

GUEST EDITORIAL

Add life to years: psychosocial interventions for people with cognitive disorders*

As population longevity increases, living with cognitive disorders during a significant part of the remaining lifespan becomes a strong possibility for the majority of older adults. Therefore, the development of treatment strategies to address the principal causes of cognitive and functional decline is a healthcare priority. The aims of medical and psychological therapies vary according to clinical severity. In the stages of mild cognitive impairment and early dementia, maintaining personal independence and enjoyment of life is a major objective from individual, societal, and economical perspectives (Neugroschl and Wang, 2011; Mokhtari *et al.*, 2012). Current anti-dementia drugs contribute to this goal to a very limited extent. In individuals with mild cognitive impairment these compounds do not prevent the onset of dementia (Raschetti *et al.*, 2007), and in those diagnosed with early dementia, these compounds delay the worsening of symptoms only for several months (Kurz and Lautenschlager, 2010). Drugs with novel mechanisms of action are being developed for Alzheimer's disease and other neurodegenerative conditions. These have the potential to slow down the progression of pathology and expand the number of years for which patients remain at mild levels of cognitive and functional impairment. It is less likely that these treatments will stop cognitive and functional decline completely (Kurz and Pernecky, 2011). Therefore, psychosocial interventions are urgently needed in addition to current and future pharmacotherapy. At any level of cognitive and functional impairment the role of psychosocial interventions is to strengthen and make the best use of preserved skills in order to attain or maintain optimal levels of activity, participation, and interpersonal relationships. In contrast to drugs, psychosocial treatments primarily operate at the behavioral level. Some attempt to restore functions through cognitive, social, or physical activity, while others attempt to minimize disability through compensatory cognitive, behavioral, or environmental strategies. Recent research

has shown that psychosocial interventions may increase regional cortical thickness or modify the pattern of neuronal network activation (Draganski and May, 2008; van Paasschen *et al.*, 2009; Voss *et al.*, 2010; Erickson *et al.*, 2011). These neurobiological effects clearly demonstrate that brain plasticity persists into old age, but the relationship to behavioral gains and the importance for the prevention of cognitive decline (Lautenschlager *et al.*, 2012; Steffener and Stern, 2012; Valenzuela *et al.*, 2012) are currently unclear.

In recent years psychosocial interventions for people with early-stage dementia have become a growing focus of research, and advances have been made in determining their scope and limitations. Cognitive activity, including stimulation, training, and reminiscence (Woods *et al.*, 2008; Kurz and Lautenschlager, 2011; Woods *et al.*, 2012), as well as physical activity (Cheng *et al.*, 2012; Winchester *et al.*, 2013), provides benefits for memory and other cognitive functions. These effects may outlast the intervention period according to some studies, but in the majority of trials they fade once the treatment is discontinued. Moreover, whereas most studies have not assessed real-life outcomes, improvements in the participants' ability to manage day-to-day problems have been reported in a handful of studies (Graff *et al.*, 2007; Clare *et al.*, 2010; Gitlin *et al.*, 2010). It is important to note that many studies conducted thus far to demonstrate the efficacy of psychosocial interventions in people with cognitive disorders had significant methodological limitations which may have reduced their ability to capture treatment-related changes.

To reveal the true potential of psychosocial interventions, more and better research is needed. Future studies should increase the field's scientific rigor by introducing improvements of design over previous trials, particularly with regard to sample size, treatment duration, standardization of interventions, transfer of treatment strategies into everyday life, matching of intervention and outcomes, and long-term follow-up (Craig *et al.*, 2008). Such high-quality studies are costly, and unlike in drug trials, industry involvement cannot be expected. Therefore, significant progress can only be made if governments and private foundations allocate

* The authors wish to dedicate this Guest Editorial to Professor Dr. Hans Lauter on the occasion of his 85th birthday. As one of the first clinicians and researchers, he promoted the development and evaluation of psychosocial interventions for people with dementia and their family carers.

more resources to research in this important area. The field will also certainly benefit from harmonization of methodology. Although the diversity of theoretical foundations and treatment strategies inevitably entails a broader spectrum of outcomes than in clinical drug trials, it is desirable to assess a common set of efficacy measures which are patient-centered, clinically meaningful, and appropriately validated. In addition to various aspects of cognitive ability, core outcomes should include coping with day-to-day problems, attainment of individually relevant goals, and patient- and carer-rated quality of life. Alignment of measures will enable comparisons across studies as well as pooling and meta-analytic evaluation of data. Such methods are required for selecting the most efficacious strategies and strategy combinations, identifying determinants of treatment success, defining optimal treatment dosage and duration, and personalizing psychosocial interventions according to individual needs and capabilities.

While improvements in the design of both interventions and trials evaluating their efficacy are required in future research, it is equally important to consolidate the role of psychosocial interventions in the broader context of the management of cognitive disorders. Evidence should be provided about which strategies are most beneficial at what level of clinical severity. Furthermore, the most efficacious, practical, and cost-effective combinations of psychosocial strategies and drug treatments, as well as the added value of such combinations over monotherapy, need to be identified.

A particularly promising yet largely unexplored strategy to support autonomy and quality of life in people with cognitive disorders is the use of modern information and communication technology, including sensor systems, smart phones, and tablet computers. Such aids can be used for a variety of purposes such as providing reminders of daily tasks, guiding activities, maintaining social links, supporting navigation outside the home, monitoring physiological functions, and ensuring safety of household appliances (Mokhtari *et al.*, 2012). Technology devices may also be an elegant and effective way to implement psychosocial strategies in everyday living. These strategies will attain growing importance in the future as the digital literates are coming of age (Bharucha *et al.*, 2009).

The ultimate goal of research in this field is to establish psychosocial interventions alongside pharmacological treatment as a strong component in the management of cognitive disorders. It is desirable for clinicians to offer patients the complementary benefits from both approaches. Patients should be able to take advantage of pharmacotherapy in order to gain years of relatively preserved cognitive and

functional ability, and they might use psychosocial approaches to replenish these years with activity, participation, and enjoyable social bonds.

Conflict of interest

Nicola T. Lautenschlager is the current Editor-in-Chief of *International Psychogeriatrics*. Therefore, one of the deputy editors reviewed this editorial.

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