THE EFFECTIVENESS OF COGNITIVE BEHAVIORAL THERAPY TO REDUCE TUBERCULOSIS SELF-STIGMA: A LITERATURE REVIEW

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ABSTRACT

Tuberculosis is an infectious disease with severe stigma. It is estimated that half of TBC patients have experienced internalization of stigma due to negative stereotypes from their community. The purpose of this review article review was to determine and to assess the effectiveness of cognitive behavioral therapy in reducing tuberculosis self-stigma. PRISMA flow diagram was used to show papers reviewed. Database used consisted of ProQuest, Science Direct, PubMed, Research Gate, Springer Link, and Google Scholar using keywords: CBT, AND Self Stigma, Cognitive behavioral therapy to reduce self stigma, CBT OR Self Stigma, Self-stigma AND CBT Intervention. articles published in English m 2003 to 2018 discussing HIV-related stigma and discrimination on patients with TB. Out of 15245 articles retrieved, 6% (4 articles) were reviewed. This review article using Downs and Black scale apprised the quality of the selected articles. Analysis method used thematic analysis and found stigma intervention as a theme. The results found four studies about the effectiveness of cognitive behavioral study and one study comparing cognitive behavioral therapy with psychoeducational (PE) found to be more helpful than CBT intervention. In another article showed more than a half of the sample (50%) from studies indicated that cognitive behavioral therapy can reduce self-stigma. Using cognitive behavioral therapy is effective for helping TBC patients to change negative beliefs and reframe their beliefs about their illness and the effect can help to reduce self-stigma.

Keywords: *self-stigma, cognitive behavioral therapy, internalised stigma*

INTRODUCTION

Tuberculosis (TBC) is an infectious disease by *Mycobacterium tuberculosis*. TBC is one of the leading causes of death in the world. The prevalence of tuberculosis disease worldwide is estimated to be 10.4 million people with TBC in 2016 and the majority of patients (90%) are adult. Indonesia is one of the five countries with the highest tuberculosis cases (Kemenkes RI, 2015; WHO, 2017).

The estimated prevalence of tuberculosis disease in Indonesia in 2016 was reported to be 395 new cases per 100,000 people, and as many as 10.4 million people with 1,2 million new cases every year (WHO, 2018). There was an increasing prevalence of TBC due to negative stereotyping of TBC patients by the community that was internalized by TBC patients. Internalized stigma is a significant predictor that takes place due to discrimination which has negative effect on patient's social function.

Stigma is influenced by social, and financial factors. TBC stigma involves negative stereotype, prejudice, and discrimination (Moriarty, Jolley, Callanan,

& Garety, 2012). There are many TBC patients who survived their illness and community isolation. The negative stereotype is related to immortality behavior, hedonism, poverty, maginalized groups, sex worker and people with HIV/AIDS (Cremers et al., 2015; Sommerland et al., 2017; Hague, 2017). The negative stereotype of TBC leads to internalization and belief of what other people think that make TBC patients get TBC self-stigma due to depressed and not feassasible (Chinouya & Adeyanju, 2017).

TBC patients (n=300) experienced stigmatization, and a half of the participants (50,4%) experienced internalization of stigma due to negative stereotypes from community that they received, such as the linkage between HIV and Tuberculosis (Cremers et al, 2015). Internalization of stigma in tuberculosis patients causes fear of TBC transmission, hopelessness, guilt, and low self esteem. The self-stigmaof TBC as a punishment that causes patients to isolate themselves (Chinouya & Adeyanju, 2017; Cremers et al., 2015; Kurspahić-mujčić et al., 2013).

Self-stigma affects the ability to manage the disease, to cure the disease, and causes delay to access health care providers due to negative social identity (Hidayati, 2015;

Kementrian Kesehatan RI, 2015; Craig, Daftary, Engel, Driscoll, & Ioannaki, 2017). In addition, individuals with TBC who are stigmatized every day with a combination of internal stigma and negative self-esteem in moderate level can experience increased anxiety and low self-esteem (Khan & Naqvi, 2017).

Cognitive behavioral therapy (CBT) is a strategy that gives challanges TBC patients' belief and reduce the negative impacts impact on themselves (Watson, Corrigan, & Jonathon, 2007). CBT improved the outcomes in social functioning activities;and the intervention could be useful to support the recovery-focused narrative therapies which address broader impacts of the illness on the patients and to promote campaigns to reduce societal stigma (Moriarty et al., 2012).

Cognitive behavioral is very important to reduce TBC self-stigma, which eventually can help TBC patients get the cure, access health care providers, and achieve goals of TBC global health by changing their beliefs (Craig et al., 2017). The objective of this literature review is to know the effectiveness of cognitive behavioral therapy (CBT) intervention to reduce TBC self-stigma.

METHOD

This study used literature review with comprehensive search strategy to identify and to assess the effectiveness cognitive behavioral therapy (CBT) in reducing TBC self-stigma. This review article used PRISMA flow diagram to show articles retrieved and reviewed. Database used consisted of ProQuest, Science Direct, PubMed, Research Gate, Springer Link, and Google Scholar.

Using keywords such as CBT AND Self Stigma, Cognitive behavioral therapy to reduce self stigma, CBT OR Self Stigma, Self-stigma AND CBT Intervention. Inclusion criteria consisted of articles written in English, articles published from 2003 to 2018, and addressed HIV-related stigma and discrimination on patients with TB. Manual search from reference list of relevant articles were conducted to find additional articles that met inclusion criteria. The exclusion criteria in this articles review were articles that do not include CBT intervention to reduce self-stigma toward TBC and poorly defined constructs, qualitative studies and article reviews.

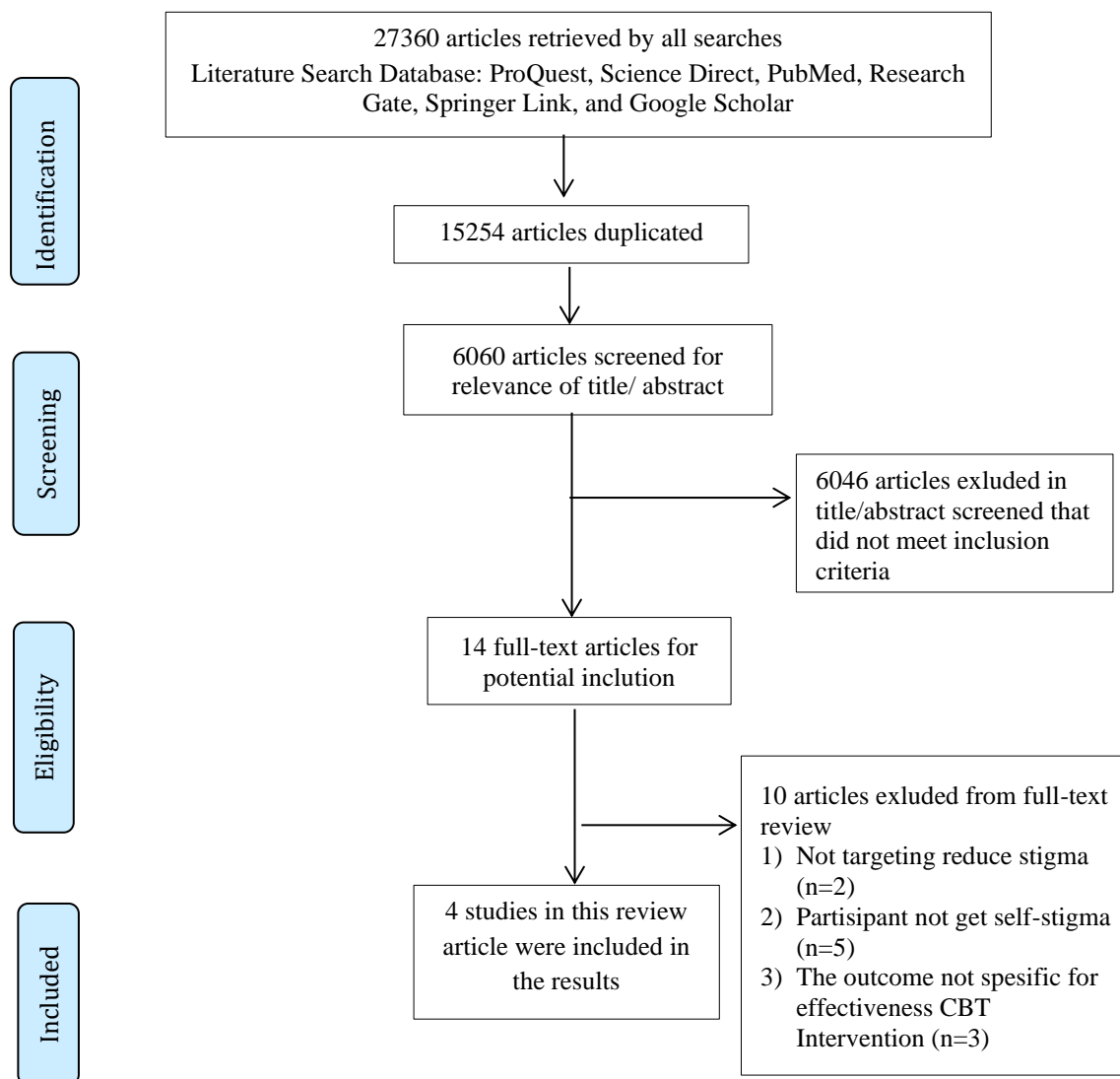The author independently appraised the quality of the selected articles using Downs and Black scale (Studies, 2008). Downs and Black scale was used to assess both randomized and non randomized studies for assessing quality and bias from the article. The tool used Likert scale.

RESULT

The search results in the selected database came up with a total of four studies written in English from 2003 to 2018, whichmatched the keywords. There are 27360 articles retrieved by all searches Literature Search Database: ProQuest, Science Direct, PubMed, Research Gate, Springer Link, and Google Scholar. From searched, there are 6060 articles screened for relevance of title/ abstract, and only 14 full-text articles for potential incltuion, and 10 articles exluded from full-text review because of not targeting reduce stigma (n=2), partisipant not get self-stigma (n=5), and the outcome not spesific for effectiveness CBT Intervention (n=3).

It is presented in the PRISMA Flow Diagram (figure 1). The results of this study show that nine studies indetified CBT intervention to reduce self-stigma. The detailed demography of relevant papers is described in table 1.

Figure 1. PRISMA Flow Diagram

The effectiveness of Cognitive Behavioral Therapy (CBT) intervention is listed in the diagram below with the following boxes:

- Identification: 27360 articles retrieved by all searches. Literature Search Database: ProQuest, Science Direct, PubMed, Research Gate, Springer Link, and Google Scholar
- 15254 articles duplicated
- Screening: 6060 articles screened for relevance of title/ abstract
- 6046 articles exluded in title/abstract screened that did not meet inclusion criteria
- Eligibility: 14 full-text articles for potential inclution
- 10 articles exluded from full-text review
  1) Not targeting reduce stigma (n=2)
  2) Partisipant not get self-stigma (n=5)
  3) The outcome not spesific for effectiveness CBT Intervention (n=3)
- Included: 4 studies in this review article were included in the results

The effectiveness of Cognitive Behavioral Therapy (CBT) intervention

The results found four articles that showed the effectiveness of cognitive behavioral study and one study showed that the combination of cognitive behavioral therapy with psychoeducational (PE) is more helpful than CBT intervention. In another article showed more than a half of the sample (50%) indicated that cognitive behavioral therapy can reduce self-stigma. Result from the Griffiths, et al. 2004 study showed significant reduction in stigmatizing from baseline to post-intervention.

The effects from this study showed the post-effect for personal stigma with the following results: 0.12 (BluPages or depression information website), 0. 11 (MoodGYM or a cognitive-behavioural skills training website) and 70. 07 (control for the intent-to-treat group, and 0. 13, 0. 10 and 70. 09) respectively for those who completed the trial. The corresponding pre-post effects for perceived stigma were 0.01, 0.09 and 0.14 for the intent-to-treat group and 0.02, 70.14 and 0.15 for those who completed the trial (Griffiths et al., 2004). This showed that cognitive-behavioural therapy literacy significantly reduced personal stigma, although the effects were small.

BluePages had no effect on perceived stigma and MoodGYM was associated with an increase in perceived stigma relative to the control. Study research by Shimotsu et al., 2014 showed that the cognitive bias was significantly correlated with-self stigma. In other study, cognitive therapy appeared feasible and acceptable to reduce stigma in people with psychosis who have high levels of internalised stigma. One study showed that cognitive behavioral therapy (CBT) alone was not as effective in reducing self-stigma as compared to using a combination of CBT and PE (Morrison et al., 2016; Wood et al., 2018).

Quality assesment

The author found a general lack of quality in intervention to reduce self-stigma which can be applied to TBC patients with self-stigma. There are no established quality criteria, the total possible score to give an indication of quality using Downs and Black Checklist (Studies, 2008) (Table 1).

Table 1 Results from the study of the CBT interventions to reduce Self-Stigma (n = 4)

No	Fist Author, Years	Method	Sample	Outcome
1.	Griffiths, et.al, 2004	Randomised Conrtol Trial (RCT)	525 adults (150 men, 375 women)	This randomised controlled trial demonstrated that, relative to an attention control group, both a web-based depression literacy intervention and a web-based cognitive–behavioural intervention resulted in a small but statistically significant reduction in stigmatizing attitudes towards depression among people with high levels of depressive symptoms.
2.	Shimotsu et al., 2014	Quasi-experiment	46 individual (36 men, 10 women)	Group CBT is effective in improving both emotional symptoms and self-stigma in outpatients with anxiety and depressive symptoms
3.	Morrison et al., 2016	A single-blind RCT	30 participant	Stigma-focused CT appears feasible and acceptable in people with psychosis who have high levels of internalised stigma. A larger, definitive trial is required
4.	Wood, et.al, 2018	Randomised Conrtol Trial (RCT)	65 participats (50 randomised to CBT and 15 to comparing CBT and psycoeducational PE	The PE intervention appeared more helpful than the CBT intervention on some outcomes, however due to the small sample sizes no specific inferences can be made and further large-scale research would be required.

DISCUSSIONS

TBC patients who have high levels of stigma were more likely to have greater depression and related mental health problems. Therefore, the care of TB patients should also include mental healthcare due to the existence of TBC stigma and depression (Lee, Tung, Chen, & Fu, 2017). Self- Stigma on TBC is one of the things that have effect on global TBC goals due to emotional effect in TBC patients which make them isolate themselves. Self-stigma is related to decreased self-esteem, self-efficacy, decline in social adaptation, and severe depressive symptoms (Fung, Tsang, & Cheung, 2011; Shimotsu et al., 2014).

Stigma reduction strategies are available in different levels and strategies which are divided as 1) Intrapersonal level, consisting of Counseling, Cognitive Behavioral therapy (CBT), Empowerment, Group

conselling, selp-help and support groups; 2) Interpersonal level: Care and Support, Home care teams, and trainingprogram; 3) Community level: Education, and Advocacy (Heijnders, 2015).

Cognitive behavioral therapy is part of intrapersonal level that means this strategy is appropriate to reduce TBC self-stigma. Treatment methods for reducing self-stigma have been investigated in recent years, particularly those incorporating the relationship between cognitive bias and self-stigma. Watson et al. proposed a cognitive process model which explained how negative self-beliefs may lead to self-stigmatization (Watson et al., 2007). Another article review showed CBT is one of the strategies intervention to reduce TBC stigma (Heijnders, 2015).

The CBT intervention to reduce TBC self-stigma is very important because it helps to control TBC disease and eliminates TBC as the developmental goals. Based on this article review, almost all articles in this review showed that CBT intervention was significant to reduce self-stigma. It utilizes cognitive behavioral techniques to improve motivation, enhance adherence-related behaviors, and address barriers and solves problems that interferences with adherence

to HIV medications (Newcomb et al., 2015). Short course of group CBT treatment is effective in improving social behaviour which may reduce self stigma that causes social isolation (Wykes et al., 2005).

The limitations of this study need to be considered when interpreting the findings. First, this study only used 4 articles in English, which may include inclution criteria and data was largely so this study is not able to group intervention types on stigma types.

CONCLUSIONS

Cognitive behavioral therapy is one of strategy interventions used to reduce self-stigma in TBC patients. Patients with infectious disease will get negative stereotype from their community. Negative streotype makes TBC patients internalized stigma which then develops into self-stigma. Using cognitive behavioral therapy as intervention is effective to help TBC patients to change the negative beliefs and reframe their beliefs about their illness and change their negative beliefs.

Conflict of interest: The author have no conflict of interest to report.

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