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COMMENTARY

Translating evidence into practice: nonpharmacological interventions for BPSD

As is widely known, the world population is growing older and the number of people with dementia is increasing significantly (Livingston *et al.*, 2017). In the opposite direction, family networks (e.g. secondary caregivers) that provide support to people with dementia are decreasing in size, something that contributes to an increase in the demands and burden that is usually faced by primary family caregivers, most of whom are female. This issue is having an impact on millions of families all over the world (Alzheimer's Association, 2019).

One of the main factors that contributes in a major way to explain the burden or burnout of family and professional caregivers is the behavioral and psychological symptoms of the dementias (BPSD). BPSD impact both directly on caregivers, and/or indirectly through the interference they create in the caregiving process such as, for example, when using respite services (e.g. day care centers; Tamayo-Morales *et al.*, 2021). BPSD are very frequent and are experienced by a large part of the population of persons with dementia sometime over the course of the illness (Brodaty *et al.*, 2015; Lyketsos *et al.*, 2002; Savva *et al.*, 2009). BPSD, along with high levels of perceived care-recipient suffering, are considered indicators of a lack of well-being in people with dementia as well as risk factors for adverse caregiving outcomes, either physical or emotional (Schulz *et al.*, 2020). BPSD are also one of the main reasons for placement into long-term care institutions (Brodaty *et al.*, 2014).

Even when dementia plays an important role in the explanation of the occurrence of the BPSD, it is well known that other factors from the environment (social and physical), the caregiver (informal or formal), and the family play a decisive role in understanding why BPSD happen (Kales *et al.*, 2015; Losada Baltar *et al.*, 2017), as well as their frequency and associated distress for caregivers. Theoretical models such as the unmet needs (e.g. Cohen-Mansfield and Werner, 1995), the A-B-C's of behavioral problems (Teri *et al.*, 1998), or the Progressively Lowered Stress Threshold (Smith *et al.*, 2004) are helpful for understanding the cause of BPSD and thus may contribute to the development of interventions aimed at reducing their frequency and impact. Considering the unmodifiable degenerative nature of the dementias, theoretical models based on the acceptance of situations and events associated with emotional distress may also be helpful for families (Márquez-González *et al.*, 2010). These models are relevant for understanding the occurrence and impact of BPSD and transfer the origin of the symptoms from a direct manifestation of an unavoidable biological disorder (the dementia) to personal or environmental factors that are, in the main, modifiable or amenable to nonpharmacological interventions. Interventions based in these models have obtained enough empirical support to be considered evidence-based treatments (Logsdon *et al.*, 2007).

In agreement with the scientific literature, nonpharmacological therapies should be considered as a first option for targeting BPSD (Dyer *et al.*, 2018), as they have shown better results than pharmacological interventions for reducing the frequency and distress associated with BPSD, as well as preventing the adverse effects associated with drugs (Ballard *et al.*, 2006; Maust *et al.*, 2015; Olazarán *et al.*, 2010).

However, even though there are many examples of intervention studies that have shown at least a moderate efficacy for reducing caregivers' distress (Cheng *et al.*, 2020) and negative outcomes on care-recipients (Spector *et al.*, 2013; Strøm *et al.*, 2016), the truth is that there is a clear frontier between the scientific context in which these interventions are developed and tested and the availability of evidence-based therapies in the applied, real-world context.

This is where the work done by Bennett *et al.* (2021) becomes particularly important, as scientific findings must become a reality in the natural context of the families and the professionals that cope with the dementias. The interventions (and the underlying practical and theoretical arguments) included in the Bennett *et al.* (2021) study are unknown for most of the people affected, and this includes in many cases dementia care professionals. For this reason, this work is invaluable to advance our knowledge of effective procedures for delivering the scientific findings to those who face the dementias on a daily basis in their work and life. The work by Bennett *et al.* (2021) makes good progress in approaching this

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issue, as it provides a review of the available examples of studies that have tried to translate to the natural context evidence obtained through scientific work.

The conclusions of the Bennett *et al.* (2021) study are optimistic in terms of the possibility of translating this scientific knowledge to the real or natural world of those who have dementia and their families. In this sense, they provide encouraging news for the well-being and quality of life of people with dementia and their families. However, the work by Bennett *et al.* (2021) also highlights important areas for improvement. The number of studies focused on the translation of empirically based interventions to the natural context is sparse and show at best low or moderate effects. The low number of studies contrasts with the increasing global impact of the dementias in society, in terms of their effects on families, health and healthcare systems, and the economy, among others. Having adequate large-scale plans of implementation of evidence-based interventions available in the natural context of people facing dementia would buffer in a non-negligible way the impact of the dementias.

Action policies are deemed necessary to favor the implementation of empirically based nonpharmacological interventions in the available social and health services. As such, this work is important in advancing the care of persons living with dementia.

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