Journal of Alzheimers Disease & Parkinsonism

Nabian. J Alzheimers Dis Parkinsonism 2023, 13:3

Research Article Open Access

Reducing Depression and Anxiety Symptoms in Patients with Parkinson's Disease: The Effectiveness of Group Cognitive Behavioral Therapy

Pantea Nabian*

Department of Psychology, Tehran University, Tehran, Iran

***Corresponding author:** Pantea Nabian, Department of Psychology, Tehran University, Tehran, Iran, E-mail: Pantea.nabian@gmail.com

Received date: 25-Apr-2023, Manuscript No. JADP-23-96958; **Editor assigned:** 27-Apr-2023, PreQC No. JADP-23-96958 (PQ); **Reviewed:** 11-May-2023, QC No. JADP-23-96958; **Revised:** 18- May-2023, Manuscript No. JADP-23-96958 (R); **Published:** 26-May-2023, DOI: 10.4172/2161-0460.1000568.

Citation: Nabian P (2023) Reducing Depression and Anxiety Symptoms in Patients with Parkinson's Disease: The Effectiveness of Group Cognitive Behavioral Therapy. J Alzheimers Dis Parkinsonism 13: 568.

Abstract

Introduction: This study examined how well group cognitive behavioral therapy treated anxiety and depressive symptoms in Parkinson's disease patients.

Methods: The experimental and control groups participated in this quasi-experimental study's pretest, posttest, and follow-up phases. Patients aged 60 to 75 from psychiatric and Parkinson's disease centers made up the study population. A random sample of 90 people who scored highly on the Beck Depression Scale and Beck Anxiety Inventory was divided into two 45 groups at random: experimental and control groups. The experimental group underwent group cognitive behavioral therapy for eight weeks, once a week; there was no training for the control group. Methods of analysis of variance with repeated measures were employed to test the hypotheses.

Results: The outcomes demonstrated that the independent variable is successful in reducing symptoms of anxiety and depression. Patients with Parkinson's disease saw reduced anxiety and depression because to group cognitive behavioral therapy.

Conclusion: Effective psychological therapies, including group cognitive behavioral therapy, can improve mood, lessen anxiety and despair, and help patients more closely follow treatment guidelines. Thus, they can take effective measures to improve the physical and mental health of these patients and aid in the prevention of Parkinson's problems.

Keywords: Group cognitive behavioral therapy; Depression; Psychological; Parkinson; Treatment

Introduction

Many Parkinson's disease patients also struggle with anxiety and/or sadness. Grieving after receiving a Parkinson's diagnosis and from losing one's freedom and movement can lead to depression and anxiety. Parkinson's disease causes chemical changes in the brain, which are also connected to depression and anxiety. Parkinson's disease and depression frequently have similar symptoms, which makes a diagnosis challenging. However, it's important to recognize and address mental health issues. Parkinson's disease symptoms can be treated with those of sadness and anxiety with appropriate treatment [1]. Parkinson's disease is a neurological disorder that mostly impacts movement in the body. Neither a cause nor a treatment is currently understood. The symptoms are brought on by the gradual death of some brain cells, which results in a deficiency of the chemical dopamine [2].

These symptoms can affect and disrupt many daily tasks and activities such as walking, talking, writing, dressing, and eating. A wide range of 'non-motor' symptoms is also common, including problems sleeping, fatigue, and pain, slowness of thinking, memory problems, constipation, and urinary incontinence. Around 80,000 Australians have Parkinson's disease and this number is expected to grow as the population continues to age. While most people diagnosed with Parkinson's are aged over 60, 15 percent of people with Parkinson's are diagnosed before the age of 50 [2-4].

Most people feel anxious sometimes, but for some people, anxious feelings are overwhelming and cannot be brought under control easily. An anxiety disorder is a condition characterized by feelings of apprehension or nervousness that don't go away and which affect a person's ability to carry out normal daily activities. There are many types of anxiety disorders, each with a range of symptoms. A person may be experiencing an anxiety disorder if, for some time, worry and fear have interfered with other parts of life. An anxiety disorder will usually be far more intense than normal anxiety and go on for weeks, months, or even longer. An anxiety disorder can be expressed in different ways, such as uncontrollable worry, intense fear (phobias or panic attacks), or upsetting dreams. Like depression, there are effective treatments available for anxiety disorders [5-8].

Despite this established negative impact, depressive symptoms in Parkinson's disease are under-recognized and under-treated in clinical practice, additionally; there is a lack of well-designed studies that can guide the clinical management of these patients. So far, only a few double-blind, placebo-controlled trials have specifically assessed antidepressant use for Parkinson's Disease patients, and even fewer research data exist on non-pharmacological approaches for

Parkinson's Disease-associated depression. As a result, evidence-based recommendations and consensus on the best treatment choice for this patient population are scarce [9-11]. The previous pharmacological studies have shown that medication traditionally used for depression in older people (e.g., SSRIs) may not be more effective than a placebo in Parkinson's Disease or may be difficult to utilize in this age group due to the aggravation of orthostatic hypotension, constipation, and cognitive impairment (e.g., tricyclic antidepressants) [12-14].

This is the first study in the context of Parkinson's disease suggesting this intervention may be useful in future intervention studies and the emerging themes of this intervention can also help understand and enhance patterns of coping with Parkinson's disease.

Materials and Methods

The research method was semi-experimental and its design was a pretest, and post-test with a control group and follow-up stage. The study population included patients in the age range of 60 to 75 who had been referred to psychiatric service centers in Tehran in 2022. One clinic was randomly selected from six psychiatric service clinics in Tehran that were willing to cooperate. All 186 patients attending the clinic were contacted, of whom 150 patients agreed to participate in the study. After obtaining their consent, Beck's anxiety questionnaire and Beck's depression scale were provided to them. Then, 90 patients were randomly selected from among patients with high scores on the Beck anxiety scale and Beck depression scale and randomly divided into two groups of 45, the experimental group and the control group. Research suggests that in semi-experimental studies, 15 people should be assigned to each group, and the possibility of dropping out of the study should also be taken into account and a larger sample than what you want to be selected [15]. For this reason, we assigned 45 people to each group.

The criteria for participating in this research; It includes a) being in stages 1 to 3 of Parkinson's disease according to the Hohen and Yaher scale, b) not suffering from debilitating diseases and chronic heart and respiratory diseases, c) not having open surgery in the inner region in In the last six months, d) not having high blood pressure, e) not participating in other treatment programs at the same time, f) having literacy and consent to participate in the research, and g) obtaining a score above the cut-off point in the anxiety and sleep quality test. The criteria for leaving the study were 1) unwillingness to continue the intervention, 2) lack of participation and cooperation in the research implementation process, and 3) absence of more than two sessions in the meetings.

Beck depression inventory

Beck Depression Inventory (BDI), for the first developed in 1961 by Beck, Mendelson, Mock, and Erbaugh [16]. Beck and his colleagues at the Center for Cognitive Therapy, Philadelphia, and the University of Pennsylvania presented a new version where the double negative sentences within the same symptoms had previously been removed. The final version was published in 1979. The revised form of the BDI was designed to determine the severity of depression in patients with a psychiatric diagnosis. Shear strengths were obtained from the response of depressed patients, including the four categories. Grades 0-9 show the minimum depression. Grades of 10-16 indicate mild depression. Mean depression scores of 29-17 and 63-30 scores indicating more severe depression [17,18].

Beck anxiety inventory

Each of the 21 questions on this survey has four possible answers (ranging from 3-0), indicating varying degrees of intensity. Scores can range from 0 to 63. The physiological elements of anxiety are more the focus of this quiz. Its nine items measure the automatic indications of hyperactivity and motor anxiety, with three of them measuring anxious moods and the remaining nine measuring specific anxieties. According to Beck et al., this scale has an internal consistency of 0.93 and a retest reliability of 0.75. The Cronbach's alpha method (n=34) reported a reliability score of 0.78 for this test in Iran. Also, T has been reported at a level of less than 0.001 equivalents to 12.3 when analyzing the validity of this test using the experimental method of differential validity between the two groups of anxiety and normal [19].

Implementation method in the intervention group: In the implementation of the study, the researcher after selecting the samples based on the study entry criteria, collected individual characteristics and then the intervention was carried out by a psychology specialist with a cognitive-behavioral degree. This 8-session 90-minute intervention (one session per week) was implemented as a group for 45 elderly people in the intervention group without companions using question-and-answer methods, group discussion, lectures, and practical practice of solutions during training hours. The content of the cognitive-behavioral group therapy intervention was presented in Table 1.

Sessions	Intervention content
1	Establishing a therapeutic relationship with clients, stating research goals. Statement of group rules. Talking about Parkinson's and anxiety and depression a common psychological disorder in this period and throughout life. It also discussed the need to use psychological treatments, including cognitive behavioral therapy.
2	Check the assignment of the previous session. Familiarity with cognitive-behavioral concepts, cognitive theory of depression, cognitive theory of anxiety, and resistance to treatment. Explanation of beliefs and the cause of problematization of beliefs. Identifying beliefs and evaluating their value. Deep muscle relaxation training
3	Check the homework from the previous session. Answering questions. Giving explanations related to spontaneous thoughts, cognitive triangles, and logical errors. Providing tasks related to identifying thoughts, logical errors, and central beliefs. Providing homework.
4	Check the homework from the previous session. Explaining the relationship between thoughts, beliefs, and behavior as well as the behavioral consequences of beliefs. Thought induction practice. Getting to know the downward vertical arrow method. Down arrow exercise

5	Checking the homework of the previous session, and reviewing the previous sessions. Re-explanation of the ABC model. Investigate what each spontaneous thought means and why it is distressing. Preparation of the main list of beliefs. Preparation of cognitive maps. Preparation of rating of units of mental discomfort. Presenting the assignments for the next session.
6	Review the assignments of the previous session. Explaining the change of beliefs and its relationship with emotions. Explaining the objective analysis of beliefs based on evidence and without regard to emotions. Training to test beliefs. Allegory of the lake giant. Objective analysis. Standard analysis. Performing functional analysis and coordination analysis on all the beliefs in the main list of beliefs. Homework next session.
7	Check the assignment of the previous session. Create an opposite or an alternative to negative beliefs. Teaching self-punishment, self-rewarding, using mental imagery, and simulation. Reinforce positive thoughts. Assignment for the next session.
8	Review the homework from the previous session. Summing up what was said in the previous meetings. Get feedback from group members. Appointments for follow-up evaluation after treatment

Table 1: Cognitive-behavioral therapy group intervention by sessions.

Implementation method in the control group

The control group did not receive any intervention and continued their normal and individual treatment. To comply with ethics in the research, after the completion of the intervention process and period, the researcher announced to the members of the control group that if they wish, they can learn the cognitive-behavioral group therapy method taught to the intervention group. Based on this, all 45 people declared their readiness and the psychologist taught all of them the cognitive-behavioral therapy group.

Statistical analysis methods

The study's raw data were analyzed by the SPSS-25 program in two cross-sections and repeated measures ANOVA was used for inferential statistical processes. The average age of the subjects was 64. 46 were men (51%) and 44 were women (49%). Among the participants, 16 people (18%) had a third middle school education, 25 people (28%) had a diploma, 32 people (35%) had a bachelor's degree, and 18 people (19%) had a master's degree. The duration of illness was between 7 and 16 years. 76 (84%) of these people were married (Table 2).

Variable index	Squares	Degree of freedom	Mean squares	F	Significant level	Chi Eta	Statistical power
Group test (Green house geisser)	975.37	1	515.47	96.05	0.001	0.79	0.99

Table 2: Results of analysis of variance with repeated measures on the pretest, post-test, and follow-up in both the control group and the experimental variables of depression and anxiety.

The above Tables 2 and 3 is for the group and the control group to test, pre-test and post-test, and follow-up. Because of the interaction of two variables F (96.05) is with degrees of freedom (1) at $p<0.05$ meaningful. The interactive effects of two variables and test significant differences between experimental and control groups in mean show pre-test, post-test, and follow-up and it becomes clear that the teaching of the effectiveness of group cognitive behavioral therapy in depression and anxiety symptoms in patients with Parkinson's is effective in the treatment group.

Test	The mean difference	SD	Significance level
Pre-and post-test	13.08	1.2	0.01
Pre-test and follow-up	14.11	1.008	0.02
Post teat-follow-up test	0.81	0.94	0.50

Table 3: Results of the LSD post hoc test, post-test, and follow-up test depression and anxiety test in the experimental group.

According to the results Table 3, LSD post hoc tests revealed that the pretest-posttest and pretest-up were in the $P \leq 0.01$. But in the post-test and follow-up at $P \leq 0.05$ there is no significant difference. Group cognitive behavioral therapy training, in other words, reducing depression and anxiety symptoms in patients with Parkinson's have a significant effect over time.

Results and Discussion

The impact of group cognitive behavioral therapy on the depressive and anxiety symptoms of Parkinson's patients is hypothesized. The experimental group had mean decreases in the post-test and follow-up, indicating that group cognitive behavioral therapy training in reducing depression and anxiety symptoms in patients with Parkinson's is effective in the treatment group. This is because the interaction of two variables F (96.05) with degrees of freedom (1) at $p <0.05$meaningful. Thus, the hypothesis is confirmed. The results showed after training in the pre-test and post-test and follow-up. There is a relationship between pretest-posttest and pretest–follow up. Group cognitive behavioral therapy training in reducing depression and anxiety symptoms in patients with Parkinson's has a significant effect over time. In this regard, their research on depression in people over 18 years as the effectiveness of group cognitive behavioral therapy expressed that group cognitive behavioral therapy for depression can be improved and will greatly inhibit the recurrence of depression. Consistent with the findings of the study findings the effects of group cognitive behavioral therapy training on depression as a group of counselors and psychologists expressed [20]. Results also conducted a

review of studies on the effects of cognitive therapy on mood disorders expressed group cognitive behavioral therapy as compared to a mere cognitive decline and mood disorders, particularly depression is more effective [21]. Group cognitive behavioral therapy with religious origins significant way to reduce anxiety and depression in patients with these disorders expressed and citing similar research conducted in this area was noted that the effectiveness of this treatment in the majority of this research has been significant. In this regard, Lynch in a study of the relationship between group cognitive behavioral therapy the human emotional states expressed that group cognitive behavioral therapy is much to overcome the negative mood and reduce depression in people in such a way that people who are familiar with the techniques of group cognitive behavioral therapy and benefit from it in everyday life, in comparison with other individuals are a less depressed and more successful way to overcome the negative mood and emotion [22-24].

Conclusion

Finally, Gilbert in their study to investigate the relationship between happiness and expressed happiness and group cognitive behavioral therapy techniques of group cognitive behavioral therapy in everyday life is a significant correlation so that the people in their lives are more aware of the mind, less depressed than other people are group cognitive behavioral therapy for the disease. Depression is assumed by the man who does not know that depression and happiness will know something. A depressed person has a lot of opportunities for false interpretations of his sense of style and her attitude to what is going on around them, is influenced. In other words, the depressed person feels alone and sad and mistakenly thinks that he does not care who is unfit and improper. The depressed person can be helped to emphasize instead of his depressed mood, pay to change their cognitive errors. Group cognitive behavioral therapy is due to the impact of depression during the follow-up to this point important that teaching group cognitive behavioral therapy techniques including relaxation, group cognitive behavioral therapy of breathing techniques and body checking is equipped and teaching these techniques to depressed people with diabetes can reduce their level of physical and mental stress.

Conflict of Interest

The author has no conflict of interest to interest.

References

1. Barone P (2011). Treatment of depressive symptoms in Parkinson’s disease. Eur J Neurol 18(Supp 1):11-15.
2. Naismith SL, Mowszowski L, Diamond K, Lewis SJ (2013). Improving memory in Parkinson's disease: a healthy brain ageing cognitive training program. Movement Disorders 28(8):1097-103.
3. Naeim M, Rezaeisharif A, Ghobadi Bagvand S (2021). The effectiveness of virtual cognitive-behavioral group therapy on anxiety, stress, and fatigue in Coronavirus Intensive Care Unit nurses. Minerva Psychiatry 216-222.
4. Zhang Q, Yang X, Song H, Jin Y (2020). Cognitive behavioral therapy for depression and anxiety of Parkinson's disease: A systematic review and meta-analysis. Complement Ther Clin Pract 39:101111-101111.
5. Reynolds GO, Saint-Hilaire M, Thomas CA, Barlow DH, Cronin-Golomb A (2020). Cognitive-behavioral therapy for anxiety in Parkinson’s disease. Behav Modif 44(4):552-79.
6. Naeim M, Rezaeisharif A, Kamran A (2021). The role of impulsivity and cognitive emotion regulation in the tendency toward addiction in male students. Addictive Disorders & Their Treatment 20(4):278-287.
7. Althaus A, Becker OA, Spottke A, Dengler R, Schneider F, Kloss M, et al (2008). Frequency and treatment of depressive symptoms in a Parkinson's disease registry. Parkinsonism Relat Disord 14(8):626-632.
8. Sproesser E, Viana MA, Quagliato EM, de Souza EA (2010). The effect of psychotherapy in patients with PD: a controlled study. Parkinsonism Relat Disord 16(4):298-300.
9. Naeim M, Rezaeisharif A, Kamran A (2021). COVID-19 has made the elderly lonelier. Dement Geriatr Cogn Dis Extra 11(1):26-28.
10. Calleo JS, Amspoker AB, Sarwar AI, Kunik ME, Jankovic J, Marsh L, et al (2015). A pilot study of a cognitive–behavioral treatment for anxiety and depression in patients with Parkinson disease. J Geriatr Psychiatry Neurol 28(3):210-217.
11. Rezaeisharif A, Cheraghian H, Naeim M (2021). Effectiveness of acceptance and commitment therapy on reducing body image disorders in adolescent girls. Addictive Disorders & Their Treatment 20(4): 336-341.
12. Moonen AJ, Mulders AE, Defebvre L, Duits A, Flinois B, Köhler S, et al (2021). Cognitive Behavioral Therapy for Anxiety in Parkinson’s Disease: A Randomized Controlled Trial. Mov Disord 36(11):2539-2548.
13. Dobkin RD, Menza M, Allen LA, Tiu J, Friedman J, Bienfait KL, et al (2011). Telephone-based cognitive–behavioral therapy for depression in Parkinson disease. J Geriatr Psychiatry Neurol. 24(4):206-214.
14. Rezaei AM, Naeim M, Asadi R, Ardebil FD, Bayat M, Khoshroo K (2021). The predictive role of emotional intelligence, resilience, and personality traits in addiction potential of students at arak university of medical sciences. Addictive Disorders & Their Treatment 20(4):472-478.
15. King BM, Minium EW (2003). Statistical reasoning in psychology and education. New York: Wiley.
16. Richter P, Werner J, Heerlein A, Kraus A, Sauer H (1998). On the validity of the Beck Depression Inventory. Psychopathology 31(3): 160-168.
17. Beck AT, Steer RA (1991). Relationship between the Beck anxiety inventory and the Hamilton anxiety rating scale with anxious outpatients. J Anxiety Disord 5(3):213-223.
18. Kalashloo M, Rafeie S, Baghshomali S, Moghadam SA, Naeim M (2018). Stress management training effects on mental health of intellectual disabilities children parents. La Revista OPCIÓN (15): 133-144.
19. Beck AT, Steer RA, Carbin MG (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. Clin Psychol Rev. 8(1):77-100.
20. Christopher JC, Chrisman JA, Trotter-Mathison MJ, Schure MB, Dahlen P, Christopher SB (2011). Perceptions of the long-term influence of mindfulness training on counselors and psychotherapists: A qualitative inquiry. J Humanist 51(3):318-349.
21. Hayes SC, Follette VM, Linehan M, editors (2004). Mindfulness and acceptance: Expanding the cognitive-behavioral tradition. Guilford Press.
22. Lynch S, Gander ML, Kohls N, Kudielka B, Walach H (2011). Mindfulness-based coping with university life: A non-randomized wait-list-controlled pilot evaluation. Stress Health 27(5):365-375.
23. Gilbert P, McEwan K, Gibbons L, Chotai S, Duarte J, Matos M. (2012) Fears of compassion and happiness in relation to alexithymia, mindfulness, and self-criticism. Psychol Psychother 85(4):374-390.
24. Rezaeisharif A, Karimi A, Naeim M (2021). Effectiveness of the cognitive restructuring approach on irrational beliefs and hopelessness in individuals with a substance abuse disorder: A randomized controlled trial. Addictive Disorders & Their Treatment, 20(4): 326-335.