Archives of Gerontology and Geriatrics 56 (2013) 91–95

Contents lists available at SciVerse ScienceDirect

Archives of Gerontology and Geriatrics

journal homepage: www.elsevier.com/locate/archger

The influence of neuroticism and extraversion on the perceived burden of dementia caregivers: An exploratory study

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ARTICLE INFO

Article history:
Received 18 April 2012
Received in revised form 27 July 2012
Accepted 28 July 2012
Available online 18 August 2012

Keywords:
Anxiety
Burden
Caregiving
Dementia
Depression
Personality

ABSTRACT

Most studies reflect dementia caregivers usually sustain higher levels of burden compared to other caregivers. However, they do not consider variability within the caregiver, such as personality traits. The purpose of this study was to examine the influence of extraversion and neuroticism on dementia caregiver burden. A cross-sectional descriptive study was conducted with 33 caregivers looking after demented-patients. All caregivers had intense burden levels, and their personality, depression, anxiety and self-rated health were evaluated. Personality variables had important effects on the caregiver burden and consequences on their mental health. Neuroticism was significantly correlated with burden ($r = 0.6$, $p < 0.01$), depression ($r = 0.68$, $p < 0.01$) and both anxiety measures, state ($r = 0.46$, $p < 0.01$) and trait ($r = 0.67$, $p < 0.01$). Extraversion was significantly correlated with neuroticism ($r = -0.42$, $p < 0.01$) and burden ($r = -0.46$, $p < 0.01$). Finally, depression was significantly correlated with state ($r = 0.63$, $p < 0.01$) and trait anxiety ($r = 0.66$, $p < 0.01$). These results indicate the importance of considering the caregiver personality in the theoretical and empirical models of the caring process. It is necessary to adequately assess the caregiver personality, as those presenting high levels of neuroticism and low levels of extraversion are more vulnerable to experience negative caring effects.

1. Introduction

Different authors (Bedard, Pedlar, Martin, Malott, & Stones, 2000; León-Salas, Olazarán, Muñiz, González-Salvador, & Martínez-Martín, 2011) have established the relationships among behavior, cognitive and functional impairment, quality of life and health in people with dementia with the burden perceived by their caregivers (Fernández de Larrinoa Palacios et al., 2011). An increasing caregiver burden is known to decrease life satisfaction (Andrén & Elmståhl, 2008). Diverse variables in reference to the care context and the caregiver as well as the care recipient show major associations with the burden: those associated to disease and the social situation of the dependent person, the greater frequency and intensity of care, and the low frequency in which the caregiver receives help from others (Garcés, Carretero, Ródenas, & Sanjosé, 2009).

However, it is important to highlight that, in general, those studies are focused on the burden of immediate factors such as the impact of the cognitive deficits, help with everyday functioning and behavioral and psychological factors. Most of them do not take into consideration variability within the caregivers, such as personality traits (Campbell et al., 2008; Löckenhoff, Duberstein, Friedman, & Costa, 2011).

Personality traits are defined as "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings and actions" (McCrae & Costa, 1990). Some of these traits, such as neuroticism and extraversion, have been related to caregiver burden (Koerner, Kenyon, & Shirai, 2009). Furthermore, few existing studies within the personality field have focused on the extraversion variable in its relationship to caregiving (Melo, Maroco, & Mendonça, 2011).

Neuroticism or negative affectivity is a personality trait that reflects people's tendency to experience negative emotional states. It is one of the five main personality dimensions, and it is conceptualized as the underlying tendency to experience emotional distress. It is a stable trait that reflects the tendency to focus on the negative aspects of the situation (Carson, 1989). People with high levels of neuroticism have been labeled as a person who is a "worrier, nervous, emotional, with low self-esteem, inadequate and hypochondriacal" (Costa & McCrae, 1985). Neuroticism has also been described as a psychological distress construct (Costa & McCrae, 1985; Lincoln, 2008). Consequently, high neuroticism scores have been consistently related to poor mental health (Lincoln, 2008). Highly neurotic individuals have been shown to appraise situations as more stressful or threatening and have negative perceptions of physical problems (Jang, Mortimer, Haley, & Graves, 2002). Neuroticism is a risk factor for increased caregiver

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http://dx.doi.org/10.1016/j.archger.2012.07.011

distress over time, and as it is easily identified, it should be targeted for intervention (Jang, Clay, Roth, Haley, & Mittelman, 2004).

In contrast, extraversion is a global indicator of a person's tendency to look for social interactions and activities. According to Costa and McCrae (1985), high scores on the extraversion scale are associated with sociable, active, talkative, person-oriented, optimistic, fun-loving, affectionate people who like to enjoy themselves, while low scores are associated with reserved, sober, unexuberant, aloof, task-oriented and retiring quiet people. Extraversion or the wish for high levels of social interaction is related to ''positive affectivity''. Extroverted caregivers feel more positive toward their efforts in caregiving, find more pleasing aspects in the task and are more satisfied with the social support they get from family and friends. In addition, they are more likely to carry out leisure activities with other people that help to reduce the feeling of burden and safeguard their health (Hirano et al., 2011). However, caregivers who score low in extroversion may have fewer buffers and resources when faced with daily caregiving stressors and may be less able to derive any benefits or rewards from the caregiving experience (Koerner et al., 2009). Few existing studies within the personality field have focused on the extraversion variable in its relationship to caregiving.

Neuroticism-emotional adjustment and extraversion–introversion are basic constructs in all theories of personality and have been strongly related to affectivity and well-being (Hotard, McFatter, McWhirter, & Stegall, 1989). Personality is one such personal resource in the caregiver stress process, and accumulating evidence suggests that neuroticism may be especially predictive of adverse caregiver outcomes (Gallant & Connell, 2003).

As personality variables have been consistently associated with affective states, we should take such variables into account when attempting to understand the consequences of caregiving. Personality does help to account for the experience of caregiving benefits/gains (Koerner et al., 2009).

Another aspect that needs to be considered is the mental health of the caregiver. Depression is a common problem among dementia-caregiving families (Joling, Smit, et al., 2012) and higher levels of burnout were found to correspond to higher levels of depressive symptoms (Takai et al., 2009). It normally lasts for long periods of time, and its influence on caregivers has been widely studied. In contrast, studies of anxiety, together with worry and feelings of fear, and psychological symptoms such as muscular tension and somatic symptoms among dementia-caregiving families have been somewhat neglected (Cooper, Balamurali, & Livingston, 2007).

Despite the fact that prevalence studies report anxiety rates from 3.7% to 76.5%, when using more reliable assessment methods in longitudinal studies, approximately 25% of caregivers report clinically significant anxiety experiences (Joling, van Marwijk, et al., 2012; Mahoney, Regan, Katona, & Livingston, 2005).

Given the fact that few studies have demonstrated the importance of personality factors, neuroticism and extraversion, among caregivers with severe burden in the caring experience of the patients with dementia, the aim of our study was 2-fold: (1) to analyze the influence that 2 personality traits (neuroticism and extraversion) have on dementia caregiver self-rated burden and (2) to examine the possible relationship between caregiver personality and psychological morbidity (depression and anxiety).

2. Materials and methods

2.1. Selection and description of participants

Participants were recruited from the Association of Relatives of Sufferers of Alzheimer's or Other Dementias and an Elderly Care Center of the City of A Coruña, Spain. Questionnaire packets were sent to 109 caregivers, and 41 (36.7%) returned completed questionnaires, of whom 8 did not meet the inclusion criteria for severe burden level. Overall, 33 primary caregivers ranging in age from 35 to 82 years ($M = 57.5$, SD = 11.3 years) took part in this study.

Each caregiver completed the self-administered assessment according to the recommendations given by a clinical psychologist with experience working with patients diagnosed with dementia and their informal caregivers.

The inclusion criteria were as follows: being the primary caregiver (persons were designated as the primary caregiver if they were principally responsible for providing or coordinating the resources required by the person with dementia, such as housekeeping, financial help and shopping) of a person with dementia for at least the previous 6 months, irrespective of whether the caregiver lived with the person or not; providing the major source of unpaid elder care; the caregiving presented a severe burden (score on the Zarit Burden Scale higher than 55 according to the reference values proposed by Martín et al., 1996); and giving informed consent.

Caregivers were excluded if they did not possess the necessary skills to be assessed. Exclusion criteria for caregivers included cognitive impairment, illiteracy or severely impaired vision and hearing.

2.2. Procedure

The study protocol was approved by the Ethics Committee at the University of A Coruña (Spain). Before the data collection, all participants were informed about the study and signed the corresponding Informed Consent.

2.3. Variables and instruments

2.3.1. Patient's cognitive and functional status

Patient's dementia stages were assessed by the Clinical Dementia Rating (CDR) (Hughes, Berg, Danziger, Coben, & Martin, 1982; Morris, 1993). The CDR is a clinical staging instrument for dementia. It characterizes 6 domains of cognitive and functional performance: Memory, Orientation, Judgment and Problem Solving, Community Affairs, Home and Hobbies, and Personal Care. The necessary information to make each rating is obtained through a semi-structured interview of the patient and a reliable informant (e.g., a family member). In addition to ratings on a 5-point scale for each domain (except Personal Care, which is rated on a 4-point scale) an overall CDR score is derived by standard algorithm. This score is useful for globally staging the level of impairment: 0 = no impairment, 0.5, 1, 2, and 3 indicate very mild, mild, moderate and severe dementia.

Regarding care recipient's characteristics ($n = 33$), 9.1% suffered from mild dementia, 51.5% moderate dementia and 39.4% severe dementia according to CDR.

Caregivers completed a demographic questionnaire that recorded information on caregiver gender, age, marital status, educational level, occupation, relationship to the patient, duration of caring, date of diagnosis (as an indication of illness duration) and level of health and social support.

2.3.2. Caregiver burden

The level of burden experienced by the informal caregiver was measured by the Zarit Burden Interview (ZBI) (Zarit, Reever, & Bach-Peterson, 1980), adapted and validated for the Spanish language by Martín et al. (1996). The ZBI was used to assess how much the caring affected the informal caregivers' health, social life, emotional welfare and other factors. This instrument consists of 22