



The effectiveness of a protocol based on cognitive-behavioral therapy in a sample of people with schizophrenia.

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Abstract

This research aims to study the effectiveness of the CBT protocol with a sample of schizophrenia spectrum. To achieve this goal, I adopted a case study approach, based on the text of the clinical interview for the diagnosis of mental disorders derived from the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) version II-SCID and the steps of the CBT protocol. The study sample was about patients with schizophrenia at Mouali Ismail Hospital in Meknes during 2021/2022. The results concluded that the CBT protocol helps to alleviate the severity of delusional and manic symptoms that characterize schizophrenia and to accept, understand, live and adapt to

the symptoms of delusions and hallucinations, and gain knowledge about how to deal with the factors responsible for the high severity of symptoms of delusions and hallucinations.

Keywords: CBT Protocol, Schizophrenia Spectrum, Schizophrenia Disorder.

* Introduction

The schizophrenia spectrum includes schizophrenia, schizoaffective disorder, psychotic disorders, and schizotypal personality. These disorders are defined by abnormalities in at least one of the following five areas: Delusions, hallucinations, disorganized thinking (speech), disorganized or abnormal motor behavior (including catatonic

behavior), and negative symptoms (DSM-5, 2013). In this research, a sample of schizophrenia disorder was selected for the study, which is categorized among the disorders included in the schizophrenia spectrum, and a case study approach was used. The research population is patients with schizophrenia disorder who have been conclusively diagnosed with schizophrenia disorder at Moulay Ismail Psychiatric and Mental Hospital in Meknes; two male patients with schizophrenia, aged between (30 - 70 years old) were selected. They were diagnosed with schizophrenia, which is considered one of the most serious mental disorders that affect the individual and the most threatening to disintegrate and deteriorate, as it affects mental functions and causes a disorder at the level of thinking, consciousness and sometimes perception, and thus appears deterioration at the behavioral and social level, which leads to obstruction and change the course of the patient's life from all aspects and fields that they occupy, and pushes them to isolation and self-isolation to live in an unreal fantasy reality and thus becomes isolated from the real world. The symptoms and manifestations of the disease vary from one individual to another and

from one society to another according to culture and civilization. Many researches and studies have been interested in studying schizophrenia as a disease and its relationship with some variables and factors and trying to understand all aspects of this disease, and many studies have been conducted to study the effectiveness of CBT in alleviating the severity of schizophrenia, but it is not as clear as it can be imagined, there is a lack of study on this topic.

*** The problem of studying**

This research is concerned with the psychological aspects of schizophrenia and the effectiveness of the CBT protocol in improving schizophrenia and reducing the triggers responsible for exacerbating symptoms in patients with schizophrenia, and it aims to answer the following general question: How effective is the CBT protocol in reducing the severity of delusions and hallucinations in schizophrenia?

In order to answer this question, the research started from a general hypothesis that assumes that the CBT protocol does indeed help reduce the severity of delusional and hallucinatory symptoms in schizophrenic patients.

*** Advantages of the Study**

The importance of this study lies in its focus on the role of

Cognitive Behavioral Therapy (CBT) in improving the symptoms of schizophrenia, particularly delusions and hallucinations. Schizophrenia is a complex mental disorder that significantly impacts the lives of patients, creating substantial challenges in social and occupational functioning, thus affecting the overall quality of life. Although some studies have examined the effectiveness of CBT in treating schizophrenia symptoms, there is a lack of research specifically addressing CBT techniques for patients with schizophrenia, particularly in reducing psychotic symptoms. Therefore, this study is important as it provides a new scientific and detailed analysis of the effectiveness of a CBT protocol in reducing delusions and hallucinations, with a focus on building and clarifying therapeutic techniques specifically targeted at these symptoms. This study will outline several therapeutic techniques that could contribute to improving patient health and reducing schizophrenia symptoms, such as cognitive restructuring, exposure to situations that trigger delusions and hallucinations, and enhancing coping and reality-testing skills. By developing these therapeutic techniques, the study aims to provide a treatment

framework that can be directly applied in clinical practice with patients suffering from schizophrenia. The expected results of this study will contribute to enhancing scientific understanding of how CBT can be effectively used to treat schizophrenia, and developing specialized treatment protocols that consider the unique nature of psychotic symptoms in the disorder. This study will also contribute to improving the quality of life for patients by providing practical, clinically applicable therapeutic strategies and techniques, thereby opening new avenues for better psychological support for individuals with schizophrenia.

*** Research Tools**

The Standardized Clinical Interview for the Diagnosis of Psychiatric Disorders in Adults (SCID):-

A literature review of the instruments used by psychologists in the diagnostic process for a variety of psychiatric disorders was conducted to determine their efficiency and usefulness. The review revealed that there are few tools that contribute accurately to the diagnostic process in the diagnostic process, and this shows the problems with the methodological evaluation of self-report instruments. In addition, the

tools that are built according to standard psychiatric classification systems are either interested in measuring individual disorders such as anxiety, depression, schizophrenia, obsession schizophrenia and obsessive-compulsive disorders, making it insufficient as a primary diagnostic tool to gather all available information about the patient's occurrence of symptoms or the presence of previous medical history. As many of the tools used within psychiatric clinics do not seem to be being developed in synchronization with global changes in medical classification systems. In an attempt to fill in these gaps, the Clinical Interview for the Diagnosis of Psychiatric Disorders in Adults was constructed according to the DSM-IV. Known as the Standardized Clinical Interview for the Diagnosis of Psychiatric Disorders (I-SCID and II-SCID), the interview items are The interview items were mostly based on the DSM-IV criteria. At the beginning of the interview, the patient's and demographic data of the patient, the history of the case and the current issue, and the interview is accompanied by a comprehensive questionnaire for some psychopathological symptoms and conditions. The interview is

accompanied by questions about the symptoms and psychopathological issues that direct the specialist to the category of specific disorder, the interview includes items specific to each disorder. For each disorder, the items were written and reviewed by the research team individually, then reviewed in periodic meetings between the research team and the number of colleagues in the specialty. Then, the validity of the instrument for diagnostic purposes was validated by checking the reliability, stability and validity of the interview. Stability and validity of the interview (Mohammed Ahmed Shalabi and Mohammed Ibrahim Al-Souky, 2013).

*** Semi-structured clinical interview**

This interview provides general and flexible guidelines for conducting the interview, allowing the practitioner greater freedom to pursue and validate many alternatives in some cases, the interviewer may add questions of their own, which may seem more like a conversation than an interview (Rogers,2001). For example, Antony & Summerfeldt's Diagnostic and Statistical Schedule for Affective Disorders and Schizophrenia (Antony and Summerfeldt, 2002).

* Unstructured interview

The unstructured interview is characterized by the flexibility to obtain a large amount of clinical information about the patient. In addition, it contributes to the establishment of a good professional relationship with the patient (Segal, Maxfield, Coolidge, 2008).Coolidge, 2008

* CBT Protocol

This protocol has a set of stages and therapeutic steps that are used with the examinee in order to understand, alleviate and treat the disorder he suffers from, by relying on a set of therapeutic techniques of cognitive-behavioral therapy which is concerned with the mental and behavioral aspect of the patient in order to achieve the goals of treatment, which are as follows:

Table 1 : The first and second session of the CBT protocol for patients with schizophrenia.

	Therapeutic session 1	Therapeutic session 2
Phase 1	The text of the clinical interview for the diagnosis of mental disorders derived from the Diagnostic and Statistical Manual of Mental Disorders	Reducing distress associated with delusional and obsessive beliefs
Phase 2	Passing the items for schizophrenia	Using the technique of catastrophizing
Phase 3	Therapeutic Alliance	Performing a home practice of respiratory relaxation.
Phase 4	Doing homework	Treatment Effectiveness
Phase 5	Therapy Effectiveness	

Table 2 : The third and fourth session of the CBT protocol for patients with schizophrenia

	Therapeutic session 3	Therapeutic session 4
Phase 1	Functional assessment of vocal activity	Introducing the patient to the cognitive-behavioral therapeutic model
Phase 2	Monitoring of evaluations/beliefs associated with hallucinations	Filling the hallucinogenic thought log using the Socratic dialogic technique
Phase 3	Psychological Normalization Approach	Home exercise: Reminding the patient of the coping strategy of self-direction.
Phase 4	Doing homeworkHome Exercise: Teaching the patient a self-directed coping strategy	Treatment Effectiveness
Phase 5	Productivity of the healer	

Table 3 : The fifth and sixth session of the CBT protocol for patients with schizophrenia.

	Therapeutic session 5	Therapeutic session 6
Phase 1	Detailing the delusions	Reminding the patient of the CBT model
Phase 2	Case formulation by formulating initial hypotheses about the role of distant environmental factors in activating delusions	Weakening delusional beliefs
Phase 3	Home exercise: Focusing coping strategy	Assessing core beliefs
Phase 4	Treatment Effectiveness	Evaluate the beliefs underlying delusional beliefs and explanations using the socratic questioning and the descending arrow method
Phase 5		Attempting to modify core beliefs
Phase 6		Teaching the patient the importance of core beliefs and monitoring their processes
Phase 7		Home practice of the cognitive deviance coping strategy.
Phase 8		Treatment Effectiveness

Table 4 : The seventh and eighth session of the CBT protocol for patients with schizophrenia.

	Therapeutic session 7	Therapeutic session 8
Phase 1	Spontaneous Thought Observation	Psychological education
Phase 2	Testing spontaneous thoughts	Doing the home exercise for behavioral deviations
Phase 3	Home practice of relaxation technique and visualization assistance	
Phase 4	Treatment Effectiveness	

Table 5 : The ninth and tenth session of the CBT protocol for patients with schizophrenia.

Therapeutic session 9		Therapeutic session 10
Phase 1	Recognizing delusional stimuli through automatic thought response via the thought log spontaneous	Education on the symptoms of relapse.
Phase 2	Home exercise to develop thinking reflexes.	Describe the signs of relapse
Phase 3	Therapy Effectiveness	Teaching the medical coping strategy
Phase 4		Use the acceptance technique of the paper
Phase 5		Re-pass the schizophrenia-specific items from the Diagnostic Interview for Psychotic Disorders (DID) clinical interview script from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV-SCID).

* Discussion of results

* Previous studies

1- Study one: A meta-analytic study entitled: Studying cognitive-behavioral therapy in a random sample of individuals at risk for clinical psychosis (Jean Addington 1, Irvin Epstein, Lu Liu, Paul French, Katherine M Boydell, Robert B Zipursky, 2011), conversions to stage 2 disease only occurred in the group that received supportive therapy although the difference was not significant, both groups improved in positive symptoms, depression and anxiety and did not improve in social functioning and negative symptoms. However, the improvement in positive symptoms was faster for the CBT group (NIH, 2011). There are limitations to this trial and possible explanations for the lack of differences between supportive therapy and CBT in the improvement of psychotic symptoms, however,

both the results of this study and possible explanations have significant implications for early detection and intervention in pre-psychosis and the design of future treatments (NIH, 2011).

2- The second study: A meta-analytic study entitled: Psychological Interventions for Psychosis (David Trevor Turner, Mark van der Gaag, Eirini Karyotaki, & Pim Cuijpers, 2014), risk of bias varied between studies (0-4) and types of intervention, CBT had the highest proportion of studies assessed as having no risk of bias at 59%, psychotherapy 41%, counseling 41%, cognitive intervention 36%, while both social skills training and psychoeducation had no risk of bias at 12%.5, CBT was significantly more effective than the other interventions in reducing positive symptoms ($g = 0.16$). This finding was robust in all sensitivity analyses for risk of bias, but lost significance in sensitivity analyses for therapist loyalty, which suffered from reduced power. Social skills training was significantly more effective in reducing negative symptoms ($g = 0.27$). This result was robust in sensitivity analyses for risk of bias and investigator loyalty. For CBT, It was significantly more effective when compared to general symptoms

characteristic of psychosis ($g = 0.42$) and supportive counseling for positive symptoms ($g = 0.23$) (NIH, 2014).

3- The third Study : A meta-analytic study titled: Effectiveness of CBT (Stefan G Hofmann, Anu Asnaani, Imke J J Vonk, Alice T Sawyer, Angela Fang, 2012). The results found the strongest support for CBT across all psychiatric conditions (NIH, 2012).

4- Study Four (or the fourth study):A meta-analytic study titled: The Effect of CBT on positive symptoms of schizophrenia spectrum disorders (G Zimmermann, J Favrod, V H Trieu, V Pomini, 2005), CBT showed a significant reduction in positive symptoms and there was a greater benefit of CBT for patients with acute versus chronic psychotic episode (effect size 0.57 vs. 0.27), CBT is a promising adjunctive treatment for positive symptoms in schizophrenia spectrum disorders (NIH, 2005).

5- Study Fifth :A systematic and meta-analytic study entitled: Early Interventions for the Prevention of Psychosis by Megan R Stafford, Hannah Jackson, Evan Mayo-Wilson, Anthony P Morrison, Tim Kendall, 2013. Evidence from the systematic review showed how well CBT reduced the transition to psychosis over a 12-month period

(hazard ratio 0.54 (95% confidence interval 0.34 to 0.86) (NIH, 2011). Although the evidence for the benefits of any specific intervention is not conclusive, these findings suggest that it may be possible to delay or prevent the transition to psychosis. Further research is needed to conclusively determine whether psychological interventions can benefit people at risk for psychosis (NIH, 2013).

*** Comparing the results of previous studies with the results of the research**

Previous systematic and meta-analytic studies that examined the effectiveness of CBT in reducing the severity of positive and negative symptoms of psychosis, and its effectiveness in reducing the progression of the disorder to the second stage of the disease in patients suffering from the prodromal first stage of the disease, concluded the following results: -

1- Significant improvement in reducing the severity of positive symptoms faster in the sample that received a cognitive-behavioral intervention.

2- CBT was significantly more effective than other interventions in reducing positive symptoms ($g = 0.16$) This finding was robust in all sensitivity analyses for risk of bias

3- CBT was significantly more effective when compared to general symptoms characteristic of psychosis ($g = 0.42$) and supportive counseling for positive symptoms ($g = 0.23$) This finding was robust in all sensitivity analyses for risk of bias, and CBT had the highest proportion of studies assessed as having no risk of bias at 59%.

4- Strongest support for CBT for the following psychiatric conditions: Substance use disorder, schizophrenia, depression, bipolar disorder, anxiety disorders, psychosomatic disorders, eating disorders, personality disorders, neuroticism, aggression, criminal behavior, general stress, distress caused by a general medical condition, distress caused by pregnancy complications, and hormonal conditions for women.

5- CBT showed a significant reduction in positive symptoms and there was a greater benefit of CBT for patients with acute versus chronic psychotic episode (effect size 0.57). CBT is a promising adjunctive treatment for positive symptoms in schizophrenia spectrum disorders.

6- Systematic review evidence showed that CBT was effective in reducing the transition to psychosis at 12 months hazard ratio 0.54 (95% confidence interval 0.34 to 0.86).

From here we conclude that the results of the previous studies confirm the effectiveness of CBT in alleviating and improving the severity of psychotic symptoms, whether positive or negative, and this is in line with the results of the research and the effectiveness of the CBT protocol in alleviating the severity of symptoms of schizophrenia disorder and reducing the possibility of worsening and developing the disorder, and helps the schizophrenic patient to live and accept the positive symptoms, especially those characterized by the disorder, and this is clear to us in the following results:

7- It is clear from the items related to schizophrenia that are found in the text of the clinical interview for the diagnosis of mental disorders for adults for the first case "S" that the results of the items related to schizophrenia disorder are equal to 101 degrees, while the results of the items related to schizophrenia disorder after the intervention of CBT, i.e. after the intervention of CBT, are equal to 79 degrees, which is less than the average of 124, from here we conclude through the pre and post test that the severity of schizophrenic symptoms has decreased by 22 degrees, and the results came out with a decrease in

the severity of delusions, which was equal to 41 degrees in the pre-test to 33 degrees in the post-test after the CBT intervention, and the results showed a decrease in the severity of delusions that was equal to 41 degrees in the pre-test to 33 degrees in the post-test. 8-point decrease, the hallucinations unit that was equal in the pre-test 21 degrees to 14 degrees in the post-test after the CBT intervention, 7-point decrease, the thinking disorder unit that was equal in the pre-test 21 degrees to 19 degrees in the post-test after the CBT intervention. The unit of catatonic symptoms, which was equal in the pre-test to 10 degrees to 8 degrees in the post-test after the CBT intervention, decreased by 2 degrees, while the symptoms of affective and volitional disorder remained the same in the pre-test and post-test.

8- As for the second case "H", it is clear from the results of the items related to schizophrenia disorder before is equal to 108 degrees, while the results of the items related to schizophrenia disorder after the CBT intervention is equal to 73 degrees, which is less than the average of 124, so we conclude that during the pre and post test the severity of schizophrenic symptoms decreased by 35 degrees. The results also showed that the severity of delusions,

which was equal to 35 degrees in the pre-test to 27 degrees in the post-test after CBT intervention, decreased by 8 degrees, the unit of hallucinations, which was equal to 24 degrees in the pre-test to 13 degrees in the post-test after CBT intervention, decreased by 11 degrees, the unit of thought disorder, which was equal to 25 degrees in the pre-test to 15 degrees in the post-test after CBT intervention, a decrease of 10 degrees, the unit of catatonic symptoms from 10 degrees at the pre-test to 9 degrees at the post-test after CBT intervention, a decrease of 1 degree, and a decrease in the severity of will disorder symptoms from 11 degrees to 6 degrees, while the symptoms of affective disorder remained the same in the pre-test and post-test.

*** Conclusion and recommendations**

- 1- The CBT protocol helps reduce the severity of delusional and obsessive symptoms that characterize schizophrenia.
- 2- CBT helps to accept and understand the symptoms of hallucinations and delusions that characterize schizophrenia.
- 3- CBT helps patients with schizophrenia to live and adapt to the delusional and manic symptoms.

4- CBT helps patients with schizophrenia learn how to deal with the factors responsible for increasing the severity of delusional and hallucinatory symptoms.

At the conclusion of this research, I have formulated several recommendations as follows:

5- Correcting misconceptions and misconceptions regarding the effectiveness of CBT in treating patients with schizophrenia.

6- Paying attention to patients with schizophrenia and following up their treatment at the level of pharmacotherapy and psychotherapy.

7- Developing rehabilitation and treatment programs for the schizophrenic spectrum, especially schizophrenia patients, which reduces the positive symptoms and the risk of relapse.

8- Spreading awareness of the schizophrenia spectrum and schizophrenia disorder in particular and its symptoms, which facilitates early detection of the disease and then treatment that minimizes the aggravation of active symptoms.

9- Caring for patients with schizophrenia and trying to integrate them into society and focusing on psychological follow-up treatment in order to enable the patient to adapt, adapt and coexist with the disease.

10- Adopting future research and other studies in this topic to study the effectiveness of CBT in reducing the severity of the positive and negative symptoms of schizophrenia, and helping the patient acquire methods and techniques to overcome all obstacles and triggers that can cause him to relapse.

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