

It is estimated that currently about 10 percent of the population suffers from depressive disorders and in 2030 they are going to be the second, after HIV/AIDS and before ischemic diseases, health burden in the world and the first, before ischemic heart disease and Alzheimer and dementias, in high income countries. Substantial increase in cognitive functioning in various mental disorders, including depression, is being observed during the last decade. Studies reveal that depression is not only an affective disorder. A decline in executive functioning, covering working memory, and especially inhibition, planning and updating, are undisputable. The impairment can be still present after pharmacotherapy making relapses more likely to occur.

Moreover, results of longitudinal studies published in 2013 clearly show that the relationship between depression and cognitive performance is that depression in adolescence causes lower cognitive performance in adulthood. There are also some preliminary results regarding pharmaceutically induced neurogenesis (process of new neurons creation). This could counteract cognitive decline however, functional significance of this process in humans remains unknown and is restricted only to some areas of the brain.

Psychotherapy is an alternative to pharmacotherapy, effective method of dealing with depression and is free of side-effects caused by the drugs. The other important advantage to pharmacotherapy is broadening of range of ways the patients can stay in relationships with others and the self. When it comes to cognitive benefits of psychotherapy, research evidence, with the exception of mindfulness or Metacognitive Therapy, is relatively small.

Based on the aforementioned premises, we assumed that combination of computer based cognitive training targeted at executive functions and classical psychotherapy will produce a synergistic effect manifesting in higher effectiveness of both cognitive training and psychotherapy of depressive symptoms.

The aim of our project is to study and understand the links between cognitive decline related to depression and psychotherapy process, which being targeted at many aspects of human functioning, misses the change in cognitive functioning.

In our study we will test a general hypothesis that depression is accompanied not only by working memory and especially executive functioning impairment but also deficits in higher level cognitive processes, like mental model construction and that the training contributes to psychotherapeutic process by holding back or slowing the decline.

When preparing the project, we chose gestalt psychotherapy – one with a holistic approach to the patient and targeted not only at emotions, thoughts and behavior, but also at awareness of sensations coming from the body. Neurogra.pl has been set as the platform for cognitive training.

In our research we will use questionnaires as well as computerized tasks testing cognitive functioning. We will measure general well-being, depressive symptoms, cognitive functioning in everyday life as well as executive functioning and working memory capacity.

The project will make it possible to examine not only how executive functioning training influences depression treatment, but also how the training transfer to higher cognitive functioning ie. mental models construction.

The objective, detailed and broader than thus far reported study on cognitive change in described above areas, will make it possible to develop modern and more effective depression treatments, counteracting widespread of this disorder.