International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

The combined effectiveness of treatment based on acceptance and commitment and behavioral activation on anxiety and practical obsessions of schizophrenic patients; A case study

***Nazila Sahandpour**
Master of Clinical Psychology, Qaemshar, Iran
Email:Nazilasahandpour53@gmail.com
Roshanak Khodabakhsh Pirklani
Department of Psychology, Faculty of Education and Psychology AlZahra University, Tehran, Iran

Abstract

Introduction: Obsessive compulsive behaviors and severe anxiety are the unfavorable symptoms in people with schizophrenia. This research was conducted with the aim of investigating the effect of the integrated treatment approach based on acceptance and commitment and behavioral activation on anxiety and compulsive symptoms of a chronic schizophrenic patient.

Method: Among the target population (chronic psychotic patients), an adult male chronic schizophrenic subject was selected based on available sampling and was examined in the framework of a single-case experimental design in the form of a multiple baseline during 8 sessions. The tools used in this research were semi-structured clinical interview, Beck's anxiety questionnaire and Maudsley's practical obsessive-compulsive questionnaire.

Results: At the end of 8 sessions of acceptance and commitment with behavioral activation, the test results showed that the anxiety score decreased by 62% and the compulsion score decreased by 75%.

Conclusion: The combination of two treatment methods based on acceptance and commitment and behavioral activation can be effective on the anxiety and obsessive-compulsive symptoms of chronic schizophrenia patients.

Keywords: schizophrenia, acceptance and commitment, behavioral activation, anxiety, compulsion

Schizophrenia is a complex mental disorder that has encountered the mental health system with huge structural, therapeutic and health-economic challenges (Lambert et al, 2019). Schizophrenia is considered as a brain disorder that, in addition to genetic components, structural and functional abnormalities can also be seen in neuroimaging studies (Shenton et al, 2022). According to DSM-5, this disease can be by impairment in cognitive, perceptual, emotional and behavioral abilities. Its etiology can be investigated in genetic factors, biological factors, psycho-social and environmental factors, and infectious factors.

The lifetime prevalence of this disease to be about 1% and the number of people suffering from it is more than 2 million people. Schizophrenia is usually seen in a chronic form and its course is defined as preliminary, active and residual stages. In the preliminary and residual stages, a mild form of unusual beliefs, magical thinking and deficiencies in self-care and interpersonal relationships are observed (Sadock et al, 2019).

Obsessive-compulsive behaviors, mood swings and severe anxiety can be mentioned as annoying symptoms for schizophrenia patients (Ganji, 2015). Also, substance abuse, smoking, and infection caused by AIDS can be seen as concurrent disorders with schizophrenia. In order to treat psychotic patients who, suffer from schizophrenia, hospitalization and

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

antipsychotic drugs are prescribed, although medications alone is not enough, and a variety of psychotherapeutic interventions such as behavioral therapy, group therapy, family therapy, supportive psychotherapies, social skills training, referrals and support groups are necessary along with medicine (Sadock, 2019). Acceptance and Commitment Therapy (ACT) and Behavioral Activation (BA), which are classified as third-wave cognitive-behavioral psychotherapies, have clear and significant clinical benefits, and the focus on them is increasing (Dimidjian et al, 2016).

The therapeutic approach based on acceptance and commitment does not necessarily seek to eliminate symptoms, but by increasing self-awareness, it seeks to improve the performance (efficiency) (Villatte et al, 2015). There is a lot of empirical evidence about the effectiveness of treatment based on acceptance and commitment and reducing a wide range of human suffering(Gloster et al,2020 & Bloy et al,2011), including its effect on depression, anxiety and hallucinations in psychotic disorders (Yildiz, 2020), schizophrenia and auditory hallucinations (Pankey & Hayes, 2003), treatment of anxiety disorders (Eifert,2003,Orsillo & Batten,2005), reduction of generalized anxiety symptoms (Keshavarz afshar et al, 2017), treatment of mood disorders (Zettele, 2003).

On the other, behavioral activation therapy is one of the short-term and rapid interventions. In this model, the patient is taught to react with the help of an alternative coping model instead of avoidance, and this method is based on normalize to normal life (Kanter et al, 2009). In a research by Choi et al (2016), they showed that motivational/behavioral activation by moderating the effect of marital status has a significant effect on reducing mild to moderate negative symptoms of schizophrenic people. Another research has shown that the subscales of behavioral inhibition and behavioral activation have a significant relationship with positive and negative symptoms and cognitive functions of psychotic people (Depp et al., 2011).

Combined studies of two treatment methods on schizophrenic patients have been indicated effective results (Yıldız & Aylaz, 2021, Jansen et al., 2020, Sadeghi Babokani,2020, Komala et al, 2018, Morin &Franck ,2017, Khodayarifard, 2003). For instance, an intervention that combines elements of behavioral activation and acceptance and commitment therapy for depression and psychosis with medication (ADAPT) simultaneously have reported a high degree of treatment validity and acceptance (Gaudiano et al., 2013).

The results of other findings show that interventions based on acceptance and mindfulness for people with schizophrenia spectrum disorder have significant effectiveness on many outcomes related to symptoms and social functioning, and these two treatments for people with schizophrenia were effective for psychosis (Jansen et al., 2020). According to what was said and according to the past studies, acceptance and commitment with behavioral activation on the anxiety and obsessive symptoms of men with chronic schizophrenia was efficient. Hence, the concern of the present study is to investigate the combined effectiveness of treatment based on acceptance and commitment and behavioral activation on anxiety and practical obsessions of schizophrenic patients.

Case report:

Mr. A, 50 years old, was diagnosed with chronic schizophrenia by a psychiatrist and was referred to the counseling center. For 2 years, he has been in the daily rehabilitation

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

center under the supervision of a psychotherapist and a psychiatrist. The interview with Mr. A showed that, in addition to confirming the symptoms of schizophrenia, he had a lot of anxiety with compulsive symptoms. He had an average insight into his disease. His memory and concentration were evaluated well in the number of repetition test during the interview. He sometimes showed auditory hallucinations and had verbal conflicts in daily communication with the people around him, and if he did not take medicine, he constantly got headaches.

On 8/11/2013, he was diagnosed with chronic schizophrenia by a psychiatrist, and for this reason, he has been hospitalized 4 times in different hospitals. So far he was consuming Artan ampoule, fluphenazine, bipyridine, trifluprazine 5 mg or eskazina, citalopram, trancopine, amitriptyline and propranolol. He had stomach pain due to high stress. He had been treated twice in the hospital for this problem. He was physically healthy and had no history of hospitalization for other physical problems.

schizophrenic patients of the day center of psychological rehabilitation on a voluntary basis, and in order to comply with ethical issues, consent form was also obtained from the subject. Psychological and interventional services were also provided free of charge.

Method

This research was conducted in the form of a single-case experimental design. The sample was selected from among the

Measuring assessment

1- The Beck Anxiety Questionnaire (1990) is a scale consisting of 21 items, in which the subject selects one of the four options that indicate the intensity of anxiety. Each question is scored in a four-part scale from 0 to 3. Each item describes one of the common symptoms of anxiety (mental, physical and panic symptoms). The total score of this questionnaire is in the range of 0 to 63. The score of 0-7 is the lowest level, 8-15 is mild, 16-25 is moderate, and 26-63 is the extreme degree of anxiety. Beck's anxiety questionnaire has high validity.

Its internal reliability coefficient (alpha coefficient) is 0.92, its validity with the retest method at an interval of one week is 0.75, and the correlation of its items varies from 0.30 to 0.76. Five types of content, concurrent, construct, diagnostic and factor validity have been measured for this test, all of which show the high efficiency of this tool in measuring the intensity of anxiety (Beck et al, 1988). Kaviani and Mousavi (2007) calculated the reliability of the Persian version of this test ($r=0.83$ $p<0.001$) as well as the validity ($r=0.72$ $p<001$) and internal consistency (Alpha=0.92).

2- Maudsley Practical Obsession Questionnaire (MOCI)

Hodgson and Rachman (1977) prepared this questionnaire that has 30 items and the subject should mark one of the correct or incorrect options in front of each item, including 9 items for inspection, 11 items for washing, 7 items for slowness and 7

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

items are considered for doubt. A higher score (between 0 and 30) indicates the intensity of obsessive-compulsive symptoms.

Procedure

The therapist participated in all the activities of the center with the patients by attending the daily rehabilitation center for a week. In a semi-structured clinical interview, a male patient with chronic schizophrenia with anxious mood symptoms and OCD was selected for this study. During the eight sessions, the interventions continued in regular 60-minute sessions. Before and after the trainings, the patient was evaluated by Beck Anxiety Inventory and Maudsley Obsessive-Compulsive Disorder. The treatment protocol was derived from the two-book training, "a practical guide to treatment based on admission and endurance" (Hayes & Estrosahl, 2004), Dousti et al. (1397), Table 1, and Behavioral Activation of the Cognitive Behavioral Therapy Complex (Kanter et al 2009). Table 2 was designed and implemented the contents of sessions.

Table 1. Protocol for using ACT to control anxiety and compulsion

session	Goal	Treatment
1	Diagnostic interview	Introduction, establishing a good consulting relationship and taking a history
2	Goal statement, assessment and treatment orientation	Tran's metaphor, introduction of approach and goals in simple language and assessment with Beck's anxiety and Madsley's obsession questionnaire
3	Familiarity with the concept of anxiety and obsession, creative despair and akahi attention	Defining anxiety and obsessions with examples, stating the solutions that clients have done so far to control them in order to understand creative despair, the metaphor of struggling in the sand, practicing mindfulness, homework to record obsessive thoughts and actions.
4	Examining and reviewing previous sessions, homework review, acceptance and disassociation with thoughts and feelings	A full day's report from last week references, beach ball metaphor, thought ball, tug-of-war with monsters, lie detector metaphor and re-evaluation

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

5	Reviewing and reviewing previous meetings, self-observer and self-context, attention awareness	Reviewing and reviewing previous meetings, self-observer and self-context, attention awareness
6	Values	Talking about how the mind evolves, the function of the mind and the mind's duty to protect us, the metaphor of the compass of life, the metaphor of two monks, leaves of Roab and evaluation
7	Committed action	Gravestone metaphor, behavioral commitments to reduce actions and obsessive thoughts and words, Golzar's metaphor of evaluation
8	Checking and reviewing all meetings and exercises Conclusion	Practical implementation of the bus metaphor, expressing the opinion of the authorities about the meetings. Review the act, encourage homework after completion

Table 2. Protocol for using behavioral activation to control anxiety and obsessive-compulsive symptoms

1 , 2	Interview and evaluation
3	Abdominal breathing training/ exercise at home three times
4	Relaxation practice / practice at night before watching TV
5	Walking / half an hour daily
6	Regular participation in the clinic's morning exercise
7	Overturning the soil of the garden / stop technique at the time of obsessive thinking and going to the yard and taking care of the garden to plant vegetables and flowers, encouraging to cultivate agricultural land instead of selling the land and using the income of the products in life (step First, to create a job and a sense of efficiency) preparing 3 pots for the number of children and planting geraniums in them to overcome the figurative thinking of numbers.
8	Follow up homework by seeing photos of home activities

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

Research Findings

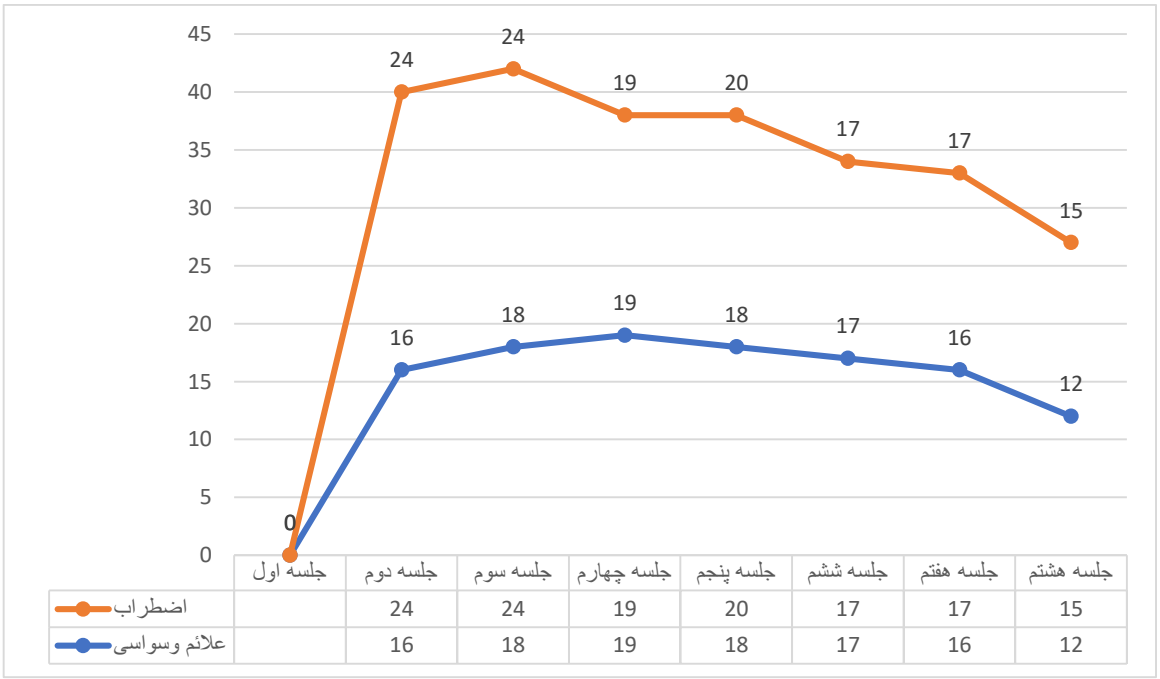
The results of data analysis and graphs obtained from weekly evaluations and scores from two questionnaires of Beck anxiety and obsessive-compulsive disorder of a chronic schizophrenic patient before (Table-3) and after the treatment (Table-4) Acceptance, commitment, and behavioral activation therapy are effective in reducing anxiety and obsessive-compulsive symptoms of chronic schizophrenia (Figure 1).

Table 3. Before the treatment

anxiety	16
compulsion	24

Table 4. Descriptive statistics of intervention scores

	N	Min	Max	Mean	Standard deviation
anxiety	6	15	24	18.67	3.14
	6	12	19	16.67	2.53



International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

Figure-1. The graph of changes in the test scores

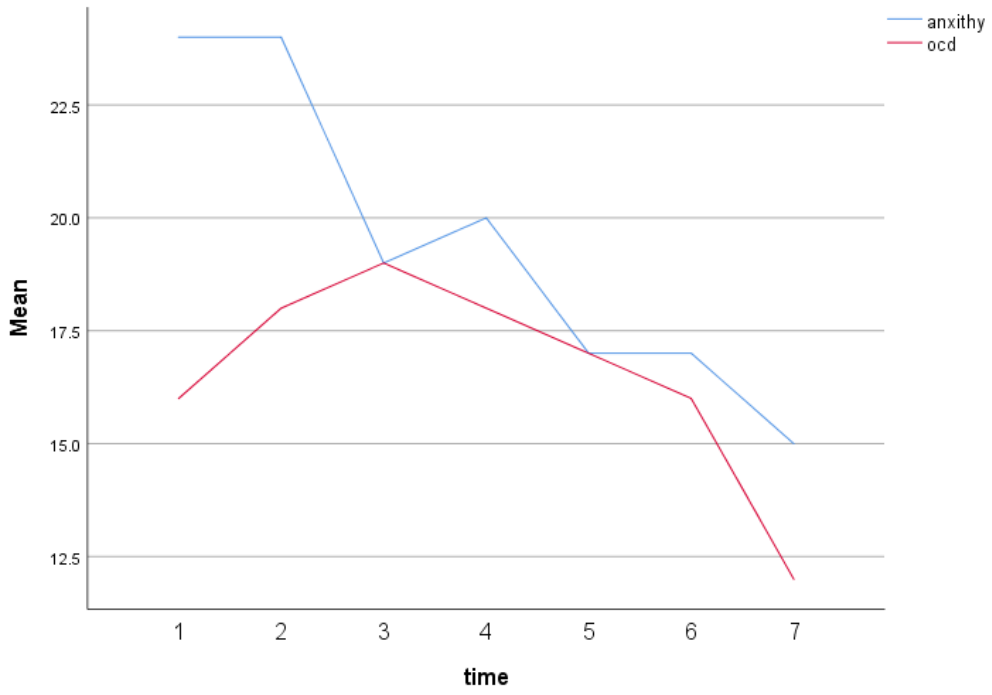


Figure-2. Changes in average scores after the treatment

Discussion

This research was conducted with the aim of investigating the combined effectiveness of acceptance and commitment-based therapy and behavioral activation therapy for anxiety and obsessive-compulsive symptoms in chronic schizophrenic patients. The results of the present study showed that despite of regular antipsychotics, the score of Beck's anxiety questionnaire and Maudsley's obsession questionnaire in the first interview were 24 and 16, respectively, and after the end of the interventions, these scores were 62% (from 24 to 15) and 75%, respectively. (from 16 to 12) has decreased.

Based on the results, it has been noted that there was an effectiveness of combining of two approaches in anxiety reduction and compulsive symptoms. The finding of this research is similar to the other studies such as Yildiz & Aylaz (2021), Gloster et al colleagues (2020)., Jansen et al. (2020), Choi et al (2016), Gaudiano et al. (2013), Holland & Halper (2005), Sadeghi babokani et al, (2020), Hijazi &

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

Mohammadi (2016), Khodayarifard (2003). According to DSM-5, schizophrenia has positive symptoms, negative symptoms, and disorganized symptoms. It is noteworthy, it is very difficult to overcome negative and cognitive symptoms compared to positive symptoms, and this problem is known as an obstacle for the relapse. With progress of the illness, other symptoms become more fluctuating, which of course, are not specific to schizophrenia and indicate that the patient may be suffer to another comorbid disorder.

Obsessive-compulsive behaviors, mood swings and severe anxiety can be defined as unpleasant symptoms of schizophrenia patients (Ganji, 2015). On the other hand, the symptoms of anxiety disorders are prominent in schizophrenia and it is possible that they fluctuate during the course of the disorder (Hall, 2017).

Since anxiety is a dominant emotion in schizophrenia, which is often diagnosed with questionnaire-based methods (Obrebska & Kleka, 2022), now many studies provide experimental evidences that shows increased anxiety may also cause to psychosis and relapse. Psychosis is important condition and therefore it seems that the anxiety and emotional symptoms in this disorder and the potential of targeting anxiety symptoms in primary and secondary prevention for schizophrenia is necessary to consider (Hall, 2017).

In a case study, acceptance and commitment therapy was conducted for an individual who experienced long-term distressing psychosis, specifically, paranoia, delusions, and related affective disorder. By measuring general distress, severity of delusional thoughts, and depression before treatment and after the intervention, had improvement.

On the other, obsessive-compulsive symptoms are very common in schizophrenia spectrum disorders (Rasmussen and Parnas, 2022). The research background shows the effectiveness of acceptance and commitment-based therapy for the treatment of obsessions, but it must be said that since cognitive behavioral therapy with exposure is the most advanced and efficient treatment for obsessive-compulsive disorder, it is recommended that it can be as the first line of treatment still. Therefore, third-wave therapies such as mindfulness and metacognitive therapies should be used

and investigated together with cognitive behavioral therapy or, if there was needed, it can be applied separately in the treatment of obsessive-compulsive disorder (Bürkle et al, 2021, Manjula & Sudhir, 2019, Key et al., 2017, Külz et al, 2016).

It is worth mentioning that in order to investigation of effectiveness of these two treatment on anxiety and compulsive symptoms, it is necessary to continue the treatment sessions in the next studies and monthly follow up to reach more accurate conclusions. Due to sample study who was a middle-aged man, it seems that the further RCT study is also necessary.

Acknowledgement:

It is greatly appreciated of Mr. Shahin Karimpour, the Clinical Psychologist of Mental Health and Psychological Rehabilitation Center of Qaemshahr for his cooperation.

Financial Disclosure

There are no financial conflicts of interest to disclose.

References:

Beck, A. T., & Steer, R. A. (1990). Beck anxiety inventory manual. Toronto: Psychological Corporation

Beck, A.T., Epstein, N., Brown, G., Steer, R. (1988). An inventory for measuring clinical anxiety: Psychometric properties. Journal of Consulting and Clinical Psychology, 56, 893-897

Bloy, S., Oliver, J. E., & Morris, E. (2011). Using acceptance and commitment therapy with people with psychosis: A case study. Clinical Case Studies, 10(5), 347-359.

Bürkle, J. J., Fendel, J. C., & Schmidt, S. (2021). Mindfulness-based and acceptance-based programmes in the treatment of obsessive-compulsive disorder: a study protocol for a systematic review and meta-analysis. *BMJ open*, *11*(6), e050329. https://doi.org/10.1136/bmjopen-2021-050329

Choi K-H, Jaekal E, Lee G-Y. (2016) Motivational and behavioral activation as an adjunct to psychiatric rehabilitation for mild to moderate negative symptoms in individuals with schizophrenia: a proof-of-concept pilot study. Front Psychol. 2016; 7:1759.

Depp CA, Cardenas V, Harris S, Vahia IV, Patterson TL, Mausbach BT. (2011). Psychopathological and functional correlates of behavioral activation and avoidance in schizophrenia. J Nerv Ment Dis.;199(11):861–5.

Diagnostic and Statistical Manual of Mental Disorders ,5th, DSM-5, (2013). American Psychiatric Association. Translation: Farzin Rezaei, Ali Fakhraei, Atusa Fermand, Ali Nilufri, Jeanette Hashemi Azar and Farhad Shamlou. Tehran: Arjmand.

Dimidjian, S., Arch, JJ., Schneider, RL., Desormeau, P., Felder, JN., &Segal, ZV. (2016). Considering Meta- Analysis, Meaning, and Metaphor: A systematic Review and Critical Examination of "Third Wave" Cognitive and Behavior Therapies.Behavior Therapy 47:886-905.

Dousti, P., Godrati, G.& Ebrahimi, M.S. (2017). Guide of group psychotherapy: based on acceptance and commitment therapy (ACT), Tehran: Amin Negar

Eifert, HG. (2003). Using Acceptance and Commitment Therapy to Trea Distressed Couples: A Case Study with Two Couples, Cognitive and Behavioral Practice,16:165-171.

Ganji, M (2015), Abnormal Psychopathology Based on DSM-5, 3rd Edition, edited by Hamza Ganji, Tehran: savalane.

Gaudiano, B. A., Nowlan, K., Brown, L. A., Epstein-Lubow, G., & Miller, I. W. (2013). An open trial of a new acceptance-based behavioral treatment for major depression with psychotic features. *Behavior modification*, *37*(3), 324–355. https://doi.org/10.1177/0145445512465173

Gloster, A. T., Walder, N., Levin, M., Twohig, M., & Karekla, M. (2020). The empirical status of acceptance and commitment therapy: A review of meta-analyses. Journal of Contextual Behavioral Science.

Hall, J. (2017). Schizophrenia—An anxiety disorder. *The British Journal of Psychiatry*, *211*(5), 262-263.

Hayes, S.C, & Strosahl, K, D. (2004). A Practical Guide to Acceptance and Commitment therapy. Translation: Akram, Khamseh (1398) 2rd edition. Tehran: Arjmand

Hijazi, Z, & Mohammadi, M, .(2016)., the effectiveness of behavioral activation on positive and negative symptoms of chronic schizophrenic female patients, the Third news conference on positive psychology, Bandar Abbas, https://civilica.com/doc/614540

Hodgson, R. J., & Rachman, S. (1977). Obsessional compulsive complains. Behavior Research and Therapy, 15(5), 389-395.

Holland, N.J., &Halper, J. (2005). Multiple Sclerosis: a self-care guide to wellness. New York: Demos Medical Publishing :1-10

Jansen, J. E., Gleeson, J., Bendall, S., Rice, S., & Alvarez-Jimenez, M. (2020). Acceptance-and mindfulness-based interventions for persons with psychosis: A systematic review and meta-analysis. *Schizophrenia research*, *215*, 25-37.

Kanter, J, Busch, A, Rusch, L. (2009). Behavioral Activation distinctive features, Translation: Mosleh, Mirzaei, Samad, Faridouni (2019) Tehran: Arjmand

Kaviani, H, Mousavi, A, (2008). Psychometric properties of the Persian version of Beck Anxiety Inventory (BAI). Tehran University Medical Journal; 65(2): 136-140

Keshavarzafshar, H, Rafei, Z, & Mirzaei, A. (2018). The effectiveness of Acceptance and Commitment Therapy (ACT) on general anxiety. *Payesh*. 17(3): 289-296

Key, B. L., Rowa, K., Bieling, P., McCabe, R., & Pawluk, E. J. (2017). Mindfulness-based cognitive therapy as an augmentation

treatment for obsessive-compulsive disorder. *Clinical psychology & psychotherapy*, *24*(5), 1109–1120. https://doi.org/10.1002/cpp.2076

Khodayari Fard, M. (2003), Effectiveness of cognitive-behavioral therapy combined with drug therapy in the treatment of schizophrenia (case study). Journal of Psychology and Education 33(1):77-102

Komala, E. P. E., Keliat, B. A., & Wardani, I. Y. (2018). Acceptance and commitment therapy and family psycho education for clients with schizophrenia. *Enfermería Clínica*, *28*, 88-93.

Külz, A., Barton, B., & Voderholzer, U. (2016). Therapieformen der Dritten Welle der Verhaltenstherapie bei Zwangsstörungen: Sinnvolle Ergänzung zu KVT? Aktueller Wissensstand [Third Wave Therapies of Cognitive Behavioral Therapy for Obsessive Compulsive Disorder: A Reasonable Add-on Therapy for CBT? State of the Art]. *Psychotherapie, Psychosomatik, medizinische Psychologie*, *66*(3-4), 106–111. https://doi.org/10.1055/s-0042-103028

Lambert, M., Kraft, V., Rohenkohl, A., Ruppelt, F., Schröter, R., Lüdecke, D., Linschmann, B., Eich, S., Tlach, L., Lion, D., Bargel, S., Hoff, M., Ohm, G., Schulte-Markwort, M., Schöttle, D., König, H. H., Manjula, M., & Sudhir, P. M. (2019). New-wave behavioral therapies in obsessive-compulsive disorder: Moving toward integrated behavioral therapies. *Indian journal of psychiatry*, *61*(Suppl 1), S104–S113. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_531_18

Morin, L. &Franck, N. (2017). Rehabilitation Interventions to Promote Recovery from Schizophrenia: A Systematic Review. Frontiers in Psychiatry, 8:10. [DOI: 10.3389/fpsyt.2017.00100]

Obrębska, M., & Kleka, P. (2022). Lexical indicators of anxiety in schizophrenia. *Anxiety, Stress, & Coping*, 1-16.

Orsillo, S.M., &Batten, S.V. (2005). Acceptance and Commitment Therapy in the Treatment of Posttraumatic Stress Disorder. Behavior Modification29(1). 95-129.

Pankey, J.& Hayes, S.C. (2003). Acceptance and Commitment Therapy for psychosis. International Journal of Psychological Therapy.3(2):311-328.

Rasmussen, A. R., & Parnas, J. (2022). What is obsession? Differentiating obsessive-compulsive disorder and the schizophrenia spectrum. *Schizophrenia Research*, *243*, 1-8.

Sadeghi Babokani, Z., Ghazanfari, A., Ahmadhi, R., & Chorami, M. (2020). The Comparison of the Effectiveness of Behavioral Activation and Psychosocial on Mental Cognitive Functions in Women with Chronic Schizophrenia. *Journal of Psychological Studies*, *15*(4), 91-108.

Sadock, B, Ahmed, S, & Sadock, V, (2019). Kaplan & Sadock's pocket handbook of clinical psychiatry ,6th. Translation: Farzin Rezaei, introduction by Seyyed Ahmad Jalili. Tehran: Arjmand.

Shenton, M. E., Whitford, T. J., & Kubicki, M. (2022). Structural neuroimaging in schizophrenia from methods to insights to treatments. *Dialogues in clinical neuroscience*.

International Journal of Psychology , Social and Educational Sciences
Vol.4, NO.2 , P:279- 290
Received: 21 March 2022
Accepted:10 June 2022

Villatte, M., Villatte, J. L., & Hayes, S. C. (2015). *Mastering the clinical conversation: Language as intervention*. Guilford Publications.

Yıldız, E. (2020). The effects of acceptance and commitment therapy in psychosis treatment: A systematic review of randomized controlled trials. Perspectives in psychiatric care, 56(1), 149-167.

Yıldız, E., & Aylaz, R. (2021). How counseling based on acceptance and commitment therapy and supported with motivational interviewing affects levels of functional recovery in patients diagnosed with Schizophrenia: A Quasi-Experimental Study. *Clinical Nursing Research*, *30*(5), 599-615.

Zettele, R.D. (2003). Acceptance and Commitment Therapy(ACT)VS. Systematic Desensitization in Treatment of Mathematic. Anxiety The Psychologycal Record .5(3).197-215.