



What influences physical activity in people with heart failure? A qualitative study

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ABSTRACT

Background: Research has highlighted the benefits of physical activity for people with stable heart failure in improving morbidity and quality of life. However, adherence to exercise among this patient group is low. Barriers and enablers to sustained physical activity for individuals with heart failure have been little investigated.

Objectives: To explore reasons why people with heart failure do and do not engage in regular physical activity.

Design: A qualitative, interview-based investigation.

Settings: Three heart failure clinics held at hospitals in the UK.

Participants: Purposive sampling was adopted to provide maximum variation in terms of gender, age, heart failure duration and severity, and current activity levels. Twenty two patients (7 = female) were interviewed, aged between 53 and 82 years.

Methods: Semi-structured interviews were conducted via telephone. These were recorded and transcribed verbatim. Framework analysis was applied to collected data.

Results: Interviewees' narratives suggested that adopting positive health behaviours was complex, affected by internal and external factors. This was reflected in the four themes identified during analysis: fluctuating health; mental outlook; others' expectations; environmental influences. Failure to exercise arose because of symptoms, co-morbidities, poor sense of self as active and/or lack of perceived benefit. Likewise, encouragement from others and inclement weather affected exercising.

Conclusions: Areas identified during interviews as influencing activity levels relate to those commonly found in behavioural change theories, namely perceived costs and benefits, self-efficacy and social support. These are concepts that practitioners may consider when devising interventions to assist patients with heart failure in undertaking and maintaining regular exercise patterns.

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What is already known about the topic?

- Guidelines advise people with heart failure to keep physically active because this can improve physical and psychosocial outcomes.
- Uptake and adherence to exercise is low among patients with heart failure.

What this paper adds

- Participants' exercise behaviours were influenced by internal factors such as mental state and perceived self-efficacy, but also by external forces, including others' responses to their endeavours.
- Providers were generally characterised as giving vague or non-specific advice regarding activity levels.
- Patients did not link exercise to improvements in heart failure symptoms or activity tolerance, but described its benefits in terms of general well-being and maintaining independence.
- Lack of specific information about implantable devices and managing co-morbid conditions affected willingness to exercise.
- Themes identified during analysis related to concepts from behavioural change theories, including perceived costs and benefits, self-efficacy and social support.

1. Background

Heart failure is a chronic syndrome that can result from multiple cardiovascular diseases and conditions. Its prevalence and incidence is on the rise due to an ageing population and increased survival from ischaemic and other heart diseases (Dickstein et al., 2008). Despite improvements in treatment, heart failure is a frequent cause of hospitalisation, as reported in a range of international studies (Ham et al., 2003; Teng et al., 2010), with admissions contributing substantially to the cost of treating this condition (Whellan et al., 2010; Zugck et al., 2010).

People with heart failure typically experience fatigue, dyspnoea and peripheral oedema, which can make exercising difficult. However, evidence shows that physical activity improves quality of life, symptoms such as breathlessness and hospital rates among this patient group (Corvera-Tindel et al., 2004; Davies et al., 2010; Willenheimer et al., 2001). A 'dose–response' effect has been demonstrated, with a 1-metabolic equivalent measure of energy expenditure (MET) per hour increase of exercise associated with a 5% reduction in all-cause death, all-cause hospitalisation, and significant improvement in maximal oxygen consumption (VO₂ max) and health status scores (Keteyian et al., 2009).

International guidelines recommend regular exercise as part of heart failure management (British Heart Foundation, 2010; Dickstein et al., 2008; NICE, 2010; Pina et al., 2003), but it needs to be ongoing to maintain its protective impact, otherwise advances in functional capacity are lost with deconditioning (Pina et al., 2003; Smart et al., 2003). In a large randomised controlled trial, despite a planned strategy to support adherence, less than half of patients were exercising at the desired level after three months (Keteyian et al., 2010). van der Wal et al. (2005) reported that in their research, 80% of participants with heart failure believed exercise was important for health but only half engaged in such activity. Evidence suggests that adherence to exercise may be less well followed compared to other aspects of self-care for heart failure (e.g. taking medications) (Schnell-Hoehn et al., 2009; van der Wal et al., 2006).

Hence, approaches to maximise and maintain activity could improve patients' outcomes (Bennett et al., 1997) and help to avoid a deterioration of symptoms and hospitalisation (van der Wal et al., 2005).

Existing research on the views of people with heart disease towards exercise has focused on attendance at cardiac rehabilitation. Limited examination has been made of the beliefs and opinions of those with heart failure about activity in general (including exercise). A review of the literature for papers focusing on the perspectives of patients towards their heart failure and its management found no investigation centring on individuals' views of exercise or physical activity (Tierney et al., *in press*). Consequently, this is an area that warrants examination given the importance placed on exercise within heart failure care (Pina, 2010).

2. Aims

The study set out to explore reasons why people with heart failure do and do not engage in regular physical activity by investigating patients' views of exercise or keeping active as part of their condition's self-management. Specific objectives included: (1) understanding patients' beliefs about exercise or keeping active and how these relate to beliefs about their condition; (2) investigating preferences among those with heart failure in relation to exercise or keeping active for management of their illness (e.g. type, location, support needed); (3) identifying motivators and barriers for people with heart failure related to exercise and keeping active, both physical and psychosocial. It was anticipated that learning more about patients' perceptions of physical activity could help in assisting them to do more exercise and in devising interventions for this purpose.

3. Methods

Design: Qualitative research was undertaken to address the aims listed above. This type of investigation strives "to understand and represent the experiences and actions of people as they encounter, engage, and live through situations" (Elliot et al., 1999, p. 216). Qualitative research is inductive, rather than testing pre-determined hypotheses (Allender et al., 2006), allowing for an in-depth understanding of the experiences and meanings individuals attach to a phenomenon (Sim and Wright, 2000).

Sample: Participants were recruited from heart failure clinics at three regional centres in the north west of England. Patients were eligible to take part if they were diagnosed with heart failure regardless of ejection fraction (based on clinical records); had New York Heart Association (NYHA) classification I–III; were clinically stable (no hospital admissions in the past three months); were 18 years of age or older. Exclusion criteria were unable to converse in English; having a cognitive impairment that would make participation difficult; a diagnosis of end-stage heart failure.

Initially, all eligible patients presenting to the three clinics were invited to take part by nurses involved in their care when they came for an outpatient appointment.

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