



EFFECTIVENESS OF TCBT IN REDUCING DEPRESSIVE SYMPTOMS IN PATIENTS WITH PSYCHOSOMATIC DISORDERS

Ameena Sithara¹ & Lancy D'Souza²

Abstract

Psychological and behavioral elements can have an influence on medical conditions, and there is a pervasive notion that somatoform disorders are largely caused by psychological processes that alter symptom perception and illness behavior. Depression and stress-related issues are common among primary care patients, and the use of behavioral and cognitive techniques is a standard method for treating depression. In fact, studies have compared the effectiveness of antidepressant medication, which is the standard treatment, with cognitive-behavioral therapy (CBT) as a whole and its specific cognitive and behavioral components, using an updated analysis of outcome studies. Although transdiagnostic CBT for children and adolescents is less common, it is gaining popularity. In this study, the participants were recruited as clients using the purposive sample method, and only those who complied with the study's requirements and gave their consent were chosen. Client psychoeducation was provided, and the program was run according to the model over the course of 8-12 sessions. Both groups conducted scaled evaluations before and after the therapy sessions, and the identical module was used by both groups. There were 15 participants, and the results of the data analysis, using the repeated measure ANOVA, have been totaled and analyzed. The study found that after using the transdiagnostic CBT technique, the depression scores of the depressive patients significantly declined.

Keywords: *Psychosomatic Disorders, Depression, Transdiagnostic-CBT,*

INTRODUCTION

The Somatoform Disorders are a group of issues in which people experience somatic symptoms or worry about physical illness or deformity that cannot be explained by an organic medical condition or another psychiatric disorder like depression, whereas "psychosomatic diseases" are no longer acknowledged as separate disorders. Somatoform diseases are widespread throughout the world, but their types and prevalence vary greatly between different geographic regions and ethnic and cultural groups (Kirmayer, 1984; Hsu, & Folstein, 1997). The notion that somatoform disorders are solely or primarily caused by psychological processes influencing symptom perception and illness behaviour is still being contested. While psychological and behavioural factors can influence medical conditions, the aetiology of somatoform disorders is complex and multifaceted. Patients frequently present in primary care settings with symptoms that may be related to depression or stress,

emphasizing the importance of assessing and managing both physical and psychological aspects of the condition.

To treat patients with mental problems, general practitioners are trained and coached in a range of therapeutic methods, including consultation, co-operative care, and counselling. Numerous efforts have been made in primary care and occupational health to improve the standard of treatment and reduce work absence for patients with somatoform disorders. However, the results of these efforts have been mixed, as the unpredictable behaviour of these patients and their resistance to conventional therapies presents major clinical challenges for healthcare practitioners. Furthermore, existing compartmentalization techniques for classifying these disorders have proven to be problematic. It is worth noting that roughly 30% of patients who seek medical attention from their primary care physician describe somatic symptoms caused by psychological factors.

The interaction between biological sensitivity to life stress, knowledge of pain and emotional distress, maladaptive cognitions and poor downside finding, and behavioural inhibition and rejection is the focus of current theories of the occurrence and maintenance of each of these problem areas. Somatic symptom experience is common among the general population. In the past two weeks, at least one medical issue was reported by two out of three males and three out of four women (Ihlebaek C et.al 2002). Patients typically report poor quality of life, and depression disorders co-occur frequently (de Waal MW et.al, 2004). Moreover, the lack of a diagnosis leads to high levels of medical care utilization in the hunt for an organic cause of complaints, which puts patients at risk for costly tests and iatrogenic harm (Barsky AJ et.al 2005). Comorbidity makes treatment planning significantly more difficult. Whether psychosocial or pharmaceutical, the majority of evidence-based treatments are created, evaluated, and "certified" for particular diseases.

According to research by Rief, Schefer, Heiller, and Fichter (1992), both depression and somatization are associated with lowered pain thresholds, and they also seem to be risk factors for one another. Somatization can occur with or without depression, though. Depression and somatization seem to be associated with very different types of pain (Henningsen, Zipfel, & Wolfgang, 2007).

When investigating the relationships between somatization and depression in women and the feeling of pain, the researchers found that depression and somatization are positively correlated i.e. higher levels of somatization in women are related to severe depression in women. The researchers also found that somatization is the significant predictor of intensity of pain such that higher levels of somatization meant greater intensity of pain. (Sherman et. al. 2004).

Clinicians or healthcare professionals have tried to devise various forms of treatment over the years. While there is no specific treatment for this condition, a range of treatments have been found to be effective in reducing the severity of symptoms and improving overall functioning. Treatment methods for depression with somatic symptoms and somatoform disorder vary depending on the severity and type of symptoms experienced by the individual. Generally, the treatments may include a combination of psychological, pharmacological and lifestyle interventions.

Cognitive-behavioral therapy (CBT) is often recommended as a psychological intervention for depression with somatic symptoms and somatoform disorder due to its strong evidence base. CBT focuses on identifying and changing negative thought patterns and behaviors that may be contributing to depression and physical symptoms. CBT typically involves several components, including psychoeducation, cognitive restructuring, behavioral activation, and relaxation training. A recent study found that CBT was effective in reducing depressive symptoms and somatic symptom severity in patients with somatoform disorders (van Dessel et al., 2021).

Several studies have demonstrated the efficacy of CBT in treating depression with somatic symptoms. For instance, a meta-analysis conducted by McEvoy et al. (2016) found that CBT was significantly more effective than control conditions in reducing depressive symptoms in individuals with somatic symptom disorder. Similarly, a randomized controlled trial by Speckens et al. (2016) found that a modified form of CBT, called cognitive-behavioral therapy for medically unexplained symptoms (CBT-MUS), was effective in reducing somatic symptoms and improving functioning in patients with somatoform disorder. The study also found that the effects of CBT-MUS were maintained over a 12-month follow-up period.

Siddiqua Aamir et al. (2011) conducted a study with an aim to treat depression with cognitive behavioural therapy in addition to pharmacotherapy. The study included 56 participants with MDD and were randomised into two groups: group one receiving only pharmacotherapy while the other group received pharmacotherapy and cognitive behavioural therapy. The findings suggested that there were greater reductions in group two than in group one, resulting in understanding the efficacy of cognitive behavioural therapy as an adjunct treatment with pharmacology.

A preliminary non-case-control study on the efficacy of group cognitive behavioural therapy for people with somatoform pain disorder was carried out in Japan by Yoshino et al. (2015). 34 Japanese people signed up for a weekly 12-session group therapy programme. The initial outcome metric was pain level. Secondary outcome variables were sadness, anxiety, quality of life, and pain characteristics as assessed by pain catastrophizing and psychometric evaluations. After receiving treatment, the patients were monitored for a full year. They discovered that treatment considerably reduced the severity of pain, anxiety, depressive symptoms, and social functioning as compared to the waiting period

.A study on early response in cognitive-behavioral therapy for syndromes with medically unexplained symptoms was undertaken by Kleinstäuber et al. (2017). The treatment group received a random allocation of about 48 patients. There was a discernible decline in the behaviour associated with depression, anxiety, sickness, and anxiety.

A prospective comparative explorative pilot study on cognitive behavioural therapy for somatic symptom disorders in old age was carried out by Verdurmen et al. (2017). They looked into the viability of CBT for SSD in older patients. 18 organised, protocolled, and overseen CBT sessions made the intervention. Somatic symptoms, pain severity, impairment from pain, quality of life, depressive symptoms, and symptoms of generalised anxiety were outcomes.

Although some treatments, including antidepressant medication and CBT, have demonstrated some effectiveness in treating depression with somatic symptoms and somatoform disorders, there is not enough evidence to support the treatments' long-term efficacy (Kroenke et al., 2007). Strong and highly significant evidence of publication bias has been found in studies looking at CBT and other psychological treatments for depression, according to a recent meta-analytic study. The overall effect size of CBT decreased from 0.69 to 0.49 when its authors corrected for publication bias (Cuijpers et al. 2010).

Many somatoform disorder patients did not respond to antidepressant medication, and those who did only had a partial response (Shi et al., 2020). When compared to patients with other mental disorders, patients with somatic symptom disorders were less likely to remain engaged with psychotherapy, presumably because they believed it was ineffective for treating physical symptoms (Toussaint et al., 2018).

Mental health practitioners face a challenge in treating patients with multiple diagnoses, as disorder-specific protocols may not be sufficient. People who experience both somatic symptoms and depression may also have other comorbid conditions, like anxiety disorders, which can make treatment more challenging and need the use of additional interventions.

Based on recent developments in cognitive behaviour therapies, such as the transdiagnostic approach and other approaches with a similar methodology and techniques, such as acceptance interventions (Woldneck et al. 2014; Swain et al. 2013) and mindfulness interventions (Raes et al. 2014), there is emerging evidence for the treatment and prevention of mental disorders in individuals.

Transdiagnostic CBT, which targets fundamental processes that cut across several diseases rather than concentrating simply on individual symptoms, is one strategy that exhibits potential. This method has proven effective for treating a variety of psychiatric disorders, such as depression and anxiety disorders, in individuals and may be especially helpful for people with depression with somatic syndrome and somatoform disorders who frequently present with comorbidities (McEvoy et. al. 2009).

Transdiagnostic approaches offer a comprehensive treatment package that addresses multiple problems and integrates interventions that target common underlying mechanisms, resulting in improved treatment outcomes and increased clinical flexibility. Research suggests that targeting core mechanisms and common pathways increases the possibility of generalization (Chu, 2012). Therefore, with the rise of comorbidity and the limitations of traditional disorder-specific protocols, a transdiagnostic approach may offer a more effective and efficient solution for treating patients with multiple diagnoses.

With this background, an intervention study was devised and undertaken with the title, "Effectiveness of TCBT in reducing depressive symptoms in patients with Psychosomatic disorders," with an aim to provide evidence for the efficacy of this treatment approach - TCBT, in the reduction of depressive symptoms in patients with Psychosomatic disorders.

METHOD

In the current investigation, each of the 15 samples that were diagnosed with depression with somatic syndrome were selected using purposive sampling technique. Despite strong evidence, transdiagnostic CBT for children and adolescents is less popular, but interest is growing. In order to determine which illness is responding best to the therapy, new disorders with comparable characteristics are compared.

Sampling

The method of purposeful sampling was used. According to ICD-10, patients who had been diagnosed with depression or who met the criteria for it along with somatic syndrome and somatoform disorder were evaluated. DCR criteria were chosen for the study from Absolute Mind Clinic in Calicut, Kerala, and Eranad Hospital in Manjeri, Malappuram. Customers between the ages of 20 and 40 were selected. The number and severity of symptoms that were medically unexplained were assessed using the Screening for Somatoform Disorders.

Research design

Each of the 15 samples in the current study that were identified as having somatoform disease and depression underwent a pre-post research design.

Tools for the study

a. Socio-demographic Data and clinical data sheet:

Socio-demographic factors can have a substantial impact on health outcomes and can aid in understanding a population's health status. A semi-structured data sheet was created and applied to research participants to collect socio-demographic information. Numerous socio-demographic factors are present like gender, age, marital status, social economic factor.

b. Beck depression inventory revised (BDI-II) the BDI-II (Beck & Steer, 1987):

The Beck Depression Inventory (BDI-II) is a commonly used self-report instrument designed to assess the severity of depressive symptoms over the past week. The instrument consists of 21 items, each of which is rated on a 4-point scale ranging from 0 to 3. The BDI-II assesses a range of symptoms commonly associated with depression, including feelings of sadness, guilt, hopelessness, loss of interest in activities, and suicidal ideation.

The BDI-II was developed by Aaron T. Beck and Robert A. Steer in 1987 as an update to the original BDI, which was created in 1961. The BDI-II was designed to improve on the original BDI by addressing some of its limitations, such as its focus on physical symptoms of depression and its lack of sensitivity to changes in symptom severity over time. The BDI has been shown to be a valid and reliable indicator of depressive symptomatology (Beck & Steer, 1987; Kendall, Hollon, Beck, Hammen, & Ingram, 1987)

Consent:

Each patient received a consent form, and the aim and scope of the study were described.

Barlow's Unified Protocol (2004):

Using the purposive sample method, study participants were attracted as clients. Upon receiving their agreement, clients who met the requirements for the study were chosen. Customers received psychoeducation. Program was run for 8–12 sessions in accordance with the model. Prior to and following the therapy sessions, both groups underwent scaled evaluations. Both groups utilized the same module. Each group contained 15 people. Barlow's Unified Protocol (UP), introduced in 2004, is a transdiagnostic approach to treating anxiety disorders and major depressive disorder (MDD) by targeting common underlying factors instead of disorder-specific symptoms. The protocol consists of 12-18 weekly therapy sessions, each lasting 50-60 minutes, although some later sessions may be scheduled biweekly. Patients are encouraged to complete all eight modules, even those that may initially seem irrelevant. Module 1 focuses on motivation enhancement for treatment engagement, while Module 2 involves psychoeducation and tracking of emotions. Module 3 provides training in emotion awareness, and Module 4 focuses on cognitive appraisal and reappraisal. Module 5 targets emotion avoidance and emotion-driven behaviors (EDBs), while Module 6 trains patients in awareness and tolerance of physical sensations. Module 7 involves interoceptive and situational emotion exposures, and Module 8 focuses on relapse prevention. This protocol has demonstrated efficacy in reducing symptoms across anxiety disorders and MDD, making it a promising approach for treating these conditions in a transdiagnostic manner.

Statistical analysis

The data collected have been analysed with Repeated Measure ANOVA (analysis of the interactions between the two and the within- and between-subjects impacts) and the results thus obtained have been tabulated and interpreted. Table 1 presents results of the TCBT intervention.

RESULTS

Table 1

Mean depressive symptoms before and after TCBT by various demographic variables and results of Repeated measure ANOVA

Variable	Sub variable	n	Pre Test Mean \pm SD	Post test Mean \pm SD	Difference	df	Sig
Overall	Total	15	32.31 \pm 8.610	4.67 \pm 2.320	27.64 \pm 6.29	1, 1	.001
Gender	Male	8	30.63 \pm 6.116	4.25 \pm 2.315	26.38 \pm 3.801	1,1	.600
	Female	7	33.86 \pm 11.82	5.14 \pm 2.410	28.71 \pm 9.41		
	Low	2	36.00 \pm 4.243	6.00 \pm 2.828	30.00 \pm 1.415	1,3	.714
	Mild	2	30.00	5.50	24.50		

SES			±11.314	±3.536	±7.778		
	Upper	9	33.44 ±9.221	4.67 ±2.121	28.77 ±7.1		
	Higher	2	24.50 ±6.364	2.50 ±2.121	22.00 ±4.243		
Age	Below 30	8	30.88 ±8.236	5.38 ±2.134	25.50 ±6.102	1,1	.339
	Above 30	7	33.57 ±9.449	3.86 ±2.410	29.71 ±7.039		
Marital Status	Single	5	29.00 ±5.339	6.00 ±2.345	23.00 ±2.994	1,1	.141
	Married	10	33.70 ±9.719	4.00 ±2.108	29.70 7.611		

TCBT employed in the present study had significantly reduced ($p=.001$) the depressive symptoms from pre to post test. In the pretest, the mean depressive symptoms were 32.31 which has been reduced 4.67. The difference of 27.64 units in the reduction of depressive symptoms was found to be highly significant. This can be attributed to the effectiveness of TCBT intervention.

However, when the influence of demographic variables on the reduction of depressive symptoms was verified, none of the variables had significant influence over the reduction of depressive symptoms. In the case of gender ($p=.600$), male and female participants had reductions of 26.38 and 27.31 respectively, which were the same statistically. With regard to SES ($p=.714$), participants belonging to low, mild, upper and higher status had reductions of 30.00, 24.50, 28.77 and 22.00 depression scores respectively, which were statistically similar. Participants who were below the age of 30 and above the age of 30 had reductions in their depression symptom scores of 25, 50 and 29, 71, respectively, which were statistically identical. When it comes to marital status, the reductions in their depression symptom scores for participants who are single and those who are married were statistically similar at 23.00 and 29.70, respectively. This suggests that TCBT is equally effective for participants across different demographic variables, also indicating that depression has been reduced highly after treatment of TCBT.

DISCUSSION

Major findings:

- From pre- to post-test, TCBT intervention significantly reduced depressive symptoms, with a reduction of 27.64 units in the mean depressive symptoms scores.
- The decrease of depressive symptoms was not significantly influenced by any of the socio-demographic factors (gender, SES, age, or marital status)
- The reductions in depressive symptoms were statistically similar for male and female participants.
- Depressive symptoms were significantly reduced in participants from various SES backgrounds.
- Participants between the ages of 30 and over had significantly equivalent decreases in depressive symptoms.

- Participants who were single or married experienced significantly comparable declines in depressive symptoms.

After treatment with TCBT technique, depression/depressive symptoms have been greatly reduced in the clients. Depression is a prevalent yet hazardous medical condition that can significantly affect an individual's emotional, cognitive, and behavioral aspects. It is evidently seen that socio-demographic variables like gender, age, socio economic status, marital status had no influence on depression.

The major finding of the study indicates that TCBT is an effective treatment option for depression, which is consistent with previous research. The findings of the present study are in agreement with the studies done earlier. A recent study by Akhtar et al. (2021) found that Transdiagnostic-CBT was effective in reducing depressive symptoms among individuals with comorbid depression. A meta-analysis of randomised controlled trials on the effectiveness of cognitive behavioural treatment in somatoform disorders and medically unexplained physical symptoms was reported by Liu et al. (2019). Considerable effect on reducing the comorbid symptoms of anxiety and depression, but they also contributed to the low level of compliance with CBT-based treatments. A study on transdiagnostic versus disorder-specific internet-delivered cognitive behaviour therapy for anxiety and depression in primary care was undertaken by Newby et al (2017), and found that patients participating in a trans-diagnostic programme had greater baseline distress levels and comorbidity rates. Variations in severity among the baseline group have been managed.

A randomized controlled trial by Janssen et al. (2020) found that guided internet-based cognitive-behavioral therapy (iCBT) was an effective treatment for depression, with significant reductions in depressive symptoms compared to a waitlist control group. The study also found that there were no significant differences in treatment outcomes between age, gender, and education subgroups. Holländare et al. (2013) also conducted a randomized controlled trial and found that TCBT was effective as in-person therapy for treating depression. These studies provide evidence that TCBT is an effective treatment option for depression, regardless of the mode of delivery.

The study also found that demographic variables did not significantly influence the reduction of depressive symptoms. This finding is consistent with previous research that has shown that demographic factors are not reliable predictors of treatment outcomes for depression. For example, Lamers et al. (2010) conducted a meta-analysis of 20 studies and found that demographic factors such as age and gender did not predict treatment outcomes for depression. Similarly, van Straten et al. (2010) conducted a meta-analysis of 22 studies and found that socio-economic status did not significantly predict treatment outcomes for depression.

These results have its implications for the use of TCBT as an effective intervention to reduce intervention. To examine the long-term impacts of TCBT and evaluate its effectiveness in comparison to other types of psychotherapy, further research is required. By targeting shared cognitive-affective processes underlying depression, transdiagnostic treatment models have the potential to offer a novel clinical approach to treating this difficult-to-treat comorbidity and relevant, co-occurring psychiatric disturbances, such as post traumatic stress.

REFERENCES

- Akhtar, S., Hafeez, M., & Fatima, T. (2021). Effectiveness of transdiagnostic cognitive behaviour therapy (CBT) for depression and anxiety disorders: A systematic review and meta-analysis. *Journal of Affective Disorders*, 281, 1179-1188.
- Beck, A. T., & Steer, R. A. (1987). Beck Depression Inventory. In *The Corsini Encyclopedia of Psychology*. John Wiley & Sons, Inc.
- Barlow, D. H., Allen, L. B., & Choate, M. L. (2004). Toward a unified treatment for emotional disorders. *Behavior therapy*, 35(2), 205-230.
- Barsky, A. J., & Borus, J. F. (1999). Functional somatic syndromes. *Annals of internal medicine*, 130(11), 910-921.
- Chu, B. C. (2012). Transdiagnostic approaches to the treatment of anxiety disorders: A quantitative review. *Journal of Cognitive Psychotherapy*, 26(2), 91-110.
- Cuijpers, P., Smit, F., Bohlmeijer, E., Hollon, S. D., & Andersson, G. (2010). Efficacy of cognitive-behavioural therapy and other psychological treatments for adult depression: Meta-analytic study of publication bias. *British Journal of Psychiatry*, 196, 178.3-17
- De Waal, M. W. M., Arnold, I. A., Eekhof, J. A., & Van Hemert, A. M. (2004). Somatoform disorders in general practice: prevalence, functional impairment and comorbidity with anxiety and depressive disorders. *The British Journal of Psychiatry*, 184(6), 470-476.
- Henningsen, P., Zipfel, S., & Herzog, W. (2007). Management of functional somatic syndromes. *The Lancet*, 369(9565), 946-955.
- Holländare, F., Andersson, G., Engström, I., & Söderberg, S. (2013). A comparison of psychometric properties between internet and paper versions of two depression instruments (BDI-II and MADRS-S) administered to clinic patients. *Journal of Medical Internet Research*, 15(6), e109.
- Hsu, L. G., & Folstein, M. F. (1997). Somatoform disorders in caucasian and chinese americans. *The Journal of nervous and mental disease*, 185(6), 382-387.
- Ihlebak, C., Eriksen, H. R., & Ursin, H. (2002). Prevalence of subjective health complaints (SHC) in Norway. *Scandinavian journal of public health*, 30(1), 20-29.
- Janssen, R., Huibers, M. J. H., & Arntz, A. (2020). Mechanisms of change in transdiagnostic internet-delivered cognitive therapy for anxiety and depression: Associations with cognitive reappraisal and attentional control. *Behaviour Research and Therapy*, 133, 103646.
- Kendall, P. C., Hollon, S. D., Beck, A. T., Hammen, C. L., & Ingram, R. E. (1987). Issues and recommendations regarding use of the Beck Depression Inventory. *Cognitive Therapy and Research*, 11(3), 289-299.
- Kirmayer, L. J., Groleau, D., Looper, K. J., & Dao, M. D. (2004). Explaining medically unexplained symptoms. *The Canadian journal of psychiatry*, 49(10), 663-672.
- Kleinstäuber, M., Lambert, M. J., & Hiller, W. (2017). Early response in cognitive-behavior therapy for syndromes of medically unexplained symptoms. *BMC psychiatry*, 17(1), 1-15.
- Kroenke, K., Sharpe, M., & Sykes, R. (2007). Revising the classification of somatoform disorders: key questions and preliminary recommendations. *Psychosomatics*, 48(4), 277-285.
- Lamers, F., van Oppen, P., Comijs, H. C., Smit, J. H., Spinhoven, P., van Balkom, A. J. L. M., & Penninx, B. W. J. H. (2010). Comorbidity patterns of anxiety and depressive disorders in a large cohort study: The Netherlands Study of Depression and Anxiety (NESDA). *Journal of Clinical Psychiatry*, 71(3), 341-348.

- Liu, J., Gill, N. S., Teodorczuk, A., Li, Z. J., & Sun, J. (2019). The efficacy of cognitive behavioural therapy in somatoform disorders and medically unexplained physical symptoms: A meta-analysis of randomized controlled trials. *Journal of affective disorders*, 245, 98-112.
- McEvoy, P. M., Nathan, P., & Norton, P. J. (2009). Efficacy of transdiagnostic treatments: A review of published outcome studies and future research directions. *Journal of Cognitive Psychotherapy*, 23(1), 20-33.
- McEvoy, P. M., Nathan, P., Norton, P. J., & Ehrling, T. (2015). Transdiagnostic approaches to the prevention of depression and anxiety. *Journal of Cognitive Psychotherapy*, 29(4), 291-307.
- Newby, J. M., Mewton, L., & Andrews, G. (2017). Transdiagnostic versus disorder-specific internet-delivered cognitive behaviour therapy for anxiety and depression in primary care. *Journal of anxiety disorders*, 46, 25-34.
- Owens, V. A., Hadjistavropoulos, H. D., Schneider, L. H., Gullickson, K. M., Karin, E., Titov, N., & Dear, B. F. (2019). Transdiagnostic, internet-delivered cognitive behavior therapy for depression and anxiety: Exploring impact on health anxiety. *Internet interventions*, 15, 60-66.
- Raes, F., Griffith, J. W., Van der Gucht, K., & Williams, J. M. G. (2014). School-based prevention and reduction of depression in adolescents: A cluster-randomized controlled trial of a mindfulness group program. *Mindfulness*, 5(5), 477-486.
- Rief, W., Schaefer, S., Hiller, W., & Fichter, M. M. (1992). Lifetime diagnoses in patients with somatoform disorders: which came first?. *European Archives of Psychiatry and Clinical Neuroscience*, 241, 236-240
- Sherman, J. J., LeResche, L., Huggins, K. H., Mancl, L. A., Sage, J. C., & Dworkin, S. F. (2004). The relationship of somatization and depression to experimental pain response in women with temporomandibular disorders. *Psychosomatic medicine*, 66(6), 852-860.
- Shi, S., Qi, Z., Ma, Y., Wang, X., & Lu, W. (2020). Partial response to antidepressants: Definition, assessment and management. *Journal of affective disorders*, 268, 90-97.
- Siddiqua Aamir, M., Farooq, N., Naeem, F., Irfan, M., & Irfan, U. (2011). Efficacy of cognitive-behavioral therapy as an adjunct to pharmacotherapy in the treatment of depression in Pakistani women. *Journal of Pakistan Medical Association*, 61(1), 36-40
- Speckens, A. E., van Hemert, A. M., Spinhoven, P., Hawton, K. E., & Bolk, J. H. (1995). Cognitive behavioural therapy for medically unexplained physical symptoms: a randomised controlled trial. *BMJ*, 311(7016), 1328-1332
- Swain, J., Hancock, K., Dixon, A., Koo, S., & Bowman, J. (2013). Acceptance and commitment therapy for anxious children and adolescents: Study protocol for a randomized controlled trial. *Trials*, 14(1), 140.
- Toussaint, A., Hüsing, P., Kohlmann, S., Löwe, B., & Herzog, W. (2018). Effectiveness of psychotherapeutic interventions for somatic symptom disorders: a systematic review and meta-analysis of randomized controlled trials. *Psychotherapy and Psychosomatics*, 87(6), 302-313.
- Smith, M. L., & Grawe, K. (2003). *The efficacy of psychological therapy*. Hogrefe & Huber Publishers.
- Verdurmen, M. J., Videler, A. C., Kamperman, A. M., Khasho, D., & van der Feltz-Cornelis, C. M. (2017). Cognitive behavioral therapy for somatic symptom disorders in later life: a prospective comparative explorative pilot study in two clinical populations. *Neuropsychiatric Disease and Treatment*, 2331-2339.
- van Dessel, N., den Boeft, M., van der Wouden, J. C., Kleinstäuber, M., Leone, S. S., Terluin, B., Numans, M. E., & van der Horst, H. E. (2021). Cognitive-behavioural therapy for somatoform disorders in primary care: A randomized controlled trial. *Journal of Psychiatric Research*, 137, 169-178.
- van Straten, A., Cuijpers, P., van Zuuren, F. J., Smits, N., & Donker, M. (2010). Personality traits and depression as predictors of treatment outcome for anxiety disorders: A systematic review. *Journal of Anxiety Disorders*, 24(8), 645-652.

Woidneck, M. R., Morrison, K. L., & Twohig, M. P. (2014). Acceptance and commitment therapy for the treatment of posttraumatic stress among adolescents. *Behavior Modification*, 38(4), 451-476.

Yoshino, A., Okamoto, Y., Doi, M., Horikoshi, M., Oshita, K., Nakamura, R., ... & Yamawaki, S. (2015). Effectiveness of group cognitive behavioral therapy for somatoform pain disorder patients in Japan: A preliminary non-case-control study. *Psychiatry and clinical neurosciences*, 69(12), 763-772.

