

# Journal of Depression and Anxiety Forecast

## Interaction of Compassion-Focused Therapy, with tDCS on Negative Cognitive Bias of Depressed Patients

Asadinoghabi LN\* and Gharibzadeh S

Institute for Cognitive and Brain Science, Shahid Beheshti University, Tehran, Iran

Dear Sir/Madam,

The current cognitive model uses an information-processing approach to describe depression. A negative cycle of negative thoughts and maladaptive behaviors forms the core of this model, which continues to focus too much on the causes and consequences of depressive symptoms (such as what happens in mental retardation). Recent studies have examined three items as possible underpinnings of this negative cycle: bias negative attention, cognitive control, and metacognition. An examination of the interventions on computer-based negative attention bias showed that interfering with bias negative attention reduced the interaction between depressive and anxiety symptoms and increased interest and motivation in social interactions. Overall, depression is the result of a two-way interaction between several cognitive and emotional mechanisms [1]. Various methods have been used to measure depression, such as self-assessment questionnaires and computer tests. Nishizawa et al. [2], in their study titled Measurement with Functional Infrared Spectroscopy during Strophic Emotion in Patients with Depression, state that previous studies have shown that emotional words increase activity in the frontal lobe. Left in depressed patients. In their study, they examined these findings in more detail. The results of this study indicate that by exhibiting negative stimuli during emotional stop, the activities related to oxygen hemoglobin in the areas of the left frontal lip increase, and there is also a relationship between the activity of this area and the severity of stress. In the field of cognitive psychology, attention bias is used to describe and measure depression. Numerous studies have investigated attention deficit hyperactivity disorder in depressed individuals, and several studies have used subsidy neurological tests to measure depression, which are based on measuring reaction time and measuring attention bias [3-6].

Numerous therapies have been used to treat depression. These include self-compassionate therapy [7], direct current electrical stimulation [8], direct current electrical stimulation, and pharmacotherapy [9], Mindfulness-Based Cognitive Therapy [10], Music Therapy [11], Behavioral Cognitive Behavioral Therapy with a Focus on Mindfulness [12], Electrical Shock Treatment [13], Computer-Based Therapies [14], Metacognitive Therapy [15], Problem-Based Therapy [16], Intensive Behavioral Therapy [17] to treat depression. In this study, we will use the interaction between compassion-based therapy and direct current electrical stimulation to improve depression, which we will introduce later and the reason for their choice.

Numerous studies have shown the effectiveness of treatment based on compassion for depression. On the other hand, Wong et al. [18] in their study on SHAQFT training showed that more activity in the lateral part of the prefrontal cortex, more altruistic behavior in the group that received the training showed compassion. Compassion training is associated with significant changes in the lateral areas of the lateral frontal cortex and lower parietal lip.

On the other hand, recent studies show that the lateral dorsal region of the prefrontal cortex is involved in attentional bias, and decreased activity in this area will lead to more attention bias. The activity of this area reduced attention biases [19,20].

As mentioned earlier, with the approach of cognitive psychology, the bias of attention to stimuli with negative content has been introduced as one of the main components and in fact, a component to describe and measure depression. Therefore, in the form of the following image, the above will be summarized and the research logic based on the research hypotheses, the proposed research method (including the number of groups and how the distribution of interventions in groups will be presented) will be stated (Figure 1). According to studies conducted so far, compassion-based therapy has had a significant effect on improving depression, and also more activation in the lateral dorsal region of the forehead cortex in people who have been trained in compassion has been associated with increased compassion and altruism. Numerous other studies have looked at the role of this area

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#### \*Correspondence:

Leila Asadi Noghaqbi, Institute for Cognitive and Brain Science, Shahid Beheshti University, Tehran, Iran.

E-mail: leilaasadi9898@gmail.com

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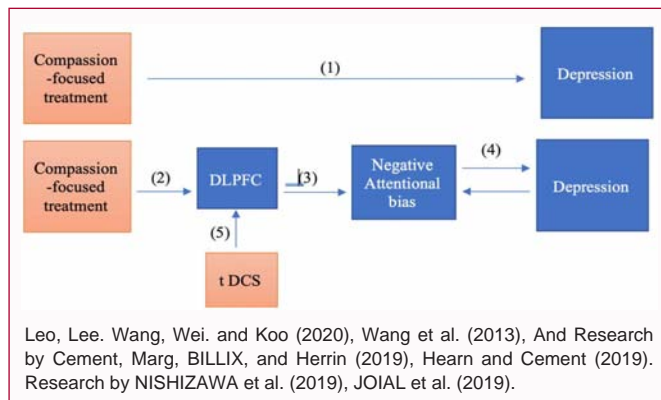
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in attention bias, and it has been shown that further activation of this area leads to reduced cognitive bias by using electrical stimulation with direct current. Finally, cognitive bias toward negative stimuli describes depression. Therefore, by summarizing the results of various studies, it is predicted that stimulation of the lateral posterior region of the prefrontal cortex by direct electrical stimulation will improve the effectiveness of the compassion-based intervention on bias attention to negative stimuli in depressed individuals.

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