that the physical impairments associated with HF caused role limitations. Feelings of loss and emotional burden resulted. Patients who saw HF as a weakness or an enemy were more emotionally burdened than were patients who were able to ascribe positive meaning to the illness.

A careful examination of the other measures of psychosocial adjustment to illness may provide additional explanations for the gender differences in health perceptions in the current sample. A high correlation between health perceptions, vitality, and physical functioning was observed in the study. This finding underscores the idea that actual health does not predict health perceptions, considering that the women in the study had high-

er health perceptions but lower functional status as demonstrated in their New York Heart Association class. Fontana²⁶ conceptualized vitality or vigor as a measurable human affect reflecting psychologic well-being. She found in her study of patients with HF that the levels of perceived vitality were highly correlated with an awareness of "life force." Therefore, feelings of vitality and physical functioning, although not significantly different in men and women in the current study, may have an impact on health perceptions. Interventions such as exercise programs that promote feelings of vigor may help improve performance and maintain the independence and autonomy that patients desire.

Gender differences were also noted in meaning scores, with women having higher scores than men. Gender differences in meaning were also supported by the qualitative data and support why women who ascribed positive meanings to their HF had higher health perceptions. Lipowski²⁷ supports the importance of this finding when he stipulates that the meaning a person ascribes to an illness may spell the difference between optimum recovery and psychologic invalidism. Deriving meaning has also been shown to mediate important events such as participation in treatment decision-making or important processes such as interpretation of symptoms.²⁸ Previous studies have not directly addressed the meaning ascribed to HF, but a study of women with breast cancer best illustrates the importance of positive meaning. Women with breast cancer who ascribed positive meaning to their illness were able to learn from their experiences and develop effective coping strategies. On the other hand, women who had more negative meanings were anguished and exhausted because their energies were focused on fighting the illness and coping with fears of survival.²⁹ Fife²³ supports that meaning changes across time as persons cope with the crisis of the illness, and that the process of reinterpretation influences both meaning and coping. Therefore, strategies to enhance effective coping behaviors among patients with HF may promote the positive meanings ascribed to the illness and may also improve health perceptions in both men and women.

Neuroticism was highly correlated with health perceptions, health satisfaction, and mental health in the current study, suggesting that as worry and stress increase, health perceptions and health satisfaction decrease. Patients also expressed concerns and worry related to HF in the qualitative interviews. Both men and women had concerns related to the debilitating symptoms and decreased

functional abilities associated with HF. Decreased satisfaction with one's health status and loss of control over one's life and the potential for a happy old age were also reported by previous researchers; as symptom distress and functional disability increased, health satisfaction decreased.⁵⁻⁶ In contrast, optimism or positive expectations have been related to good physical health and increased compliance among patients after undergoing heart transplantation; that trait optimism was negatively associated with perioperative myocardial infarction and positively associated with rate and extent of lifestyle normalization³⁰ and decreased total rehospitalizations and complications after coronary artery bypass graft surgery.³¹ These findings suggest that optimism has important implications for psychosocial and physical well-being and health satisfaction. Therefore, efforts to promote optimistic expectations and teach patients effective strategies for self-management may reduce stress levels and decrease feelings of dissatisfaction associated with symptom distress and ultimately, increase health perceptions.

Participants in the study spoke about death and feelings of hopelessness and how "faith in God" helped them cope with HF. Westlake and colleagues³² emphasized the importance of enhancing hope and spiritual values as a means to promote adjustment. Furthermore, a growing body of literature suggests that for older persons with chronic illness, spiritual well-being is also a critical dimension of health perceptions. Spiritual well-being includes 3 interrelated aspects of "connectedness," (1) intrapersonal (eg, self-actualization and finding meaning in life)³³⁻³⁴; (2) interpersonal (eg, loving and being loved, forgiveness)³⁵; and (3) transcendent (eg, one's relationship with a higher power or God).³⁶⁻³⁷ Research evidence suggest that the spirituality plays an important role as the physical, emotional, and social functions in persons confronting serious illness and contributes to the ability to cope with illness, maintain independence, and, in global terms, "age successfully."³⁸ However, the lack of standardized measures of hope and spirituality limit further study of this concept in patients with HF and needs to be addressed in future research studies.

Significant differences in patient characteristics between genders were noted in age and employment status. The significant difference in age can be explained by the longer life expectancy in women. In the Framingham study,³⁹ the median survival time after diagnosis was 1.7 years for men and 3.2 years in women. Furthermore, as supported in previous studies, a majority of the women were

diagnosed at a later age in life,¹⁹ thus explaining the difference found in employment status in our sample. Women in the sample had already retired, but a majority of the men were still in the prime of their working years. The difference in age most likely also explains why women in the sample had higher health perceptions, health satisfaction, and meaning scores and lower neuroticism scores than men. Grady and colleagues⁶ stated that health satisfaction differences based on the patient's age can be explained by the fact that older people have already worked, raised families, and achieved many of their life goals. Older people also have lower expectations regarding their health and less to lose from being ill than do younger patients. The difference in the way in which younger patients viewed their illness was best demonstrated in the 23-year-old male patient who expressed resentment toward his illness and viewed it as having deprived him of opportunities to enjoy his life. Therefore, health care workers need to be sensitive to the needs of younger patients with HF as a means of improving health satisfaction and health perceptions.

CONCLUSION

The findings of this study are limited by the small sample size. Additional studies examining the symptom distress and management strategies of men and women with HF are needed to better understand gender differences in health perceptions. Further research is needed to describe the relationship between ascribed meaning, spirituality, neuroticism, coping behaviors, and health perceptions and psychosocial adjustment to illness in patients with HF.

Effective treatment strategies that improve health perceptions and support psychosocial adjustment to illness may potentially improve long-term morbidity and mortality from HF syndromes and, therefore, are an important goal in the care of patients with HF. Patient teaching can be tailored to address the gender-specific concerns of men and women with this condition. Clinicians need to provide patients with effective psychological counseling that focuses on patient concerns and promotes positive meaning and optimistic coping behaviors.

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