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Authors: Mateusz Kalita, Zbigniew Żylicz

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Mateusz Kalita, Zbigniew Żylicz https://orcid.org/0000-0002-6740-1533

Faculty of Medicine, University of Rzeszów, Poland

Non-pharmacological methods of treating depression in elderly are effective and not toxic: a minireview

[Running title: Non-pharmacological treatment of depression]

Address for correspondence:

Zbigniew Żylicz
Faculty of Medicine, University of Rzeszów, Kopisto 2A, 35–315 Rzeszów, Poland
e-mail: bezyna55@gmail.com

Abstract

Psychological depression is a frequent disorder still underdiagnosed and untreated in elderly. It is treated like something that belongs to the last phase of life. Depression is known to compromise quality of life near death. Pharmacological therapy is not always possible in this group because of frequent adverse effects and interactions with other drugs used and limited time until death. Beside pharmacological therapy there are many non-toxic non pharmacological therapies, more suitable for this population. These therapies, like cognitive behavioral therapy or mindfulness meditation therapy as well as many other are confirmed to be effective and safe in this population. Some of these therapies are suitable for the patients who are cognitively impaired.

Key words: psychologic depression, treatment, non-pharmacologic, cognitive behavior therapy, psychotherapy, mindfulness meditation

Introduction

Depressive disorders are a group of mental disorders, including symptoms such as lowered mood, guilt, pessimism, anhedonia, psychomotor retardation, diurnal rhythm and appetite disorders [1]. Sometimes they are believed to belong to this phase of life. In geriatric population the risk factors for experiencing new depressive episode were studied in 1408 elderly [2]. The most important were age, female gender, previous depression episodes, subjective memory impairment, dementia, anxiety and somatoform disorders [2]. The onset of clinical symptoms of depression contributes to the impairment of daily functioning. Depressive disorders can adversely affect life expectancy and quality as a result. It is estimated that depressive disorders occur in 10% of elderly people across the whole world [3]. It is probably much more frequent toward end of life. Depression is frequently under-diagnosed and under-treated in older adults, often leading to premature death. The etiology is more varied than in younger people. Also, patients with neurodegenerative disorders have a higher risk of developing depressive disorders, in Alzheimer's disease the risk is increasing up to 50% [4]. The risk further increases if the patients are deficient in folic acid and/or vitamin B12 [5]. Older patients are most likely to seek psychotherapeutic help for problems such as relationship problems with loved ones, deterioration in health, experiences of loss, bereavement, financial problems, decline in general functioning, but not for depression [6].

The response rate for comprehensive treatment (which includes pharmacological, psychological, and social support) of depression in older adults is 80–90% [5]. Although these optimistic data do not focus on the end-of-life care. Successful treatment requires a holistic approach that includes pharmacotherapy, and non-pharmacological methods, such as art therapy and psychotherapy. In general, therapy leads to improved quality of life, increased functionality, possible improvement in health status, longer life, and lower healthcare costs [7]. Improvement should be evident after about two weeks of therapy, but full effects may require several months of treatment. Therapy in older patients is recommended to be continued longer than in younger patients, sometimes for the rest of their lives [8].

Special attention should be paid to the patients attending palliative care services [9, 10]. This is a specific patient population as their frequently limited time to death precludes treatment with pharmacologic therapies. They may however, benefit from non-pharmacological therapies [11].

In this paper we shall review the suitability and evidence of the non-pharmacological methods of treatment of depression in frequently cognitively impaired elderly population.

Psychotherapy in general

The primary non-pharmacological method of treating depression in patients is generic psychotherapy. It is used as a primary or adjunctive treatment method, depending on the patient's health and the reported problem. Psychosocial methods like psychotherapy, have a small but statistically significant effect in reducing depressive symptoms among elderly [12]. Additionally, it is important to note that most efficacious are the combinations of pharmacotherapy and psychotherapy [13]. In both day- and in-patient geriatric wards, it is worth considering implementing individual as well as group psychotherapy for patients diagnosed with depression. Group psychotherapy should be conducted alongside individual therapy sessions and pharmacotherapy [14]. However, group psychotherapy for the elderly is an area that should be studied more thoroughly.

Cognitive behavioral therapy

One of the best investigated and effective types of therapy for treating depressive disorders is cognitive-behavioral therapy (CBT). It involves identifying and changing negative thoughts and behavioral patterns, and then developing healthier coping strategies to deal with the impeding daily functioning symptoms of depressive disorders [15]. For geriatric patients, cognitive-behavioral therapy may be more adequate than standard drug treatment, as often older people with depression are reluctant to take antidepressants or unable to tolerate their adverse effects [5]. Under such circumstances, CBT offers a wide range of treatment options for these patients [16]. Cognitive-behavioral therapy in a systematic review appeared to be more effective than placebo in the treatment of depression in elderly [17].

Mindfulness meditation

Another well researched form of therapy for depression in older adults is mindfulness meditation intervention (MMI) [6, 18]. Mindfulness meditation intervention have a purpose to raise greater awareness of present moment experience. During this process, the therapist tries to focus on what is happening now, instead of being distracted by thoughts of the surrounding world and problems. This approach can be developed through the regular practice of meditation or other exercises designed to enhance awareness and focus. This allows patients

to experience the present moment more consciously and better manage their thoughts and emotions [19]. Mindfulness alleviates ruminations, i.e., recurring negative thoughts that are not directly related to current situations and do not contribute to understanding or clarifying a situation. It addresses and excessive autobiographical memory [20]. Mindfulness meditation intervention has demonstrated efficacy in alleviating symptoms of depression in older adults and can be used as an adjunct or alternative to conventional treatment for older adults with depression. In a systematic review of 19 studies including 1076 elderly patients MMI showed significant improvement depression scores compared to controls [21].

Other therapies

Some patients with impaired cognitions will be unable to respond to verbal therapies [22]. They may respond to music [23] or even dance therapies [24]. Regular dancing after six months can result in improvements in motor and cognitive functions. After this period of time there is an increase in the thickness of the cortex of centers in the occipito-temporal lateral curve of the brain involved in visuo-motor integration and imitation of actions, which are important for the automatic execution of learned movements [25]. Two systematic reviews concerning hundreds of studies, revealed positive effect of dance therapy on the treatment of depression in elderly [26, 27]. This suggests that the effects of regular attendance at dance evenings will not only allow older people to reduce the clinical manifestations of depressive disorders and stress, but may also help them function physically on a daily basis. Dance therapy can have similar positive effects as mindfulness therapy in the treatment of depression in elderly [28]. This evidence is straightforward. There is only a question whether patients attending palliative care services (may be the day-care-centers) would be able to benefit from this.

Potential for improving mental health has been demonstrated by practicing yoga, which allows patients to better control their stress levels, anger, anxiety, depressive symptoms and increase their state of well-being, among other things [29]. The long-term use of a combination of yoga and CBT also has beneficial effects on geriatric patients with depression, anxiety and sleep disorders [30]. Laughter yoga is a unique variation of yoga in which laughter is induced through exercise, breathing techniques, movement, eye contact and an atmosphere of childlike play, positively affecting mood and spirituality. A decrease in anxiety and depressive symptoms has been observed in those who participate in such activities [31, 32].

Spiritual care

As the years pass and experiences accumulate, many elderly people face reflection on the essence of their own existence, seeking deeper answers to questions about the meaning of life, values and spiritual needs. Spirituality and religiosity form an important foundation in the lives of these individuals, yet they are often underestimated in the context of coping with depressive disorders in old age [33, 34]. Fostering one's spiritual sphere combined with religiosity has a beneficial effect on elderly patients struggling with depression. Nevertheless, further research is needed in the context of other religious faiths [35].

Controversies around the non-pharmacological methods

Despite of great interest in non-pharmacological treatments of depression, none of these methods was tested so extensively as newer antidepressants. For example, newer antidepressants were tested by the break of millennium on over 30 000 patients in 315 trials [36] while the cognitive behavioral therapy, the most extensively studied non-pharmacological method, on only 2 765 patients in 48 much smaller trials [37]. These proportions remained unchanged for next decades. So, the non-pharmacological treatments of depression may be non-toxic, but their efficacy remains less well established.

The studies attempting to evaluate the non-pharmacological treatments of depression suffer some common deficiencies as lack or insufficient blinding, small sample size, short follow-up and failure to use of intent-to-treat analysis. Although we extrapolate the results from the general population, there is still not enough evidence for the special groups like palliative care population.

In a questionnaire survey 535 psychiatric patients treated for depression were asked to rate the importance of 16 statements. In their response the patients stated that symptom control as measured by depression scales was equally important as optimism, self-confidence and return to normal self [38]. This may be valid for both pharmacological and non-pharmacological treatments, but we are not certain what we are measuring in the trials. All trials aim it achieve control of symptoms of depression, but this is not the same as being happy. It is possible that available data we achieve in clinical trials are only a superficial or easily measurable surrogate of the effects that matter for the patients.

Moreover, treatment for depression has been shown to improve quality of life in the acute treatment phase, but it is questionable whether quality of life remains at this level even if symptoms of depression are still in remission following treatment [39].

Notwithstanding these controversies and methodological hesitancies it should be stated that especially for palliative care patients the non-pharmacological methods of treatment of depression may be valuable as they are easily available at any setting and they are non-toxic.

Conclusion

Non-pharmacological methods of treating depression in elderly patients are important for improving quality of life and reducing depressive symptoms. Additional activities can be an effective addition to pharmacologic therapy. Also, issues related to spirituality and religiosity are extremely complex, and attending to this aspect in patients can yield promising results. The indications, benefits and risks analysis of specific treatments should be evaluated on a case-by-case basis, taking into account the patient's preferences cognitive abilities, values and beliefs. It is worthwhile to continue research in the search for more effective treatments for depression in geriatric patients, and including the study of topics such as group psychotherapy for the elderly, as it can contribute to enhancing their well-being and overall functioning.

Author contributions

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Conflict of interest

None.

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