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Review

Physical activity in caregivers: What are the psychological benefits?

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ABSTRACT

Previous research demonstrates that physical activity has psychological benefits for people of all ages. However, it is unclear whether people caring for a frail or ill relative would derive similar psychological benefits, considering the potentially stressful caregiver role. This article reviews the current literature describing the effect of physical activity interventions on the psychological status of caregivers.

A search from January 1975 to December 2012 identified five intervention studies investigating physical activity and psychological status in caregivers. These focused on female Caucasian caregivers who were older than 60 years. The physical activity interventions improved stress, depression and burden in caregivers, but small sample sizes, short-term follow up and varying results limited the generalizability of the findings. There were few trials investigating male caregivers, and most care-recipients were people with dementia.

Studies with caregivers of different ages and gender, with a range of physical activity interventions, are needed to clarify whether physical activity has psychological benefits for caregivers.

Contents

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1. Introduction

In the last decade there has been an expansion of research on the benefits associated with physical activity in adults of all ages. Physical activity (PA) has both physical and psychological health benefits. Studies have demonstrated that PA reduces the risk of cardiovascular disease (Dubbert, 2002) and some cancers, improves pulmonary function, reduces the risk of some chronic diseases, minimizes falls and improves pain management (Warburton, Nicol, & Bredin, 2006). PA has been found to decrease morbidity and mortality (Warburton et al., 2006). Psychological benefits include stress reduction and prevention and improvement of depressive symptoms (Castro, Wilcox, O'Sullivan, Baumann, & King, 2002) and improved sleep (King, Baumann, O'Sullivan, Wilcox, & Castro, 2002). There is also evidence to suggest that PA can improve cognition (Lautenschlager, Cox, & Cyarto, 2012).

In studies focusing on older people, PA improves balance, strength and gait, endurance and general quality of life (Blake, Mo, Malik, & Thomas, 2009). It may also delay mobility limitations and further disability so that independent living can continue (Bennett & Winters-Stone, 2011). Psychological benefits of PA in older people include improvements in cognitive function, mood and well-being (Kerse et al., 2010).

The term "carer" or "caregiver" is commonly defined as someone who provides care to another person who is dependent on the caregiver for help (Oyebode, 2003). Informal caregivers are unpaid, and are usually spouses or other family members. They are a vulnerable group of people (Oyebode, 2003) who play an important role in providing practical help and support, which enables people with chronic conditions to remain living in the community. Although there are positive aspects to providing care, the physical and psychological effort required to provide ongoing care can impact significantly on caregivers' well-being. Caregivers have been shown to be at increased risk of stress and depression, to experience sleep problems more often, and have poor physical health (Oyebode, 2003). They often do not have the time to engage in preventive health behaviors such as regular PA, and studies have found that caregivers participate in less formal PA compared to non-caregivers (Fredman, Bertrand, Martire, Hochberg, & Harris, 2006; Hirano et al., 2011).

There have been numerous interventions aimed at improving the psychological health of caregivers such as education, counseling and respite. However, these have had conflicting results (Pinquart & Sorensen, 2006; Sorensen, Pinquart, & Duberstein, 2002). Due to benefits PA has in the general population, interventions aiming to increase PA have also been trialed in the caregiver population. However, it is less clear whether the psychological benefits seen in the general population also extend to the caregiver population, at least one third of whom experience significant impact on their well-being due to their caring role (Oyebode, 2003).

This review provides an overview of the literature reporting on PA in caregivers and its effect on their psychological health, from the period of January 1975 to December 2012.

The purpose of this review is to examine the psychological benefits of PA in caregivers, what types of PA interventions have resulted in psychological benefits, and the limitations of study results obtained to date. The potential caregiver-specific barriers will also be highlighted. This review will present an overview of this topic, clarify in which psychological domains PA may be useful, and help guide future directions in this area.

2. Methods

2.1. Search strategy and selection criteria

The scientific databases MEDLINE, PsycINFO, PubMed and Google Scholar were searched using the terms: exercise, physical activity, motor activity, physical exertion, physical fitness, caregivers, carers and caring. References listed in articles were also followed up. Limits of English language and human studies were used. Studies published between 1975 and 2012 were included. These dates were selected as caregiver literature dates approximately from the mid 1970s, and we wished to capture as many articles as possible, since there has been no previously published review.

2.2. Types of studies

Only studies in which caregivers were allocated to either a PA program, or usual care (control group) were included. Observational studies were excluded because these studies do not contribute to evidence-based practice in this area. Study quality was assessed using criteria following Peacock and Forbes (2003). It was coded whether participants were randomly allocated to intervention or control group (yes = pass; no/not reported = fail), whether these groups were comparable in terms of study characteristics (yes = pass; no = fail), whether these groups had at least 10 participants as studies with smaller sample sizes are at risk of errors (yes = pass; no = fail), the attrition rate (<10% pass; 11–20% moderate; >20% or not reported, fail), whether validated outcome measures were used (yes = pass, no = fail), and whether there was blinding of assessors (yes = pass; no/not reported = fail). A study was rated *strong* if it had no fail ratings and no more than one moderate rating; *moderate* if it had no fail ratings and more than one moderate rating; *weak* if it had one or two fail ratings; and *poor* if it had more than two fail ratings.

2.3. Types of participants

Studies included informal caregivers of any age, and there was no restriction on the illness or diagnosis of care-recipient (CR). Only studies in which the major focus was the caregiver psychological outcome were included.

2.4. Types of interventions

Interventions included any type of physical activity training. This could range from general walking, to specific programs such as Tai Chi, or yoga. The intervention could take place in any setting, including at home, in the community, or hospital-based. Group and individual PA, as well as types, frequencies, and duration of PA programs were described.

3. Results

There were a total of 750 published articles found by the search. All 750 abstracts were reviewed using a standard evaluation form by SL, with consultation with other authors (NL, BD, KM), and checked if these fit the criteria for inclusion. Although this review was not specifically focusing on older caregivers, all of the eligible studies investigated outcomes in caregivers who were over 60 years of age.

Fig. 1 shows the flow chart of the search. There were a total of fifteen studies found investigating PA in caregivers. Of these, there were five clinical trials using PA as an intervention which were included in this review (Castro et al., 2002; Connell & Janevic, 2009; Hill, Smith, Fearn, Rydberg, & Oliphant, 2007; King et al., 2002; King & Brassington, 1997; Marsden et al., 2010); four of these were randomized controlled trials (RCTs). There were three studies using PA as an intervention which focused primarily on outcomes for the CR (Molloy et al., 2006; Teri et al., 2003; Vreugdenhil, Cannell, Davies, & Razay, 2012), rather than the caregiver, hence these studies were excluded. Three observational studies were also