Original Research

The Effect of Cognitive Behavioral Therapy in Occupational Therapy on Anxiety Levels in Schizophrenia Patients

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ABSTRACT

Background: Schizophrenia patients tend to experience anxiety that can hinder the occupational therapy process and occupational function recovery. The purpose of this study was to determine the effect of Cognitive Behavioral Therapy (CBT) on the occupational therapy perspective on the anxiety levels of schizophrenia patients at Grhasia Mental Hospital, Special Region of Yogyakarta (DIY).

Methods: This study used a pre-experimental research design with a one-group pre-test and post-test approach. Purposive sampling was used with a sample size of 16 schizophrenia patients. The research instrument used the Zung Self Rating Anxiety Scale (ZSAS) to measure anxiety levels before and after the intervention. Data analysis was performed using the Wilcoxon signed-rank test with the assistance of the SPSS program.

Results: The analysis results showed a significant difference between anxiety levels before and after the CBT intervention, with a p-value of 0.001 (p < 0.05).

Conclusion: Cognitive Behavioral Therapy has a significant effect on reducing anxiety in schizophrenia patients at Grhasia DIY Mental Hospital. The application of CBT needs to be carried out on schizophrenia patients as a form of occupational therapy intervention to support emotional stability and improve occupational function.

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INTRODUCTION

Mental health is an important aspect of human life that affects an individual's functioning in society. Mental disorders such as schizophrenia occupy a prominent position in the global burden of disease because they cause a decline in social functioning, inability to work, and high dependence on others. The WHO (2017) reports that more than 450 million people worldwide experience mental disorders, including schizophrenia, which affects individuals' cognitive and emotional functioning. This emphasizes the need for holistic interventions, including psychosocial rehabilitation, to improve patients' quality of life (WHO, 2017).

Schizophrenia is a chronic psychotic disorder that causes significant changes in the way a person thinks, behaves, and interacts socially. Schizophrenia patients often experience high levels of anxiety, which can worsen the healing process and prolong the treatment period (Hawari, 2014). This unmanaged anxiety can cause dysfunction in assessing reality, aggressive or withdrawn behavior, and decreased social adaptation skills. Therefore, comprehensive therapeutic solutions are needed to reduce this anxiety so that patients can undergo the rehabilitation process more optimally (Hawari, 2014).

Cognitive Behavioral Therapy (CBT) is an evidence-based psychological therapy that focuses on changing irrational thinking patterns and maladaptive behaviors. From an occupational therapy perspective, CBT can help patients understand the relationship between thoughts, emotions, and behaviors while improving functional abilities in daily activities. Research shows that CBT is effective in reducing anxiety in various conditions, including patients with schizophrenia. This approach is expected to stabilize the patient's emotional state and improve their social functioning (Adawiyah, 2019).

The success of CBT implementation lies not only in cognitive change, but also in improving patients' self-control and stress management skills. Techniques such as cognitive restructuring and reframing help patients control their emotional reactions to situations that trigger anxiety (Stallard, 2019). Research by Caturini and Handayani (2014) proves that CBT is effective in reducing anxiety and increasing self-esteem in patients with mental disorders at the Surakarta Regional Mental Hospital. Thus, CBT as an occupational therapy intervention has great potential in improving the psychological recovery of schizophrenic patients (Caturini & Handayani, 2014).

Based on this description, this study aims to examine the effect of CBT in the perspective of occupational therapy on the anxiety levels of schizophrenia patients at the Grhasia DIY Mental Hospital. This study is expected to contribute to the development of evidence-based practice in the field of occupational therapy, as well as expand the application of psychiatric rehabilitation interventions in Indonesia to improve the quality of life and accelerate the recovery of mental disorder patients.

MATERIALS AND METHOD

This study used a quantitative research design with a pre-experimental design and a one-group pre-test and post-test design. This design was chosen because it allows for the measurement of differences in anxiety levels in schizophrenic patients before and after receiving CBT therapy intervention. This method is suitable for determining the direct effect of a treatment without a control group.

The research was conducted at the Mental Rehabilitation Unit of Grhasia Mental Hospital during the period of September to October 2022. This location was chosen because it is a referral center for schizophrenia patients undergoing psychiatric rehabilitation and occupational therapy. The research time was determined based on the therapy schedule and the availability of respondents who met the research criteria.

The study population consisted of all schizophrenia patients undergoing occupational therapy rehabilitation at Grhasia Mental Hospital. The sample was taken using purposive sampling with the inclusion criteria being patients with a diagnosis of schizophrenia, good cognitive level, able to follow instructions, ZSAS anxiety score of more than 44, and willing to be research respondents. The exclusion criteria were patients who were unable to follow the therapy process, or had severe physical disorders. The sample size was 16 schizophrenic patients.

The research variables consisted of an independent variable, namely CBT, and a dependent variable, namely the anxiety level of schizophrenia patients. The instrument used to measure anxiety levels was the Zung Self Rating Anxiety Scale (ZSAS), which consisted of 20 items with an interval measurement scale. The validity of the instrument was tested with an r value between 0.663 and 0.918, while reliability was measured using Cronbach's alpha of 0.8, thus declaring it valid and reliable.

The data collection procedure included structured interviews and observations as well as the completion of the ZSAS questionnaire before and after therapy. Complete supporting data were obtained from medical records. Data analysis began with a normality test using Shapiro-Wilk, followed by a paired sample t-test for normally distributed data or a Wilcoxon test for non-normally distributed data. The analysis aimed to determine the effect of CBT on patients' anxiety levels.

This study obtained ethical approval from the relevant institution at Grhasia Mental Hospital by guaranteeing data confidentiality and written consent from the patients who were respondents. Ethical aspects were maintained by ensuring voluntary participation and the respondents' right to withdraw at any time without consequences. All procedures were carried out in accordance with health research ethical standards to protect the welfare of the respondents.

RESULTS

Table 1. Characteristics of Research Respondents (n = 16)

Variable	Category	Frequency (n)	Percentage (n)
Age	21–30 years	5	31.3
	31–50 years	9	56.3
	51–65 years	2	12.5
Gender	Male	7	43.8
	Female	9	56.3
Education	Elementary	2	12.5
	Junior High School	2	12.5
	High School	9	56.3
	D3	1	6.3
	Bachelor's Degree	2	12.5
Occupation	Not working	4	25
	Farmer	2	12.5
	Laborer	2	12.5
	Self-employed	7	43.8
	Housewife	1	6.3

Table 1 shows that most respondents were aged 31–50 years (56.3%), female (56.3%), and had a high school education (56.3%). The most common occupation is self-employed (43.8%). This indicates that the productive age group with a secondary education level is the population most likely to undergo rehabilitation at Grhasia DIY Psychiatric Hospital. Respondents in this category tend to be socially active and have a higher risk of environmental stress compared to other groups.

Table 2. Distribution of Anxiety Levels Before and After CBT Intervention (n = 16)

Anxiety Level	Pre-test n (%)	Post-test n (%)
Normal	0 (0.0)	11 (68.8)
Mild	16 (100)	5 (31.3)
Moderate	0 (0.0)	0 (0.0)
Severe	0 (0.0)	0 (0.0)
Total	**16 (100)**	**16 (100)**

Table 2 shows that before the CBT intervention, all respondents experienced mild anxiety (100%). After the intervention, there was an increase in the number of respondents with normal anxiety levels to 68.8% and a decrease in the mild category to 31.3%. These results illustrate a significant change in patients' anxiety levels after participating in six weeks of CBT sessions.

Table 3. Mean Zung Self-Anxiety Scale (ZSAS) Scores Before and After Intervention (n = 16)

Variable	Minimum Score	Score Maximum	Mean	Δ (Delta)
Pre-test	45	50	46.9	—
Post-test	41	46	43.5	—
Difference (Δ)	—	—	—	3.3

Table 3 shows that the mean ZSAS score before intervention was 46.9 and decreased to 43.5 after intervention, with a mean difference of 3.3 points. The decrease in scores indicates an improvement in anxiety levels after therapy. The minimum score also decreased from 45 to 41, indicating a decrease in anxiety symptoms in all respondents.

Table 4. Hypothesis Test Results (Wilcoxon Signed Ranks Test)

Statistical Test	Z-value	p-value
Pre-test vs Post-test	-3.432	0.001

Table 4 shows that the Wilcoxon test results indicate a p-value of 0.001 (< 0.05), which means there is a significant difference between anxiety levels before and after CBT intervention. Thus, it can be concluded that *Cognitive Behavioral Therapy* is effective in reducing anxiety levels in schizophrenia patients at Grhasia DIY Mental Hospital.

DISCUSSION

The results of this study indicate that Cognitive Behavioral Therapy (CBT) is effective in reducing anxiety levels in schizophrenia patients at Grhasia DIY Mental Hospital. Before the intervention, all respondents experienced mild anxiety, while after the intervention, most were in the normal category. The results of the show that CBT helps patients change negative thinking patterns and improve their ability to control emotions. A similar study by Adawiyah, (2019) also proved that relaxation techniques

and cognitive restructuring can reduce anxiety levels in schizophrenia patients in psychiatric hospitals.

The characteristics of the respondents in this study show that most patients were in the productive age range, namely 31–50 years. Productive age has a higher tendency to experience stress due to workloads, social pressures, and family responsibilities. This is in line with Hawari's, (2014) opinion that unadaptive life stressors can trigger mental disorders such as schizophrenia. Thus, CBT plays an important role in helping productive-age patients identify maladaptive thoughts and replace them with more realistic thinking patterns.

Based on gender, this study found that there were more female patients than male patients. This could be due to institutional policies that direct more male patients to work training activities, resulting in fewer males meeting the inclusion criteria. Nevertheless, these results show that CBT intervention remains effective in both genders. Sadock, Sadock, and Ruiz, (2015) explain that cognitive behavioral therapy can be applied to various groups of schizophrenia patients because it focuses on restructuring negative thoughts that are the source of anxiety.

In terms of education level, most respondents had a high school education. A secondary education enables patients to understand and follow the therapy process well because they have adequate logical thinking and communication skills. Stuart and Sundeen, (2016) emphasize that the success of psychological therapy in patients with mental disorders is influenced by the patient's education level and cognitive ability to receive instructions. These results support the application of CBT as a therapy that can be tailored to individual thinking abilities, including in patients with secondary education.

The results of this study also show a decrease in the average Zung Self Anxiety Scale (ZSAS) score after CBT therapy. The decrease in scores indicates an improvement in the patient's emotional condition through increased awareness of the thoughts and behaviors that trigger anxiety. According to the World Health Organization, (2018) strengthening cognitive function and stress management are important parts of the recovery strategy for people with schizophrenia. Therefore, the application of CBT not only reduces anxiety but also supports the social rehabilitation process of patients in psychiatric hospitals.

This study has several limitations that need to be considered. The small sample size and the absence of a control group mean that the results of this study cannot be generalized widely. In addition, some respondents showed inconsistent involvement during therapy sessions due to fluctuating emotional conditions. Nevertheless, this study implies that Cognitive Behavioral Therapy is worthy of being used as a routine intervention in rehabilitation programs for schizophrenia patients. In the future, it is recommended that similar studies be conducted with a larger sample size and involve a comparison group to obtain more representative and statistically robust results.

CONCLUSION

The results of this study conclude that CBT is proven to be effective in reducing anxiety levels in schizophrenic patients at Grhasia Mental Hospital in Yogyakarta. Before the intervention, all respondents experienced mild anxiety, while after the intervention, most showed normal anxiety levels. This confirms that CBT plays a role in helping patients recognize and change maladaptive thinking patterns to be more realistic and improve their ability to control emotions. CBT interventions conducted routinely

and structurally can be an integral part of mental rehabilitation programs, particularly to optimize the psychological recovery of schizophrenia patients. This study recommends that the application of CBT be expanded in mental health nursing services and used as a supportive therapy in overcoming anxiety disorders.

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