Positive affect, anhedonia, and compliance with self-care in patients with chronic heart failure

Dionne Kessing a, Aline J. Pelle a, Nina Kupper a, Balázs M. Szabó b, Johan Denollet a,⁎

a Center of Research on Psychology in Somatic Diseases (CoRPS), Tilburg University, Tilburg, The Netherlands
b Department of Cardiology, St. Elisabeth Hospital, Tilburg, The Netherlands

ARTICLE INFO

Article history:
Received 24 March 2014
Received in revised form 15 August 2014
Accepted 19 August 2014

Keywords:
Positive affect
Anhedonia
Depression
Compliance
Self-care
Heart Failure

ABSTRACT

Objective: Optimal self-care is crucial in patients with chronic heart failure (HF). While the focus of research has been on negative mood states, adequate psychological resources may be required to successfully engage in HF self-care. Therefore, the longitudinal associations of multiple positive affect measures in explaining HF self-care including consulting behavior were examined while adjusting for depressive symptoms and potential covariates (e.g., disease severity).

Methods: In this prospective cohort study, 238 patients (mean age: 66.9 ± 8.6 years, 78% men), with chronic HF completed questionnaires at baseline and 1-year follow-up. Positive affect was assessed with the Positive and Negative Affect Scale (PANAS) and the Global Mood Scale (GMS). Anhedonia, i.e. diminished interest or pleasure, was assessed with a subscale of the Hospital Anxiety and Depression Scale (HADS). The 9-item European Heart Failure Self-care Behaviour scale was completed to assess HF self-care including consultation behavior.

Results: Linear mixed modeling results showed that anhedonia was most strongly associated with both poor self-care (estimate = −.72, P < .001) and consulting behavior (estimate = −.44, P < .001) over time, after adjustment for covariates and depressive symptoms. GMS positive affect was related to better HF self-care adjusting for standard depressive symptoms but not when adjusting for anhedonia. PANAS positive affect was not independently related to self-care.

Conclusion: Anhedonia was associated with worse compliance with self-care among chronic HF patients over time, irrespective of disease severity and depression. Associations between positive affect and self-care were dependent on the measures used in multivariable analyses.

© 2014 Elsevier Inc. All rights reserved.

Introduction

Chronic heart failure (HF) is a growing major public health problem affecting 1–2% of the general population in developed countries, due to the aging of the population and increased survival after an acute cardiac event [1,2]. Despite the improvement of HF treatment, it is associated with high morbidity and mortality rates, impaired health status, and high number of hospital (re-)admissions which has led to major healthcare costs [3,4].

From the patient perspective, chronic HF is a burdening condition as it requires a vast amount of self-care [5]. Self-care refers to the actions patients must undertake to maintain healthy functioning and well-being by actively managing symptoms, treatment, and lifestyle changes inherent in living with a chronic medical condition [6]. Maintaining health can be achieved by adapting behaviors such as complying with medication and lifestyle regimen, and consulting professionals when chronic HF symptoms worsen (i.e., consultation behavior) [6]. Critically, poor self-care has been associated with adverse outcomes in patients with chronic HF [7].

A multitude of different factors affect and complicate chronic HF self-care behavior [5]. Adequate psychological resources are required to provide patients with the necessary motivation and energy to successfully engage in optimal self-care. While the focus of research has been on negative mood states such as depression, it is being debated whether positive affect should be considered as the opposite as both states can be experienced simultaneously [8,9]. Relatively little is known about the health effects of positive psychological affect (i.e., mood states such as feeling active, joy or cheerful) but preliminary evidence suggests that positive affect may be associated with enhanced cardiovascular health [10–12], healthy lifestyle (e.g., physical activity) [11], and adaptive biological function (e.g., reduced inflammation) [11,13].

To date, no consensus exists on the definition and measurement of positive affect and it has recently been stressed that research should include multiple constructs of positive affect to examine its relationship with cardiovascular health outcomes and behaviors [11]. It was previously reported that different positive affect measures reflected different dimensions of positive affect using factor analysis in the current
HF sample and that these dimensions were also distinctively related with inflammatory biomarkers [13]. One of these measures has been assumed to assess anhedonia [12], a core feature of major depressive disorder that is defined as diminished interest in or pleasure in response to stimuli that were previously experienced as rewarding during a pre-morbid state (DSM-IV-TR) [14]. Remarkably, while it is often assumed that depression is associated with poor compliance in patients with HF, findings have been inconsistent in confirming this relationship so far [15,16]. Given these inconsistencies and the assumption that positive affect is not merely the opposite of negative affect, it is of interest whether positive affect and/or anhedonia are associated with compliance with HF self-care activities and consultation behavior as potential behavioral determinants of health outcomes.

Therefore, we prospectively examined and compared the associations of positive affect and anhedonia with compliance with self-care behaviors at baseline and 1-year follow-up among patients with chronic systolic HF using several affect measures. In addition, we examined whether disease severity, depressive symptoms, or other potential covariates could explain these associations.

Materials and methods

Participants and procedure

HF outpatients were consecutively recruited between June 2006 and October 2008 from 3 teaching hospitals in The Netherlands (i.e., St. Elisabeth Hospital, Tilburg; Amphia Hospital, Breda; and ZorgSaam Hospital, Terneuzen). Inclusion criteria were: left ventricular ejection fraction (LVEF) ≤ 40%, age ≤ 80 years, no hospital admission in the month prior to inclusion, and stable on oral HF medication during the month prior to inclusion. Exclusion criteria were life-threatening co-morbidities, severe cognitive impairment, psychiatric comorbidity except for mood disorders, and/or insufficient understanding of the Dutch language. Of 282 eligible patients, 253 patients agreed to participate (response rate = 89.7%) at baseline (Fig. 1).

Eligible patients were consecutively approached for participation by their cardiologist or nurse during a regular outpatient clinic visit. If willing to participate, patients were called by an independent investigator to schedule a baseline study appointment in which patients were given additional information about the study. At baseline and at 12-month follow-up, participants completed questionnaires at home to assess socio-demographics, psychological variables, and HF self-care that were returned by mail and checked for missing items accordingly. Patients were contacted when either a questionnaire was not returned within two weeks or in the event of missing items. The study was approved by the medical ethics committees of all 3 hospitals, and was conducted according to the principles outlined in the Declaration of Helsinki (2008). All participants provided written informed consent and anonymity was guaranteed.

Positive affect

According to our previous study [13], positive affect was assessed with 2 different measures at baseline and 1-year follow-up: the widely

---

**Number of eligible patients**

N = 282

- Non-response (n = 29)
  - Refused to participate (n = 5)
  - Did not return questionnaire (n = 21)
  - Death (n = 3)

**Enrolled at baseline**

N = 253 (response rate = 89.7%)

- Excluded (n = 15)
  - Missing data in baseline predictor(s)

**Number of patients included in final sample**

N = 238 (completion rate = 94%)

- Drop-out (n = 29)
  - Refused to participate (n = 10)
  - Did not return questionnaire (n = 9)
  - Unreachable (n = 1)
  - Exclusion due to dementia (n = 1)
  - Death (n = 8)

**Number of patients at 1-year follow-up**

N = 209 (completion rate = 88%)

---

Fig. 1. Flow chart of patient inclusion.
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات