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Adherence

What matters to patients with heart failure? The influence of non-health-related goals on patient adherence to self-care management

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ABSTRACT

Objective: To describe the life goals of heart failure (HF) patients and to determine whether adherence is influenced by the extent to which these priorities are perceived as compatible with HF self-care regimens.
Method: Forty HF outpatients identified their top-five life goals and indicated the compatibility of HF self-care regimens (diet, exercise, weighing) with these priorities. HF knowledge, self-efficacy and reported adherence were also assessed.
Results: Patients valued autonomy and social relationships as much as physical health. However, the rated importance of these domains did not predict adherence. Adherence positively correlated with the extent to which the regimen, specifically exercise, was considered compatible with life goals ($r = .34$, $p < .05$). Exercise adherence also correlated with illness severity and self-efficacy ($rs = -.42$ and .36, $p < .05$, respectively). The perceived compatibility of physical activity with personal goals predicted **11%** of the variance in exercise adherence above and beyond that accounted for by illness severity and self-efficacy ($F\Delta$ (1, 36) = 7.11, $p < .05$).
Conclusions: Patients' goals outside of the illness management context influence self-care practices.
Practice implications: Exploring patients' broad life goals may increase opportunities to resolve ambivalence and enhance motivation for self-care adherence.

1. Introduction

Ineffective self-care among patients with heart failure (HF) is the leading cause of frequent hospital readmissions, high morbidity and mortality rates, as well as costly health expenditures [1–5]. The term '*self-care*' refers to patient-initiated practices that help maintain and optimize physical wellbeing [6,7]. HF practice guidelines in the US [8] and Europe [9] stipulate that patients should engage in the following self-care behaviors: (1) restricting salt and fluid intake, (2) daily weighing, and (3) balancing physical activity with rest. However, a recent study [10] of HF patients across 15 countries indicated that 50–80% of individuals never or rarely adhere to these recommendations. Given that self-care is central to the successful management of HF [4], it is crucial to elucidate factors that underlie patient non-compliance [11].

Health behavior models are commonly used to explain patient adherence [12]. These models include the Health Belief Model (HBM) [13–15], the Common Sense Model of Self-Regulation (CSM; [16,17]) and the Theory of Planned Behavior/Theory of Reasoned Actions (TPB/TRA; [18]). Although each theory differs somewhat in the construal and labeling of constructs, all models underscore the importance of patient knowledge and self-efficacy for health behavior [12]. A recurrent finding in the HF literature is that adherence is not solely driven by these cognitive factors [19–21, 54]. That is, several qualitative studies suggest that HF patients' decisions to follow self-care recommendations are driven by whether they *value* the prescribed behavior and perceive it to be an

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integral part of their lives [21–26]. For example, one study found that among patients with similar knowledge of self-care recommendations, those who prioritized HF management above other life events (e.g., a job transition) were more proficient at self-care [22].

Despite the evidence that assessing patient goals and values can advance the understanding of HF self-care adherence, few studies have examined this process. The main exceptions are interventions that incorporate motivational interviewing (MI) strategies, which direct patients' awareness to the discrepancies between their current actions and desired goals [27]. Yet, the impact of MI on self-care adherence has been suboptimal [28–30], arguably because MI programs advocate for HF-related goals (e.g., undertaking physical activity) that are not necessarily important to some patients. As a case in point, a qualitative study found that patients have difficulty prioritizing HF management when they have to attend to other pressing matters, such as taking care of a sick spouse [31]. It is possible that capitalizing on a broad range of patient life-goals and charting their compatibility and incompatibility with self-care regimens may be more conducive to understanding health behavior change.

The phenomenon whereby one goal interferes with the achievement of another is termed *goal incompatibility* [33]. In non-HF populations, it has been shown that conflicts between personal and exercise goals predict non-compliance with a physical activity regimen [33–35]. For example, one study [36] asked undergraduate students to list goals for school, home, community or leisure, and rate the extent to which these goals facilitated or conflicted with physical activity. The perceived compatibility of exercise with personal goals predicted physical activity above and beyond self-efficacy and behavioral intention. This suggests that the motivation to perform a health behavior is driven not only by the commitment to a single health goal but also by the interrelations between multiple goals from different life domains.

Examining the dynamic process between competing goals may help to operationalize the construct of motivation in health behavior theories [37], and also serve as a useful clinical approach. To date, no quantitative research has examined whether patients' competing life priorities influence their self-care practice or whether goal compatibility has a similar degree of impact on adherence as other known predictors of self-care in health behavior frameworks, namely, knowledge and self-efficacy.

As such, the overall aim of the current study was to enhance the understanding of patient motivation for self-care through the examination of their goals. The first objective was to gauge the importance patients accorded to managing HF relative to priorities in other life domains. The second objective was to determine whether the perceived incompatibility of HF self-management with non-health-related goals predicted adherence above and beyond the explanatory power of knowledge and self-efficacy.

2. Methods

2.1. Participants

Participants were HF patients who received their care from a hospital outpatient heart failure clinic in London, Ontario, Canada. Patients were invited to participate in the study during their scheduled appointment with a HF specialist. Inclusion criteria were: (1) the ability to speak and read English; (2) adequate mental status (as gauged by the attending physician); (3) mild to moderate HF symptoms as identified by the New York Heart Association functional (NYHA) Class II and III guidelines [38]; and (4) HF as the primary diagnosis. Patients with NYHA Class I were excluded because self-care management is not typically part of the treatment regimen for those who are asymptomatic. Given the limited evidence that suggests that physical activity benefits NYHA IV patients [39–41], it would be unlikely that such individuals would have been prescribed all three self-care recommendations (exercise, diet and daily weighing) under investigation. Accordingly, NYHA IV patients were excluded. The study protocol was approved by the Health Sciences Research Ethics Board at the University of Western Ontario and the Lawson Health Research Institute at the London Health Sciences Centre.

2.2. Measures

2.2.1. Self-care adherence

The Self-Care of Heart Failure Index (SCHFI V6.2) [42,43] management (6 items) and maintenance (10 items) subscales are validated instruments that assess overall patient compliance across a range of therapeutic and symptom monitoring behaviors. As per previous research on individual self-care behaviors [10], this study used the scores of separate items on the SCHFI to measure adherence to specific lifestyle regimens. Seven of the original 16 SCHFI items (Table 1) were used to gauge adherence to salt and fluid restriction (4 items), physical activity (2 items), and daily weighing (1 item). Medication compliance and items pertaining to behavioral recommendations that were not applicable to all patients in the sample (e.g., immunization and calling the doctor's office) were excluded. Each item was rated on a 1 (never or rarely/not likely) to 4 (almost daily/very likely) point Likert-type scale. The total raw scores for each of the three self-care behaviors were standardized so that the range was 0–100, with a higher score indicating better adherence to that aspect of the regimen. See Table 1 for descriptive statistics.

2.2.2. HF knowledge

Knowledge about HF and how to apply that knowledge were assessed by the Dutch Heart Failure Knowledge Scale (DHFKS) [44] and the Knowledge Acquisition Questionnaire (KAQ) [45], respectively. Descriptive statistics are presented in Table 1.

The 15-item multiple-choice-based Dutch Heart Failure Knowledge Scale (DHFKS) [44] is a reliable and well-validated measure [46] that measures general knowledge about the causes of HF, HF symptoms and self-care recommendations. The score (0–15) is based on the number of correct responses, with higher scores indicating better levels of didactic HF knowledge. The 8-item multiple-choice KAQ, shown to be internally consistent (α = .61–.66) [45], assesses the extent to which patients can apply HF information. For example, one item requires respondents to identify foods that are high in salt from a given list. Scores (0–8) based on the number of items answered correctly reflect the ability to apply HF knowledge.

2.2.3. Self-efficacy

Perceived ability to perform self-care behaviors was assessed using the 6-item Confidence subscale from the SCHFI [42,43]. Participants rated items on a 4-point scale, ranging from 1 (Not Confident) to 4 (Extremely Confident). The total raw scores were standardized to range from 0 to 100 by subtracting 6 from the sum and multiplying by 5.56. Higher scores indicated higher self-efficacy. See Table 1 for descriptive statistics.

2.2.4. Prioritized goals

Participants identified their top-5 goals through a modified version of the Personal Value Card Sorting Task [47]. The adapted card items were culled from qualitative interviews highlighting HF patient experiences [21–26,31,48–52] and were generated to reflect the four basic value domains (i.e., openness to change, self-transcendence, self-enhancement, conservation) detailed in