

The Effectiveness Of Cognitive Behaviour Therapy (CBT) And Internet Cognitive Behavior Therapy (ICBT) As Non-Pharmacological Interventions On Patients With Anxiety: A Systematic Review

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Abstract— Cognitive Behavior Therapy (CBT) is one of the non-pharmacology interventions that can be used to treat anxiety in patients. The objective was to know the effectiveness of CBT and Internet Cognitive Behavior Therapy (ICBT) to reduce anxiety. The key words used were CBT and anxiety. Journal articles search were done electronically using multiple databases, namely: DOAJ, Sage, Proquest, Medline, Google Scholar, Science Direct and Elsevier. Limitation year used was eight years (2008-2016). From the results obtained fifteen kinds of literature selected from 1597 journal articles found. Fifteen studies raised in this study do not all have control groups. Combined findings of this study provided support for the use of CBT as a treatment that can be used to treat anxiety disorders. To increase the effectiveness of CBT, some researchers developed into internet applications, namely ICBT. In improving further research, it needs applicative modules as a guide in the application of CBT for patients with anxiety disorders, either conventional CBT or Internet-based CBT.

Keywords: CBT, ICBT, anxiety

I. INTRODUCTION

Anxiety disorders are a mental health problem that affects many people today. Anxiety disorders often appear and accompanied by psychological symptoms that continue as tantrums, anger, and hallucinations [1]. Levels of anxiety that harm are severe anxiety and panic. Severe anxiety and panic are feeling excessive worry if left untreated will lead to maladaptive behavior and emotional disabilities [2].

In developing countries, the incidence of anxiety in adult and elderly is as much as 50% [3]. While the incidence of anxiety disorder in Indonesia is about 39 million of the 238 million populations. Data obtained from the Health Research the Ministry of Health (Risksedas) in 2008, found that 11.6% of Indonesia's population aged over 15 years experience

anxiety problems facing the surgery. The women have a tendency to experience anxiety disorders than men.

Handling anxiety can be done by behavioral psychotherapy combined with pharmacotherapy, but pharmacotherapy can cause a trend that is addictive and have adverse side effects [3]. According to Joseph therapy developed at this time more towards non-pharmacology, including the process of care treatments, modality therapies (environment, supportive psychotherapy, group activity therapy, and psycho-religious therapy). CBT is a form of modality therapy that allegedly can reduce anxiety in a person. To increase the effectiveness of CBT, some researchers developed into internet applications, namely ICBT [4].

II. METHODS

A literature search was conducted in some major databases such as DOAJ, Proquest, Medline, Google Scholar, ScienceDirect and Elsevierdengan enter the keywords of Effectiveness, CBT, ICBT, and Anxiety. Year limitation used was from 2008 to 2016. From 1597 articles obtained, the article's inclusion criteria were: 1) treatment given was CBT; 2) samples were patients with anxiety disorders.

The parameters used to determine the patient's anxiety was by using various instruments such as GAD (Generalized Anxiety Disorder), SAD (Social Anxiety Disorder), SCI-93 (The Stress and Crisis Inventory-93), HADS (Hospital Anxiety and Depression) and LSA-SR (Liebowitz Social Anxiety Scale Self Response).

III. RESULTS

ICBT (Internet Cognitive Behavior Therapy) effectiveness research in patients with anxiety disorders was conducted by James D Herbert et.al. In his research, James compared the

three therapies at once that CBT (Cognitive Behavior Therapy), ICBT (Internet Cognitive Behavior Therapy) and SET (Social Effectiveness Therapy). James took these 73 respondents and divided into three treatment groups. The results showed that the respondents were given more ICBT shown significant results in lowering anxiety as measured by using a scale of SAD [5].

Erik Hedman et.al, also conducted research with a focus on ICBT. The purpose of the study was to determine the effectiveness of ICBT to reduce severe anxiety. Erik compared the ICBT effectiveness with the conventional CBT. From the 81 respondents were taken, 40 respondents received treatment with ICBT, and 41 respondents received conventional CBT treatment. The results showed that ICBT was more effective to reduce anxiety [6].

ICBT effectiveness as therapy in patients with anxiety disorders was also corroborated by research conducted by Shannon L Jones et.al. Shannon conducts research aimed to determine the effectiveness of ICBT in adult patients who experience common anxiety. Shannon found that 24 respondents who got ICBT intervention decreased levels of anxiety (which was scored by using measurement scale of GAD (Generalized Anxiety Disorder) compared with 24 respondents as the control exercised WLC (Waiting List Condition) [7].

Some studies also compared the effectiveness of CBT therapy with other modality therapy to overcome anxiety. These studies include research by Astrid Balje, et.al. In the study, Astrid compared GCBT (Group Cognitive Behavior Therapy) and GST (Group Schema Therapy). Astrid managed to collect 72 respondents of patients with anxiety disorder with co-morbid personality disorders. Measurement scale used was LSA-SR (Liebowitz Social Anxiety Scale-Self-Report) to measure the level of anxiety and AVPDS (Avoidant Personality Disorder Severity Index) to assess personality disorders. Results showed that respondents who received the intervention GCBT significantly declined in anxiety compared with GST group [8].

The studies performed by Inger Jansson, et.al where Inger compared between CBT and PBS (Problem Based Method). Inger took 50 respondents of which 22 respondents were treated by PBS intervention and 28 respondents were given CBT intervention. To determine the decreased anxiety in patients was done by using the rating scale SCI-93 (The Stress and Crisis Inventory-93). The results showed that patients given CBT interventions showed a significant reduction in all grades on a scale of SCI-93. Whereas patients who received the intervention PBS showed impairment on one aspect of the three aspects assessed [9].

Jacinta studies were Faucher, et.al compared the effectiveness of CBT with MBSR (a mindfulness-based stress reduction) in patients with acute social anxiety. From the 38 respondents, 20 respondents were given the CBT intervention while 18 respondents were given MBSR intervention. But along the way, there were seven respondents of MBSR CBT and four respondents who experienced a dropout. Jacinta research results showed that the respondents were given CBT intervention showed improvement subjectively decreased

anxiety. While that doing MBSR showed a decrease in physiological anxiety [10].

Subsequent research on the effect of CBT was performed by Endang Caturini S, et.al. Endang gave intervention in 64 respondents with the following division of the group of 32 respondents as the treatment group given CBT intervention and 32 other respondents as the control group. Respondents selected were schizophrenic patients with anxiety, maladaptive coping mechanisms, and low self-esteem disorder. This research was conducted at the Regional Mental Hospital Surakarta. Endang research results showed significant differences in schizophrenia patients with anxiety disorders, coping mechanisms and low self-esteem given CBT intervention compared to the control group which was not given CBT intervention [11].

The author also displays a journal written by Zakiyah where Zakiyah did the literature study with a descriptive exploratory approach to determine the effect or impact and effectiveness of computer-based CBT on anxiety and depression. Zakiyah concluded that CBT is an intervention to change the negative behaviors of patients, CBT is effective for patients with anxiety and efficient regarding cost, even computer-based ICBT still cannot be applied properly [12].

Zakiyah's literature study strengthens the results of research conducted by Peter Tyre, et al. In his research, Peter wanted to know the effectiveness of clinical conditions and cost effectiveness of patient anxiety committed CBT. Peter by his research concluded that patients who received CBT-AH decreased anxiety and cost-effectiveness of treatment compared with patients given standard treatment [13].

IV. DISCUSSION

A summary of the research conducted the review; demonstrate positive effects of CBT to decrease anxiety in patients than other modality therapy. Currently, the management of anxious clients is not only given psychopharmacology treatment but also with psychotherapy approaches. One of psychotherapy that has been done and is quite effective in reducing and controlling the symptoms of the disease or disorder is CBT. CBT is an effective non-pharmacological treatment for almost all mental disorders, especially anxiety. This therapy encourages patients to develop self-help skills, focusing on the problem, inductive, and practice skills in the environment.

Problems in the implementation of CBT is that most clients cannot afford treatment or therapy process due to several factors such as the availability of treatment, access, cost, and lack of trained practitioners. Technological developments in the field of health information systems allow for the development of computer-based health care process.

Computer-based CBT (ICBT) is a treatment program that involves treatment based CBT manuals that have been adapted to a computerized format. A computerized clinical information systems support online service that can be done for the assessment, diagnosis, treatment plan, implementation, and evaluation criteria. Currently, many computerized clinical information systems are available for mental health services and can be reliable, cheap, easily accessible, efficient time to

assess signs and symptoms as well as implement treatment guidelines. The results of three studies conducted in clients with anxiety showed a computer-based CBT (ICBT) is better than the implementation of CBT through face to face. In the computer-based CBT therapy or ICBT allows the therapist to follow the patient's personal development through telephone contact or email that face to face is a little limited. Assessment of the level of anxiety before and after ICBT can be done using the anxiety scale online. Several studies of ICBT have not set the size of the patient group of anxiety disorder that may be suitable for the application of computer-based CBT or ICBT.

V. CONCLUSION AND RECOMMENDATION

A summary of the research conducted the review; demonstrate positive effects of CBT to decrease anxiety in patients than other modality therapy. Currently, the management of anxious clients is not only given psychopharmacology treatment but also with psychotherapy approaches. One of psychotherapy that has been done and is quite effective in reducing and controlling the symptoms of the disease or disorder is CBT. CBT is an effective non-pharmacological treatment for almost all mental disorders, especially anxiety. This therapy encourages patients to develop self-help skills, focusing on the problem, inductive, and practice skills in the environment.

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The development of information and computer technology in Indonesia allows computer-based CBT (ICBT) to be developed. ICBT will be easily accessible to everyone at a reasonable cost. With ICBT, the therapist can serve more clients than that of conventional CBT through face to face. Development of ICBT in Indonesia needs to be preceded by ICBT module manufacturing as implementation guidelines.

Need a trial to assess the effectiveness of ICBT conduct in patients with anxiety in Indonesia which implemented using existing ICBT module so that it can be used as a reference implementation of ICBT in Indonesia. Development the ICBT for other issues related to the therapy in patients who have behavioral disorders.

REFERENCES

- [1] S. Tamber and Noorkasiani, *Kesehatan Usia Lanjut Dengan Pendekatan Asuhan Keperawatan*. Jakarta: Salemba Medika, 2009.
- [2] M. C. Townsend, *Psychiatric Mental Health Nursing: Concepts of Care in Evidence-Based Practice*, 6th ed. Philadelphia: F.A Davis, 2009.
- [3] S. . Videback, *Psychiatric-Mental Health Nursing*, 5th ed. Philadelphia: Lippincott Williams & Wilkins, 2011.
- [4] J. Murray and D. P. Farrington, "Risk Factors for Conduct Disorder and Delinquency: Key Findings from Longitudinal Studies," *Can. J. Psychiatry*, vol.55, no. 10, pp. 633–642, Oct. 2010.
- [5] J. . Herbert, B. . Gaudiano, A. . Reingold, E. Moitra, V. . Myers, K. . Dalringle, and L. Brandsma, "Cognitive Behavior Therapy for Generalized Social Anxiety Disorder in Adolescents: A Randomized Controlled Trial," *J Anxiety Disord*, vol. 23, no. 2, pp. 167–177, 2009.
- [6] E. Hedman, P. Ström, A. Stünkel, and E. Mörtberg, "Shame and Guilt in Social Anxiety Disorder: Effects of Cognitive Behavior Therapy and Association with Social Anxiety and Depressive Symptoms," *PLoS One*, vol. 8, no. 4, 2013.
- [7] M. Rijken, M. Jones, M. Heijmans, and A. Dixon, "Supporting self-management," in *Caring for people with chronic conditions: a health system perspective*, no. Who 1983, 2008, pp. 116–142.
- [8] A. Baljé, A. Greeven, A. van Giezen, K. Korrelboom, A. Arntz, and P. Spinhoven, "Group schema therapy versus group cognitive behavioral therapy for social anxiety disorder with comorbid avoidant personality disorder: study protocol for a randomized controlled trial," *Trials*, vol. 17, no. 1, p. 487, 2016.
- [9] I. Jansson, A. B. Gunnarsson, A. Björklund, L. Brudin, and K.-I. Perseus, "Problem-Based Self-care Groups Versus Cognitive Behavioural Therapy for Persons on Sick Leave Due to Common Mental Disorders: A Randomised Controlled Study," *J. Occup. Rehabil.*, vol. 25, no. 1, pp. 127–140, Mar. 2015.
- [10] J. Faucher, D. Koszycki, J. Bradwejn, Z. Merali, and C. Bielajew, "Effects of CBT Versus MBSR Treatment on Social Stress Reactions in Social Anxiety Disorder," *Mindfulness (N. Y.)*, vol. 7, no. 2, pp. 514–526, 2016.
- [11] S. H. Endang Caturini s, "Pengaruh CBT Terhadap Perubahan Kecemasan, Harga Diri pada klien dengan

- Skizofrenia,” *J. Terpadu Ilmu Kesehat.*, vol. 3, pp. 41–50, 2014.
- [12] Z. Zakiah, “Pengaruh dan Efektifitas Cognitive Behavioral Therapy (CBT) berbasis Komputer terhadap Klien Cemas dan Depresi,” *E-Journal Widya Kesehat. dan Lingkung.*, vol. 1, no. 1, Jun. 2014.
- [13] P. Tyrer, S. Cooper, P. Salkovskis, H. Tyrer, M. Crawford, S. Byford, S. Dupont, S. Finnis, J. Green, E. McLaren, D. Murphy, S. Reid, G. Smith, D. Wang, H. Warwick, H. Petkova, and B. Barrett, “Clinical and cost-effectiveness of cognitive behaviour therapy for health anxiety in medical patients: a multicentre randomised controlled trial,” *Lancet*, vol. 383, no. 9913, pp. 219–225, Jan. 2014.