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The Effects of Mindfulness-Based Stress Reduction for Family Caregivers: Systematic Review

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A B S T R A C T

Caring for patients with various conditions is demanding and stressful and can have a negative impact on both physical and psychological health. This paper reports a systematic review and critical appraisal of the evidence on the effectiveness of mindfulness-based stress reduction for the family caregivers of patients with various conditions. There were improvements in the self-rated psychological symptoms, such as stress, depression, anxiety and mindfulness. To conclude, mindfulness-based stress reduction, as a safe and transportable approach, has potential to improve the psychological symptoms in the caregivers of patients with various conditions.

Caregivers are "hidden patients" who have undergone both substantial physical and emotional stress (George & Gwyther, 1986). The term "caregiver" is most commonly used to address a person providing assistance (i.e., physical and/or emotional) to a patient with chronic illness or with old age, disability, or a mental health disorder. Family care providers usually include the spouse, parents, children of elderly parents, or other relatives. Caregiving requires time, effort, financial cost, or changes in the roles, responsibilities and family relationships (Kurnat & Moore, 1999; Lengacher et al., 2012). Caring for patients with various conditions is demanding and stressful and can result in added physical and emotional burden. Moreover, caregivers usually have total responsibility for their loved ones and spend less time focusing on their own health conditions (Kornfield, 2008; Williams, Teasdale, Segal, & Kabat-Zinn, 2007).

Caregivers tend to use more healthcare services than non-caregivers due to their elevated health risks and low perceived health (Ho, Chan, Woo, Chong, & Sham, 2009; Schulz & Cook, 2011). Research has shown that there is a decrease in the overall caregiver health and quality of life and an increase in the mortality and morbidity in family caregivers (Amirkhanyan & Wolf, 2003; Bauer et al., 2000; Kiecolt-Glaser et al., 1987; Moretti, Torre, Antonello, Cazzato, & Bava, 2002; Redwine et al., 2004). Caregiving is associated with a host of problems that are related to caregivers' health and well-being. The relationships between the caregiver burden and poor physical health, compromised immune function, social isolation, loneliness, chronic sleep disturbances, or emotional issues, such as chronic stress, anxiety, and depression, have been well documented in several studies (Aschbacher et al., 2006; Bergman-Evans, 1994; Carter, 2006; Clyburn, Stones, Hadjistavropoulos, & Tuokko, 2000; Epstein-Lubow, Davis, Miller, & Tremont, 2008; Ferrara et al., 2008; Kiecolt-Glaser et al., 2003; Neundorfer, 1991; Pinquart & Sorensen, 2007; Schulz & Martire, 2004; Sorensen, Duberstein, Gill, & Pinquart, 2006; Taylor, Ezell, Kuchibhatla, Ostbye, & Clipp, 2008; Yaffe et al., 2002).

By contrast, caregivers' health can have an impact on the care recipients' health. Caregivers may neglect their own health and well-being because all their energy has been expended in the process of care providing, especially when taking care of children (Heinzer, 1998). However, full concentration and dedication may affect their emotions and abilities to function adequately in their caregiving role, and they may eventually have the opposite effect on the health of the care recipients. Research has indicated that caregiver depression is correlated with patient depression (Mystakidou et al., 2007). Additionally, the study by Osborne and colleagues reported that highly stressed parents are less able to implement interventions for their children with disabilities (Osborne, McHugh, Saunders, & Reed, 2008).

It is important for nurses to consider the health care needs of caregivers. Nursing interventions could help caregivers maintain an acceptable level of health status and ability to take care of patients; in this way, they could reduce the demand for nursing home care or delay the transition to nursing home care (Dahlrup, Ekstrom, Nordell, & Elmstahl, 2015). Complementary therapies have been increasingly used all worldwide and a growing number of nurses are practicing complementary therapies, due to their effects on improving both physical and psychological components. Nurses may play a vital role in managing caregivers' health by incorporating complementary therapy programs in their nursing roles.

MINDFULNESS-BASED STRESS REDUCTION

Mindfulness is grounded in Buddhist philosophies and is defined as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 1994; Siegel, Germer, &

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Olendzki, 2009). That is to say, in mindfulness practice, individuals are encouraged to pay attention to what is happening in the moment, in a non-judgmental way, without relying on previously schemas. This approach may eventually help individuals change the way they think (Segal, Williams, & Teasdale, 2013). Mindfulness meditation has involved a therapeutic and spiritual approach for more than 5,000 years and has become increasingly popular in some parts of the world in recent years (Ospina et al., 2007). Mindfulness meditation is a form of mental training that includes a family of practices that incorporate a meditative component; in this approach, individuals are trained to consciously calm their minds to still or empty the mind and ultimately achieve inner peace or harmony (Chen et al., 2012; Ospina et al., 2007; Travis & Pearson, 2000). Mindfulness meditation offers an accessible, low-cost, therapeutic approach that avoids the stigma of psychiatric treatments (Chen et al., 2012; Deng & Cassileth, 2005; Issakidis, Sanderson, Corry, Andrews, & Lapsley, 2004; Manocha, 2000; Ospina et al., 2007).

Mindfulness-based stress reduction (MBSR) was developed by Kabat-Zinn at the University of Massachusetts Medical Centre in 1979 and has become the most commonly used mindfulness-based interventions; it also has standardized techniques (the techniques have been systematically described in manuals) (Baer, 2003; Baer & Krietemeyer, 2006; Cramer, Lauche, Paul, & Dobos, 2012; Ospina et al., 2007). Briefly, MBSR is a highly structured, psycho-educational and skill-based therapy package that combines mindfulness meditation with hatha yoga exercises (Kabat-Zinn et al., 1992; Ott, 2004). The intervention is traditionally an 8-week, group-based program with additional silent retreat, and it incorporates the following three different practices: a sitting meditation, body scan, and mindful Hatha yoga, which is defined as a particular yoga that focuses more on maintaining moment-to-moment awareness than other yoga practices (Kabat-Zinn et al., 1992; Ospina et al., 2007; Ott, 2004). The classes usually last 2.5 hours, and 45-minute audiotapes of the intervention are provided for individual daily practice (Baer, 2003; Proulx, 2003).

The MBSR program is designed to treat patients with chronic pain, and it is now offered in hospitals and clinics around the world (Kabat-Zinn, 2003; Kabat-Zinn, Lipworth, & Burney, 1985; Ospina et al., 2007). It has been studied in heterogeneous populations and been found to be effective for individuals who are suffering from chronic pain, cancer, anxiety, depression, HIV, fibromyalgia, emotional and behavioral disorders as well as a variety of other medical issues (Jevning, Wilson, Pirkle, O'Halloran, & Walsh, 1983; Kvillemo & Branstrom, 2011; Marchand, 2012; Miller, Fletcher, & Kabat-Zinn, 1995; Ospina et al., 2007; Reibel, Greeson, Brainard, & Rosenzweig, 2001; Robinson, Mathews, & Witek-Janusek, 2003; Smith, Richardson, Hoffman, & Pilkington, 2005; Weissbecker et al., 2002; Wong et al., 2011).

Previous reviews have reported the health benefits of MBSR for patients with various conditions (Chen et al., 2012; Chiesa & Serretti, 2010; Cramer et al., 2012; Lauche, Cramer, Dobos, Langhorst, & Schmidt, 2013; Ospina et al., 2007; Smith et al., 2005), but no systematic reviews have focused specifically on MBSR and caregivers. As a result, a systematic review of the use of MBSR among caregivers may facilitate the overall situation of MBSR practice in enhancing the health and well-being for caregivers of patients with various conditions.

AIM

The primary aim of this systematic review was to summarize and evaluate the evidence for the effectiveness of MBSR for caregivers of patients with various conditions.

Studies focusing individually on yoga and/or meditation, or including therapies like a non-MBSR intervention are not included in this review. The studies on Mindfulness-Based Cognitive Therapy (MBCT) for caregivers are included in this review. MBCT is grounded in MBSR and is designed to help individuals who suffer from depression and other psychological or psychiatric conditions (Kabat-Zinn, 2013; Smith et al., 2005). It has content that is very similar to MBSR, and the major difference is the additional 3-minute breathing space incorporated as part of the program (Smith et al., 2005).

METHODS

Protocol and Registration

The review was conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009). The protocol was not registered prior to conducting the review.

Search Strategy

Nine databases (the Cochrane Library, PubMed, Medline, CINAHL, PsycINFO, Web of science and three Chinese databases, CNKI, Wanfang data and VIP) were searched (from inception to 1 Feb 2015) for original articles. The literature search was conducted around search terms for "MBSR" and "caregiver". Search strategies were developed to accommodate the different indexing approaches used by the databases (Smith et al., 2005). For PubMed, the search strategy included the following search terms: "(MBSR [Title/Abstract] OR mindfulness-based stress reduction [Title/Abstract] OR MBCT [Title/Abstract] OR mindfulness-based cognitive therapy [Title/Abstract] OR mindful* [Title/Abstract]) AND (caregiver [Title/Abstract])". The search was limited to publications reporting research in humans. Reference lists of all potentially relevant articles and other reviews in the field were reviewed to identify any studies that were missed in the electronic database search.

Eligibility Criteria

The following conditions had to be met to include a study in this review:

1) Types of studies. Filtering identified only a small number of randomized controlled studies; therefore, all research studies that included outcome measures were selected. Eligible studies were papers written in English or Chinese.
2) Types of participants. Studies including participants (18 years of age and older) who were family caregivers of patients with various conditions were eligible for inclusion.
3) Types of interventions. Studies that assessed MBSR or MBCT or variations of MBSR/MBCT programs as the main intervention were eligible for inclusion. Studies of mindfulness-based interventions that were clearly different from the original MBSR or MBCT programs, such as mindfulness-based exercise, were excluded.
4) Types of outcome measures. Studies with patient self-reported measures of subjective wellbeing, quality of life, and physical functioning were included. Physical measures (immunological function) and psychological measures (stress, anxiety, and coping) were also included.

Data Extraction and Analysis

For each included study, two reviewers independently extracted all relevant data and entered the data into a standardized Excel file. The trial was excluded if no usable data were listed or could be retrieved. A third reviewer checked all the data, and any discrepancies were discussed until consensus was achieved. All relevant studies were appraised, and their methodological quality was assessed.

Search Outcome

A total of 468 articles were identified. Two reviewers then independently reviewed all titles and abstracts, using an eligibility form derived