



The Effectiveness of Cognitive Behavioral Therapy (CBT) To Decreased Depression in Woman Patients with Cancer included cervical cancer and breast cancer

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Abstrak

Kanker tertinggi di Indonesia pada wanita adalah kanker payudara dan kanker serviks. Keduanya adalah kanker yang paling umum pada wanita dan penyebab kematian tertinggi pada wanita. Beberapa pasien wanita dengan kanker payudara atau kanker serviks yang baru didiagnosis akan mengalami depresi. kebanyakan pasien yang baru didiagnosis menderita kanker, kurang dari 6 bulan melaporkan perasaan depresi sebesar 91,4%. Intervensi yang efektif untuk mengurangi tingkat depresi adalah dengan memberikan intervensi terapi perilaku kognitif (CBT). CBT adalah psikoterapi yang direkomendasikan untuk mengobati depresi pada pasien dengan kanker payudara dan kanker serviks. Tujuan dari penelitian ini untuk meninjau efek CBT pada penurunan depresi pada pasien wanita dengan kanker termasuk kanker serviks dan kanker payudara. Studi ini adalah tinjauan sistematis. Kami mencari artikel dari basis data EBSCOhost, Google Cendekia, Pubmed, dan Science Direct yang diterbitkan dari 2008 hingga 2018. RCT dimasukkan dalam ulasan ini. Empat RCT dimasukkan dalam penelitian ini. Intervensi CBT dilakukan secara berbeda untuk setiap artikel, secara umum, setiap sesi diberikan selama 60-90 menit dengan jumlah sesi yang berbeda. Hasil yang diukur dalam 3 artikel lebih dari satu variabel (tidak hanya depresi) dan satu artikel hanya mengukur tingkat depresi. Terapi perilaku kognitif dapat digunakan untuk pasien wanita dengan kanker payudara dan kanker serviks yang mengalami depresi. Diperlukan penelitian lebih lanjut untuk mengetahui efektivitas CBT dalam mengurangi depresi pada pasien wanita khususnya pada kanker serviks yang baru didiagnosis.

Kata kunci : Terapi Perilaku Kognitif, Depresi, Kanker Pada Wanita

Abstract

The highest cancers in Indonesia women are breast cancer and cervical cancer. Both are the most common cancers in women and the highest cause of death in women. Some woman patients with newly diagnosed of breast cancer or cervical cancer will experience depression. most patients newly diagnosed with cancer, less than 6 months reported a feeling of depression of 91.4%. An effective intervention to reduce the level of depression is to provide cognitive behavioral therapy (CBT) intervention. CBT is a psychotherapy recommended for treating depression in patients with breast cancer and cervical cancer. The objective of this study is to review the effects of CBT on decreasing depression in woman patients with cancer including cervical cancer and breast cancer. This study was a systematic review. We searched articles from EBSCOhost, Google Scholar, Pubmed, and Science Direct database which published from 2008 till 2018. RCTs included in this review. Four RCTs included in this study. CBT intervention are carried out differently for each article, in general, each session is given for 60-90 minutes with a different number of sessions. Outcome measured in 3 articles was more than one variable (not only depression)

and one article only measured the level of depression. Cognitive behavioral therapy can be used for woman patients with breast cancer and cervical cancer who are depressed. Future research is to make CBT effectively in reducing depression in woman patients specifically in newly diagnosed with cervical cancer is needed to confirm the evidence.

Keyword: *Cognitive Behavioral Therapy, Depression, Cancer In Woman*

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INTRODUCTION

Cancer is a disease that arises due to abnormal growth of body tissue cells that turn into cancer cells. Cancer is one of the main causes of death worldwide (1). In 2017, it is predicted that almost 9 million people die worldwide due to cancer and will continue to increase to 13 million people per year by 2030 (2). Cancer is the number 2 cause of death in the world by 13% after cardiovascular disease (3). The highest cancers in Indonesia women are breast cancer and cervical cancer. Both of them affect mostly to the women and caused death on women. (4). Based on the Globocan estimate, the 2012 International Agency for Research on Cancer (IARC), breast cancer incidence was 40 per 100,000 women, 17 cervical cancer per 100,000 women (3).

Cervical cancer is a malignancy originating from the cervix, namely the lower third of the uterus, cylindrical, protruding and associated with the vagina, while breast cancer is a malignant tumor that is formed from breast cells that grow and develop without control so that it can spread to the organs or breast tissue (5,6). Breast cancer and cervical cancer can cause psychological symptoms that can affect the life of the patient in the form of fear, disability, dependence, loss of independence, decided from the relationship of role functions and financial reduction. Patients also feel guilty, especially in those who are first

diagnosed with cancer (7,8). The psychological condition of a woman who has cancer at the beginning of a diagnosis and is declared positive as a cancer patient, then a sufferer will be very shocked and feel unbelief which can lead to feeling depressed, where sufferers feel anxious, stressed and depressed and angry and deny their illness because they have perceptions about life changes and how they can adjust (9,10). According to Duggleby's study, most patients newly diagnosed with cancer, ie less than 6 months reported a feeling of depression of 91.4% (11).

According to Grimsbø et al., Changes in one's health can create a transition process, this transition process can be a source of stress and depression, this condition of stress and depression can increase when it starts until the end of treatment, which will affect the patient's adaptation / coping abilities (12). In addition to these aspects, sufficient information for patients can also facilitate coping and decision-making abilities regarding cancer treatment. It is expected that woman patients diagnosed with cancer can carry out certain coping mechanisms in order to adapt (9,13).

Therefore there is a need for nursing interventions to reduce the level of depression in women with cancer by providing cognitive and behavioral therapy (CBT). Cognitive Behavioral Therapy (CBT) is an active psychotherapeutic

intervention that helps patients to identify, evaluate, and modify maladaptive thoughts and beliefs related to emotional stress (14). Patients with depression have negative beliefs about themselves about the world and the future that strengthen and perpetuate their mood disorders. Therefore, the basic cognitive strategy in CBT is to help patients modify negative thinking as a vehicle to improve their mood (14,15). Although studies on the effectiveness of cognitive and behavioral therapy in woman patients with cancer are still rare, there is no research that explains the effectiveness of CBT towards depression rates in woman patients include breast cancer and cervical cancer. In addition, the need for similar studies on the effectiveness of cognitive and behavioral therapy in some outcomes in woman patients including breast cancer and cervical cancer is needed to prove the evidence.

The aim of this study was to review the effectiveness of CBT in reducing depression rates in female patients with cancer including cervical cancer and breast cancer to create evidence-based decisions about the possibility of using CBT interventions to reduce depression rates in female patients with cancer including cervical cancer and breast cancer.

MATERIALS AND METHODS

This research was a systematic review. The strategy in searching literature for research articles was searched online through Ebscohost, Google Scholar, Pubmed, and Science Direct databases published from 2008 to 2018 using

Table 1. Keyword search articles

The article search step is based on keywords
Cognitive behavioral therapy
Depression
1 AND 2
Cancer
Cancer in woman
1 AND 2 AND 4 OR 5
Cervical cancer
Breast cancer
1 AND 2 AND 4 OR 5 OR 7 OR 8

selected keywords. Then from several articles that have been obtained, it was then identified whether the research article was in accordance with the expected criteria for review. The keywords in the article search that will be reviewed were listed in table 1.

Selection Criteria

Subjects must be female patients with breast cancer and/or cervical cancer

Using cognitive and behavioral therapy as an intervention

Size results include the level of depression

The design of the study is RCT, quasi-experimental, or study under study

Rewritten in English or Indonesian

Exclusion criteria

The study is original (for example, editorial, opinion pieces, reviews, and notes)

The research uses cognitive and behavioral therapy as a comparison

RESULT AND DISCUSSION

Result

Three RCTs included in this study. Study selection strategy described on **Figure 1**.

Discussion

Effect

As explained earlier that the aim of this is to review the effects of cognitive and behavioral therapy to reduce the depression level of female patients with cancer including breast cancer and cervical cancer. Hopko's research (2008) showed that giving CBT intervention was given to female patients with breast cancer (n = 7), lung cancer (n = 1), stomach cancer (n = 1), colon cancer (n = 1), prostate cancer (n = 1), pancreatic cancer (n = 1), and bone cancer (n = 1) can provide strong treatment integrity, good patient compliance, excellent patient satisfaction using the CBT

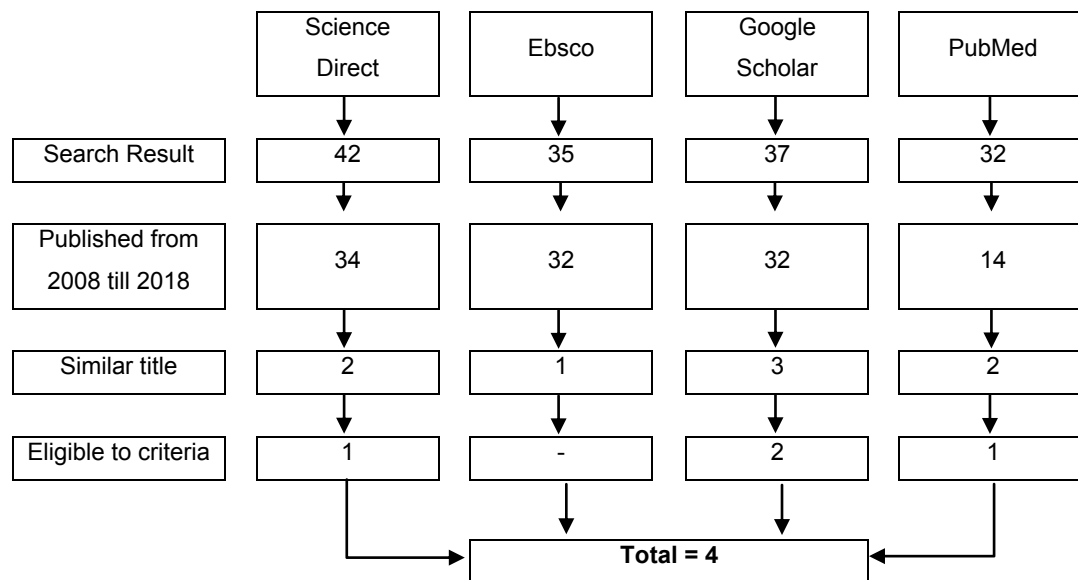


Figure 1. Study selection strategy

Table 1. Studies Review

No	Authors, year	Title	Intervention		Result
			Treatment group	Control group	
1	Hopko (2008)	Cognitive-Behavior Therapy for Depressed Cancer Patients in a Medical Care Setting	CBT with 9 sessions is given every week per hour for 9 weeks and is followed up after 3 months.	Usual care	Results revealed strong treatment integrity, good patient compliance, excellent patient satisfaction with the CBT protocol, and significant pre-post treatment gains across a breadth of outcome measures assessing depression, anxiety, quality of life, and medical outcomes. These gains also were associated with strong effect sizes and generally maintained at 3-month follow-up.
2	Pillai (2012)	Efficacy of Cognitive-Behavior Therapy (CBT) On Depressed Spouses of Cancer Patients in an Adjuvant Care Setting	CBT for 60 minutes once a week	Usual care	Significantly showed a decrease in depression in the intervention group compared to the control group. The intervention group showed a significant decrease in BDI score, $t(17.96) = 4, p < .000$. However, there was no significant change in the control group in the BDI score, $t(-0.557) = 4, p > .607$.
3	Nova & Sumintardja (2016)	The role of the CBT brief on the level of depression and the problem of body image of young adult breast cancer patients.	The CBT Brief lasts 6 sessions with 60-90 minutes for each session.	Non	The results showed that the brief CBT had a significant role in depression ($P = 0.04$), while the CBT brief had a marginally significant role for the overall body image ($P = 0.06$).
4	Soetrisno et.al (2016)	Effect of Cognitive Behavioral Therapy For Serotonin Level, Depression Score And Quality Of Life In Cervical Cancer Patients	CBT and usual care	Usual care	There was an influence from cognitive behavioral therapy on serotonin levels, depression scores and quality of life in advanced cervical cancer patients and was statistically significant.

protocol, and significant results after giving CBT is assessing depression, anxiety, quality of life, and medical outcomes. This advantage was also associated with a strong effect size and was generally maintained at a 3-month follow-up. This is evidenced by the results of the level of depression using the Hamilton Rating Scale for Depression (HDRS) pre-CBT mean: 17.5 SD 6.0; Post CBT mean 5.5 SD 5.4 with p value <0.001 with effect size 2.0. Whereas measurements using the Center for Epidemiologic Studies Depression Scale (CES-D) showed pre CBT mean: 30.6 SD 7.7 Post CBT mean 12.5 SD 9.6; $p < 0.001$ with effect size 1.7. The measure of the level of depression using BDI II showed that pre-CBT's mean: 25.5; SD: 9.2 and Post CBT's mean 11.5 SD: 9.9. It can be concluded that CBT effectively reduces depression in cancer patients with $p < 0.001$ with effect size 2.0 (16).

Pillai's study (2012) showed that the average depression value using the Beck scale at the beginning and end of the study in CBT administration in female patients with breast, colorectal and lung cancer for the intervention group showed a mean score of 24.6, SD = 3.84 versus mean 11.4, SD = 4.27 and the mean control group 26.4, SD = 4.21 versus mean 27, SD = 3.93. The intervention group showed a significant decrease in BDI score $t(17.96) = 4$, $p < .000$. However, there was no significant change in the control group in the BDI score, $t(-0.557) = 4$, $p > .607$ (17).

Research conducted by Nova and Sumintardja (2016) found that the CBT brief had a significant role in depression in young adult breast cancer patients ($p = 0.04$) with a BDI II pre-intervention score mean 23.4 SD 9.40, post mean intervention 8,20 SD 5,22. The CBT brief also played a marginally significant role for overall body image ($P = 0.06$) with the mean before the intervention was 14.2 SD 3.96 and the mean after the intervention was 7.40 SD 3.91. assessment items in the body image include aspects of affection, behavior and cognitive (18).

The Soetrisno et al. (2016) showed that there were effects of behavioral and cognitive therapy on serotonin levels, depression scores and quality of life in advanced cervical cancer patients and they were statistically significant. Serotonin levels and higher quality of life scores after intervention were compared with controls, (219.43 ± 33.42 vs 89.57 ± 23.23) and (85.13 ± 14.62 vs. 41.86 ± 7.24), whereas depression scores were lower after CBT intervention (mean 11.20 ± 4.94 vs mean 17.00 ± 4.86) and statistically significant ($p < 0.05$) (19).

Type of Interventions

CBT intervention in the study conducted by Hopko (2008) was CBT with 9 sessions given every week hour and was followed up 3 months after the intervention was given to cancer patients in the medical care setting. This intervention was modified to further reduce existing anxiety symptoms (cognitive behavioral therapy for depression or CBTD). Modifications to interventions are also done to address cognitive encoding relevant to cancer, assessment, and expectation, sleep problems and increased problems and daily hassles often reported by cancer patients. The behavioral activation protocol given in this study is in the usual format of relaxation training, short cognitive therapy, cancer exposure, problem-solving, and sleep skills training also given during the session (16).

The type of intervention conducted by Pillai (2012) was the administration of CBT to couples of cancer patients with depression for 60 minutes once a week. Therapists teach participants to identify and evaluate major negative automatic thoughts and apply scheme restructuring techniques to deny core beliefs and to develop more adaptive beliefs and behaviors. Special attention is given to the development of collaborative therapeutic alliances and trusting participants (17).

The intervention carried out by Nova and Sumintardja (2016) was a short CBT (brief CBT) which was a short version of CBT. The CBT Brief lasts 6 sessions and 1 meeting for initial data collection. Each session lasts for approximately 1 hour. The first session is a concept-making session. This session will discuss the problems faced and determine the focus of the problem that will be resolved during the therapy process. The second session was a session introducing brief CBT, goal setting, and behavioral activation. The third session will identify maladaptive thinking. The fourth session, participants will be given one skill to challenge maladaptive thinking. The fifth session, participants will be given the skill to solve the problem. The sixth session is a closing session and maintains changes that occur after the session (18).

While the CBT intervention carried out by Soetrisno et al. (2016) in advanced cervical cancer patients (IIIB-IV) was CBT in general and standard therapy from the Hospital, it did not explain the length and amount of CBT sessions conducted in the study (19).

Outcome and measurement

The results measured in Hopko's study (2008) included depression, anxiety, quality of life, and medical outcomes. The depression measurement scale using the Hamilton Rating Scale for Depression (HRSD) consisted of 24 items of interviews, The Beck Depression Inventory-II (BDI-II) consisted of 21 items, each of which was assessed on a 4-point Likert scale and The Center for Epidemiological Studies of Depression Scale (CES-D) is a self-report questionnaire of 20-item depressive symptoms that has adequate and simple psychometric properties related to the diagnosis of major depression. Measuring anxiety using The Beck Anxiety Inventory (BAI) is a 21 item questionnaire specifically designed to distinguish cognitive and somatic symptoms of anxiety from depression.

Quality of life measurement uses The Quality of Life Inventory (QOLI) while medical results use the Medical Outcomes Study Short Form (SF-36), which assesses health status and is functional and includes eight subscales: physical function, role-disability Physical Problems, Body Pain, Health Perception, Vitality, Social Function, Role of Disability-Emotional Problems, and Mental Health. The outcome of the Hopko (2008) study showed that there were significant results after CBT was given, namely decreased depression and anxiety and improved quality of life and medical outcomes (16).

Pillai Research (2012) results measured were the level of depression using BDI (Beck Depression Inventory). BDI is a self-managed depressive scale measuring the level of depressive symptoms such as hopelessness and irritability, cognitions such as guilt or feelings of punishment, and physical symptoms such as fatigue, weight loss, and lack of interest in sex. This study showed that there was a decrease in depression in couples of cancer patients after being given an intervention in the form of CBT (17).

The results of the research conducted by Nova and Sumintardja (2016) which was the level of depression and body image. Quantitative measurements using BDI-II measured instruments and Body Image Scale. The results showed that the brief CBT had a significant role in depression ($P = 0.04$), while the CBT brief had a marginally significant role for the overall body image ($P = 0.06$). When viewed further in the body image, there is a marginally significant result from the CBT brief role on the overall body image of breast cancer patients. When it seen specifically on each aspect of the body image it was found that there was a marginally significant difference from the brief CBT on the effective and cognitive aspects of body image of young adult women with breast cancer with $p = 0.06$. There are significant differences in aspects of behavior

with a value of $p = 0.04$. These results indicate that the brief CBT plays a role in depression as a whole and also in increasing aspects of behavior in the body image (18).

In the Soetrisno et al. (2016), the measurement of depression levels using BDI II with results showed a decrease in the level of depression after being given CBT, measurement of quality of life using WHOQOL-BREF and serotonin levels with an increase in quality of life and serotonin level of advanced cervical cancer patient (19).

CONCLUSION AND RECOMMENDATION

Recommendation for practice

Some Of woman patients with cancer including breast and cervical cancer are depressed when they are first diagnosed. Effective intervention needed to reduce depression in woman patients with cervical cancer and breast cancer is cognitive behavioral therapy. Cognitive and behavioral therapy is one of the interventions recommended to reduce depression in cancer patients.

Recommendation for research

Based on this review, the author has an interesting questions to answer for further studies with consideration that research is still rarely leading to the initial diagnosis. The question is "what is the effect of cognitive therapy and treatment if modified by providing education to cervical cancer patients with an initial diagnosis?". This review also has weak evidence, because the authors only founded 3 studies that described a cognitive and behavioral therapy for female patients with cancer and there was only one patient with cervical cancer. It can be a reason to have similar studies, the similar studies are also needed to confirm the evidence especially focused on cervical cancer patients.

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