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## THE EFFECTIVENESS OF ANTIDEPRESSANT COMBINED WITH QURANIC CBT IN REDUCING ANXIETY LEVEL OF MOSLEM OUTPATIENT WITH ANXIETY DISORDER IN SULTAN AGUNG ISLAMIC HOSPITAL IN SEMARANG

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### ABSTRACT

Anxiety disorders are emotional conditions in which a person feels excessively anxious. It is generally caused by the excessive perception of a particular danger threatening the security of an individual and sometimes interferes with the daily activities and social interaction of an individual. Anxiety disorders consist of GAD (*generalized anxiety disorder*), OCD (*obsessive-compulsive disorder*), PTSD (*post-traumatic stress disorder*), and SD (*social disorder*). The Quranic CBT (*cognitive behavioral therapy*) is a treatment method carried out by changing the way of thinking of a person with anxiety disorders, which will also change their behavior positively so that anxiety will be reduced. This study aimed to determine the effectiveness of the Quranic CBT in reducing the anxiety level of the outpatient with anxiety disorder in Sultan Agung Islamic Hospital, Semarang. As many as 20 patients diagnosed with anxiety disorders and treatment with antidepressants were randomly divided into two groups in this study. Group 1 was the patients undergoing therapy with antidepressants and also given Quranic CBT. Group 2 was the patients using antidepressant drugs and not given Quranic CBT therapy. Before the treatment, all groups were interviewed using The Hamilton Anxiety Scale to measure the anxiety level. After three months of the treatment, all groups were interviewed again to evaluate the reduction of the anxiety level. The difference in the anxiety level reduction among the groups was then analyzed using independent student t-test statistical analysis. The results showed that the total score difference of the group 1 and 2 was  $10,30 \pm 4,08$  and  $4,10 \pm 3,25$  respectively. Based on the statistical analysis, it also showed that there was a significant difference in the total score difference among the treatment groups ( $p$ -value  $<0.05$ ). This showed that the Quranic CBT method effectively reduced the anxiety level of the outpatient with anxiety disorder in Sultan Agung Islamic Hospital, Semarang.

**Keywords:** Antidepressant; Anxiety Disorder; Quranic CBT.

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### INTRODUCTION

Anxiety disorders are emotional conditions in which a person feels excessively anxious. It is caused by the excessive perception of a particular danger threatening the security of an individual and sometimes interferes with the daily activities and social interaction of an individual.<sup>5</sup>

Anxiety can cause feelings of psychological discomfort, including feeling worried or feeling threatened. Anxiety also triggers physical symptoms such as

tachycardia, increasing heart rate, and increased breathing frequency to difficulty breathing. If anxiety occurs persistently to interfere with daily activities, it is said that the individual is suffering from an anxiety disorder. According to the 5th edition of The Diagnosis and Statistical Manual of Mental Disorder (DSM), the symptoms experienced by someone with GAD are excessive and uncontrolled anxiety, irritability, and anxiety. They are not capable of performing social functions. Physical problems experienced

include fatigue, muscle tension, and difficulty sleeping. Meanwhile, OCD is characterized by obsessions and compulsions.<sup>5</sup>

The prevalence of GAD globally, especially in America, is 13.3% at 18-54 years old and 10.6% at 55 years old. In Indonesia, based on the data released by RIKESDAS,<sup>16</sup> the prevalence of depression is 6.1%, and only 9% of all patients are taking medication or undergoing medical treatment. Although in the RIKESDAS,<sup>16</sup> there is no data on the number of patients with anxiety disorders, there is a significant relationship between depression and anxiety that an unmanaged anxiety disorder will result in depression. The prevalence of people with mental-emotional disorders aged 15 years and over is 9.8%. This number is slightly higher than those issued by RIKESDAS,<sup>17</sup> which is 6.0%. Provinces with the highest number of people living with emotional disorders are South Sulawesi, Southeast Sulawesi, West Java, Yogyakarta, and Nusa Tenggara Timur. The cause of the mental-emotional disorders (anxiety) was reported by a study conducted at the RSUD Ampana, Tojo Una-Una District, Palu, Central Sulawesi, namely drug abuse (OR = 4,776 at 95% CI 1,781 - 12,811), Behavioral factors (OR = 5.979 at 95% CI 2.285-15.640), family relationship factors (OR = 15.057 at 95% CI 5.105 - 44.409) and socio-cultural factors (OR = 5.874 at 95% CI 2.263-15.248).<sup>14</sup> The management of anxiety disorder consists of pharmacological therapy and non-pharmacological therapy. According to Zulkarnain,<sup>21</sup> the imbalance between materialism and spiritualism is also a risk factor for negative thoughts, such as despair, egoism, greed, jealousy, lust, immoral and unethical attitudes/behavior. This has overridden true happiness and satisfaction and has created new problems, namely mental illness / mental illness, including GAD. So that, CBT (*Cognitive Behavioral Therapy*) can play its role in managing the cause of anxiety disorder. CBT is a treatment method that is carried out by changing the way of thinking of a person with anxiety disorders, which will also change their behavior to a

more positive direction to reduce anxiety. Meanwhile, Quranic CBT is a CBT method that applies the Quranic verses as a guideline to treat an individual with anxiety disorder. The study carried out by Zulkarnain,<sup>21</sup> also reveals that the Quran uses the CBT method to overcome anxiety problems and reduce anxiety levels. According to Dan J. Stein,<sup>20</sup> CBT and *serotonin reuptake inhibitor* (SRI) administration are the main therapy options that are also considered safe in OCD. However, Quranic CBT has a more significant effect than conventional CBT, especially for muslim patients, as it emphasizes the recitation of the Quranic verses, which also influences human brainwaves.<sup>13</sup> The research objective is to evaluate the effectiveness of the quranic CBT in reducing the anxiety level of the outpatient with anxiety disorder in Sultan Agung Islamic Hospital, Semarang.

## MATERIAL AND METHODS

This was a treatment trial research using the purposive sampling technique. The number of participants enrolled in this study was calculated by using sample size calculation for clinical trials as follow<sup>3</sup>:

$$n = 2 \left\{ \frac{(z\alpha + z\beta)S_2}{x_1 - x_2} \right\}$$

$$n = 2 \left\{ \frac{(1,96 + 0,84)7,57}{11,33} \right\}$$

$$n = 7$$

In the beginning, 23 outpatients diagnosed with anxiety disorders and in the treatment of antidepressants were enrolled in the study. After one month of the study, three participants discontinued their participation because they did not come for further treatments.

All the participants were then divided into two groups. Group 1 was the patients undergoing therapy with antidepressants and also given Quranic CBT. Group 2 was the patients using antidepressant drugs and not given Quranic CBT therapy. Before the treatment, all groups were interviewed using

The Hamilton Anxiety Scale can measure the anxiety level. After three months of the treatment, all groups were interviewed again to evaluate the reduction of the anxiety level. The intervention given to group 1 was the murottal of quranic verses and motivational counseling provided by the therapist based on the therapist manual workbook written by Sabki et al.<sup>18</sup> All the participants were willing to follow the research and had signed given informed consent.

The difference in the anxiety level reduction among the groups was then analyzed using independent student t-test statistical analysis. All data were taken from the interviews and the medical records of the outpatient in the Sultan Agung Islamic Hospital, Semarang, from January to April 2021. This research was approved by the Health Research Ethics Committee of Sultan Agung Islamic Hospital (No. 71/EC/KEPK/2020).

**RESULT**

**Table 1.** Subject characteristics

subject characteristics		amount (%)
gender	male	11 (55%)
	female	9 (45%)
age	15-54	15 (75%)
	55-65	5 (25%)
antidepressant	benzodiazepin	47%
	SSRI	15%
	tricyclic antidepressant	8%
	others	30%

**DISCUSSION**

**Table 2.** Mean difference of HAM-A score between group 1 and 2

treatment	N	mean difference ± SD	p-value
group 1	10	10,30 ± 4,08	< 0,05
group 2	10	4,10 ± 3,25	

Table 1 shows that men are 55% of the participants suffer from an anxiety disorder, and women are 45%. According to the review conducted by Jalnapurkar et al.<sup>9</sup> on sex differences in anxiety disorder, it has been said that sex differences exist in the prevalence, clinical features, and comorbid conditions that may complicate anxiety disorder, and these are more common in women than men. It also keeps in line with the study conducted by Diferiansyah et al.<sup>4</sup> which said that women suffer from anxiety more frequently than men with the ratio of 2:1. However, it was difficult to conclude that sex differences also existed in this research as the sample size was too small to represent the whole population. The data also reveal that 75% of the sufferers are at the age of 15-54 and 25% are 55-65. The data also shows that 47% of the sufferers use a benzodiazepine as a therapy, 30%, 15%, and 8% of the participants use SSRIs, tricyclic antidepressants, and others. SSRIs are recommended as first-line therapy for treating anxiety disorder due to their positive benefit/risk balance. However, the prolonged onset of its anxiolytic effect may lower the patient's treatment compliance.<sup>2</sup> *Benzodiazepine*, through a systematic review, has been suggested to be effective in treating anxiety disorder and has limitations in relieving comorbid depressive symptoms. It also has some potential problems like the development of tolerance, dependence, and distressing withdrawal symptoms when the drug is stopped. This may limit the overall effectiveness of benzodiazepine as the patients discontinue the treatment before the anxiolytic effect occurs.<sup>7</sup> *Benzodiazepine* can be used for a short period and combined with the SSRIs and SNRIs during the first week before the anxiolytic effect of the antidepressants occurs.<sup>2</sup>

Table 2 shows that the total score difference of the group 1 and 2 was 10,30 ± 4,08 and 4,10 ± 3,25 respectively. Based on the statistical analysis, it also showed that there was a significant difference in the total score difference among the treatment groups

( $p$ -value  $< 0.05$ ). This result keeps in line with the research conducted by Ramadan et al.<sup>13</sup> on schizophrenic inpatients being treated with Quranic verses recitation (murottal). It has been said that Quranic verses recitation can decrease the severity of schizophrenia through the modulation of the limbic system. As a result, the production of cortisol hormone decreases. It can also induce the relaxation indicated by increasing alpha brainwaves of the qEEG (quantitative electroencephalography) measurements.<sup>13</sup> According to the research conducted by Rafique et al.,<sup>12</sup> it reported that women with depression showed a reduced level of depression after listening to Ar-Rahman Chapter compared to the control at the post-assessment level. The study conducted by Mahjoob et al.<sup>11</sup> also showed the effectiveness of quranic verses and reciting in improving the mental health score.

Quranic CBT is similar to conventional CBT except for its quranic verses, recitation listening and lectures, and encouragements to read The Holy Quran. CBT reduces anxiety, depression, and other mental illnesses by changing someones' way of thinking (cognitive) to be more positive, which influences their behavior to be more adaptive and rational to deal with something. This treatment can cope with social anxiety problems.<sup>8</sup> However, quranic CBT, which includes quranic verses recitation, has a more significant impact on an individual's neuropsychological condition, primarily moslem patient. Khan et al.<sup>10</sup> said that The Fatihah Chapter from The Holy Quran has beautiful sound and intonation and the capacity to relax and heal people and eliminate negative thoughts and stress. Reza et al.<sup>15</sup> also said that its beautiful tones, when recited, give a harmonious effect to the brain due to the neuronal oscillation synchronization effect during its recitation. Research conducted by Ebrahimi et al.<sup>6</sup> showed a more significant improvement in depressive moslems treated with spiritual and psychotherapy in CBT programs than those treated with conventional CBT.

## CONCLUSION

The Quranic CBT method effectively reduced the anxiety level of the moslem outpatient with anxiety disorder in Sultan Agung Islamic Hospital, Semarang.

## REFERENCES

1. American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5). Washington: American Psychiatric Publishing.2013.
2. Bandelow B, Michaelis S, Wedekind D. Treatment of anxiety disorders. *Dialogues Clin Neurosci.* 2017;19 (2) : 93-107. doi:10.31887/DCNS.2017.19.2/bbandelow
3. Dahlan MS, Besar sampel untuk penelitian kodokteran kesehatan. Edisi 4. Jakarta: Epidemiologi Indonesia;2016.
4. Diferiansyah O, Septa T, Lisiswanti R. Gangguan Cemas Menyeluruh. *JUKE Unila.* 2016;5(2):63–68.
5. DiPiro JT, Yee GC, Posey LM, Haines ST, Nolin TD, Ellingrod V. *Pharmacotherapy : A Pathophysiologic Approach.* 11th Ed. New York: The McGraw-Hill Companies; 2020.
6. Ebrahimi A, Neshatdoost H, Mousavi S, Asadollahi G, Nasiri H. Controlled randomized clinical trial of spiritually integrated psychotherapy, cognitive-behavioral therapy, and medication intervention on depressive symptoms and dysfunctional attitudes in a patient with dysthymic disorder. *Advanced Biomedical Research.* 2013;2 (1).
7. Farach JF, Pruitt D, Roy-Byrne PP. Pharmacological treatment of anxiety disorders: Current treatments and future directions. *J anxiety Disord.* 2012 Dec; 26 (8):833-834.
8. Fitri D. Efektivitas Cognitive Behavior Therapy Untuk Menurunkan Kecemasan Berbicara Di Depan Umum Pada Mahasiswa. *Jurnal Ilmiah Psikologi Gunadarma.* 2017; 10(1).

9. Jalnapurkar I, Pigott T, Allen M. Sex Differences in Anxiety Disorders: A Review. 2018. DOI : 10.24966/PDA-0150/100012.
10. Khan N, Ahmad NB, Beg AH, Fakheraldin MAI, Alla ANA, Nubli M. Mental and spiritual relaxation by recitation of the holy Quran. 2nd International conference on computer research and development, ICCRD 2010 (May 2016), 863-867.
11. Mahjoob M, Nejati J, Hosseini A, Bakhshani NM. The Effect of Holy Quran Voice on Mental Health. *J Relig Health*. 2016 Feb;55(1):38-42.doi: 10.1007/s10943-014-9821-7.
12. Rafique R, Anjum A, Raheem S S. Efficacy of Surah Ar-Rehman in Managing Depression in Muslim Woman. *Journal of Religion and Health*. 2017;1-11.
13. Ramadan R. The Effect of Listening to the Murottal Qur'an Against Schizophrenia in Inpatients at the Mental Hospital of Southeast Sulawesi Province. 2020;(2):1-6.
14. Rau M, Rahman A, Randalembah G. Faktor Risiko Kejadian Gangguan Anxietas di Rumah Sakit Umum Daerah Ampana Kota kabupaten Tojo Una-Una Tahun 2016. *Preventif : Jurnal Kesehatan Masyarakat*. 2020; 8(1): 34-38. Retrieved from <https://jurnal.fkm.untad.ac.id/index.php/preventif/article/view/83>.
15. Reza MF, Muzaimi M, Abdullah JM, Begum T, Omar H, Ahmed AL. Is Brain Rhythm and Quran Rhythm Harmonic? *Akademi Sains Malaysia Journal*. 2012;6 (1).
16. Riskesdas. Hasil Utama Riset Kesehatan Dasar 2018. Jakarta: Kementerian Kesehatan Republik Indonesia. 2018.
17. Riskesdas. Hasil Utama Riset Kesehatan Dasar 2013. Jakarta: Kementerian Kesehatan Republik Indonesia. 2013;
18. Sabki ZA, Sa'ari CZ, Muhsin SBS. *Therapist Manual Workbook*. Malaysia: Faculty of Medicine, University of Malaya. 2018.
19. Samhani I et al. Potential of Quantitative Electroencephalography (QEEG) In Measuring Cognitive and Psychoacoustical Effects of The Fatimah Chapter Acoustic Stimulation. *International Journal of Quranic Research*. 2019;11(2):1-21.
20. Stein DJ. Obsessive compulsive disorder. *South African Journal of Psychiatry*. 2017 July;19 (3):180-186.
21. Zulqarnain M. Quranic Exegesis from Psychological Perspective: An Application of Quranic Therapy in Generalized Anxiety Disorder. *International Journal of Quranic Research*. 2019;11(2):22-37.