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## **EFFECTIVENESS OF COGNITIVE BEHAVIOR THERAPY WITH YOGA FOR MAJOR DEPRESSION OF ADOLESCENCE**

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### **ABSTRACT**

*This study evaluated the effectiveness of cognitive behavior therapy with yoga for the interventions of participants suffering from major depression without psychotic features. Yoga, a combination of physical and mental exercises, is effective and acceptable for the adjunctive interventions of major depression. This study aimed to explore further the evidence of yoga's efficacy for major depression. The cognitive behavior therapies with yoga given for three months, which helped the participants to recover from the major symptoms of depression. The findings extend the accumulating evidence in favor of the cognitive behavior therapy with yoga being useful in reducing symptoms of depression. Further research is needed.*

**KEY WORDS:** Cognitive Behavior Therapy, Yoga, Depression

## INTRODUCTION

Adolescence is a phase of life in which one is no longer a child and yet not an adult. It encompasses the dependent as well as the independent years especially during late adolescence (16 – 19years),when the adolescents have fully developed physical characteristics but, may not have developed either their distinguishing identity or well-informed opinions and ideas about themselves, others, their surroundings or future jeopardizing their life now and future and hence the future of the society and nation. Depression the so-called “common cold” of mental health is one of the prominent disorders that the people are suffering nowadays. Depression strikes in several forms. When a psychologist or psychiatrist makes a diagnosis of a participant’s depressive illness, he or she may use a number of terms- such as unipolar, bipolar, clinical, endogenous, major, melancholic, seasonal affective or unipolar – to describe it. Nevertheless, psychiatrists to describe the depression as a long period when a person feels very sad to the point of feeling worthless, hopeless and helpless a mental disorder indeed.

Sri Lanka recorded an extraordinary high suicide rate for adolescents aged 15 - 19 in the early 1990s (46.5/100,000). With this in perspective, the Ministry of Health in Sri Lanka recommends school programmes for adolescents by mental health units of local hospitals. : A total numbers of 445 students were assessed (male-54.4%, female 45.6%). Thirty six percent screened positive for depression (mild depression-17%, severe depression-19%) and 28% screened positive for severe anxiety. Females screened positive for depression and anxiety significantly more than the males ( $p = 0.0001, 0.005$  respectively). Students in classes facing barrier examinations at the end of the year had the highest positivity rates. Examination related issues (36%) were the most commonly cited problem (Rodrigo et al.2010) however, it is known that cognitive behavior therapy is an efficacious treatment for depression (American Psychiatric Association, 2006).

The present investigation attempts to study the efficacy of Cognitive behavior therapy with yoga for unipolar depression among female adolescence school students. According to cognitive theory, thinking negatively greatly affected the likelihood of developing a depression and maintaining it during stressful events in a person’s life. Individuals who think negatively are more vulnerable towards depression because they perceive the environment, their future and themselves in a negative, depressive context. This negative way of thinking guides depressed participants’ perception, interpretation and memory of personally relevant experiences, thereby resulting in a negatively biased construal of their personal world, and ultimately, the development of depressive symptoms (Beck, 1967). Theoretically, cognitive – behavioral therapy with yoga can be employed in any situation in which there is a pattern of unwanted behavior accompanied by distress and

impairment. It is a recommended treatment option for a number of mental disorders, including affective (mood) disorders, personality disorders, social phobia, obsessive – compulsive disorder (OCD), eating disorders, substance abuse, anxiety or panic disorders, agoraphobia, post – traumatic stress disorders (PTSD), and attention deficit hyperactivity disorders (ADHD). It is also frequently used as a tool to deal with chronic pain for participants with illnesses such as rheumatoid arthritis, back problems, and cancer. Participants with sleep disorders may also find cognitive – behavioral therapy with yoga as a useful treatment for them.

In modern times the prime reason behind the popularity of yoga has been its therapeutic use. Yogic methods were not originally developed as curative techniques for different diseases. They are conceived as Sadhanas for living a healthy and happy life without having lust for material riches. In fact yoga is a science of consciousness of which mind is a part. In yogic literature, consciousness has different forms. It may be varying from sense consciousness, intellectual consciousness to transcendental consciousness (Swami Satyananda, 1980).

Yoga has several mechanisms that make it a promising treatment for depression and anxiety, including physical activity, behavioral activation, and mindfulness. Following positive outcomes from adapted CBT interventions incorporating mindfulness-based practices, this study explored the effects of a therapeutic yoga program as an adjunct to group-based CBT for depression or anxiety. ([Melissa O'Shea](#) Et, al-2020)

In psychology, we trace the history of the study of individual differences to Galton, which is hardly 100 years old. However, thousands of years ago in the yogic literature different types of human personalities were described and it was emphasized that the same yogic method was not suitable for all types of people. On the basis of temperament, four types of personalities have been described. They are intellectual personality, emotional personality dynamic personality and mystic personality. Similarly, as per the mental state, the five personality are i) moodha, ii) kshipla, iii) vikshipta, iv) ekagra, and v) niruddha. For each of these personalities different forms of yoga have been recommended. However, the most important among the classifications is the one based on the three gunas of sattwa, rajas and tamas. These gunas are largely acquired and so through them desired transformation in attitudes and personality are possible through yogic practices.

The findings reported by Selvamurthy (1993) highlight the promotive aspect of yoga. He was shown that six months of yogic practices conducted on junior officers of defense produced “significant improvement in body flexibility, physical performances and also in cognitive and non-cognitive functions. The psychological profile revealed a reduced anxiety level, improvement in concentration, memory, learning efficiency and psychomotor performances. The biochemical profile showed a relative hypo metabolic

state and reduced levels of stress hormones. Studies on hyper sensitive patients revealed the curative potential of yogic practices by considerable reduction in stress responsiveness as well as restoration of baroreflex sensitivity.

A study was conducted under the guidance of Swami Niranjananda (1995-1996) on prisoners lodged in different jails in Bihar in India. A total of 1,013 prisoners participated in 15 days yoga training programs in these jails. From the results obtained from them, it was noticed that after their participation in the yoga programs, the prisoners found themselves physically more fit and energetic, and reported improvement in their digestion and sleep and felt themselves happier. They also reported substantial reduction in their negative feeling and emotions like anger, revenge, anxiety, depression and improvement in happiness. Thus the results indicate that yogic practices not only serve us curative and preventive against somatic problems, but also act as effective instruments of positive psychological and emotional transformation.

The present experimental study is unique in studying the depression of female Adolescence school students at level as well as a unique attempt has been made here to alleviate the emotional and cognitive burden of female adolescent students by the use of cognitive behaviour therapy and yoga.

### **Objective of the study:**

The Main objective of the study was to apply the cognitive behavioral therapy with yoga for Bockting etal (2005) Bockting etal (2005) depression among female adolescence school students suffering from major depression without psychotic features.

### **Sub Objectives**

1. To find out Depression level among female adolescence school students
2. To find out impact of cognitive behavioral therapy with yoga for unipolar depression.

### **Hypothesis:**

- Cognitive behavior therapy with yoga will generally show effectiveness in reducing depression among female adolescence school students.

## **METHODOLOGY**

### **Sample**

The sample for the present study was drawn from a population of a private girl's school in Jaffna. The saturation sampling method was used (N= 24). Three of the students could not sustain their interest and dropped out from the study. The final sample size of the

study was 21 school female adolescence students; of them 14 were suffering from major depression, constituting the experimental group. The remaining 7 female students constitute the sample for the normal control group. From among the 14 students of major depression, the waiting list control group was formed by enrolling half of the students drawn at random of the experimental group of major depression. The waiting list control group female students were given the assurance that they will be treated for their depression later.

### **Tool used**

The tool used in the study was selected after a thorough analysis of literature on depression. The following inventory administrated to collect data: The Revised Beck Depression inventory (RBDI: Beck)

### **Design**

The study of this research is a pretest-posttest experimental and twin control group design. There were 21 students in all. The researcher applied the RBDI to the female students (N=7) of the experimental group before and after the experimental treatment. The waiting list control group matched on sex and age (N=7) as also a normal control group were also administered the RBDI; they did not receive the experimental treatment. A within comparison of the RBDI scores before and after treatment for the experimental group was performed. Further, a between comparison of RBDI scores across the experimental group with their respective counterpart in the waiting list control group as also with the control group was also done.

### **Procedure of Cognitive behavior therapy (CBT) with yoga**

The CBT was used by the present investigators cum practitioners in the present context as a group work. The content of the CBT procedures used in the present context is outlined below session wise.

#### **In Session 1 & 2**

Firstly, A warm, empathetic and genuine therapeutic relationship was established by the practitioner with the participants to reinforce learning.

#### **In Sessions 3 and 4:**

The Central Nervous System divided into two sympathetic and the parasympathetic. In depressive disorder, sympathetic arousal achieved using applied and dynamic practices. Both these approaches lead to balance and greater harmony the mindfulness of Breathing and Metta Bhavana practices however, are certainly useful for anyone to practice. In fact, the Metta Bhavana practice is highly recommended for those who experience depression.

Practices for depression included Surya Namaskara, backbends, standing and twisting; breathing techniques include Bhastrika, Kapalhati and abdominal breathing and relaxation technique.

These techniques were use in addition to cognitive behavioral therapy to teach patients new ways of coping with stressful situation. The yogic techniques were used from the third and fourth sessions but continued till last session.

### **In Session 5 & 6:**

In these sessions, participants were encouraged for doing home assignment - to keep a daily record of activities on an hourly basis and to make an assessment of their sense of mastery and pleasure activities. "Mastery" refers to a feeling of an accomplishment, a sense that something has been achieved, even if the activity itself was not pleasurable. Activities which may give a sense of pleasure (walking, watching TV, talking to a friend, playing, going to movie, hearing songs) do not necessarily give a feeling of mastery. Therefore, they discussed and assessed separately.

### **In the Next Session:**

When the mastery and pleasure ratings began to improve the participants, they were given home assignment to keep a daily record of automatic thoughts. Automatic thoughts are thoughts that automatically come to mind when a particular situation occurs. Cognitive behavioral therapy with yoga seeks to challenge these automatic thoughts. So whenever the participants felt depressed they had to record the objective situation, the thought they had and feeling they led to.

### **In the 8<sup>th</sup> and 9<sup>th</sup> session:**

The participants were asked to write down the alternatives to irrational ways of perceiving the situation. It was done to help the participants realize that they had been locked into one way of seeing the situation and that there were other rational ways.

### **In Sessions 10 & 11:**

The participants were motivated by giving lecture on assertive training with example. It was found useful by all the participants who could not express anger or irritation, difficult to say no, who are overly polite and allows others to take advantage of them, to express affection and other positive responses, who felt they did not have the right to express their thought, beliefs, and feelings as also express social phobias.

### In Session 12 to 16:

Participants were encouraged to improve the frequency and quality of social interactions by a role-play and by telling stories to them. By teaching role-play to the participants, they were encouraged to improve the frequency, quality and intensity of social interactions. The practitioners played the roles of teacher and parents before the students and how they can show socially desirable behaviors towards them.

Overall, cognitive behavior therapy with yoga procedures of treatment continued for 16 sessions for three months: 8 sessions for 1<sup>st</sup> month and 4 sessions in the 2<sup>nd</sup> month and 4 sessions in the last month respectively. Each session lasted for at least an hour. At the termination of the therapy with yoga, the participants were re assessed using the RBDI. The participants were requested to keep doing these enjoyable activities as also indulge in social interactions for another six months. Statistical analysis Mean, standard deviation, t-test were the statistical to test the hypothesis of this investigation.

## RESULTS AND DISCUSSION

**Table 1:** Showing the level of pretest depression score in major depressed experimental group and posttest depression score in major depressed experimental group among School adolescence female students.

Variable	N	$\bar{X}$	$\sigma$	T	L.S
Pretest depression score in major level experimental group	7	31.14	3.79	7.72	5%
Posttest depression score in major level experimental group	7	12.14	3.68		

The results summarized in table 1 show that the obtained 't' value is significantly different i.e., posttest depression score is significantly different and less compared to pretest depression score among the major depressed School female adolescence students lending credence to the hypothesis of the study. Thus cognitive behavioral therapy and yoga practice among depressed School female adolescence students are effectiveness in bringing down their level of depression. The outcome of this study supports **Christensen et al. (2004)** who indicated that there is efficacy of cognitive behavior therapy with yoga in a community sample. In fact they delivered therapy via the internet; so also the works of **Clark et al (1999)** and **Bockting et al (2005)** who found group cognitive behavior

therapy with yoga is effective for treating adolescent depression. The findings of the present study also are in conformity, with Swami Niranjanananda(1996)who reported that yogic practices act as effective instruments of positive psychological and emotional transform

Variable	N	$\bar{X}$	$\sigma$	T	L.S
Posttest depression score in major depressed experimental group	7	13.13	3.67	6.90	5%
Posttest depression score in major depressed waiting list control group	7	32.12	3.78		

**Table 2:** Showing the comparison between posttest depression score in major depressed experimental group and posttest depression score in major depressed waiting list control group.

The results summarized in table 2 show that the obtained ‘t’ value is significant i.e., posttest depression score in major depressed experimental group is significantly different from posttest depression score in major depressed waiting list control group supporting the hypothesis of the study. As the depressed experimental group only received cognitive behavior therapy with yoga, it reduced the depression level for them compared to their counterparts. Thus from this it can be concluded that there is effectiveness of cognitive behavior therapy with yoga among the depressed School female adolescence students. The present finding supports **Merry et. al., (2004)** who showed in their experiment that there is efficacy of cognitive behavior therapy with yoga for depressed school students. The present finding is in line with another study by **Spence et.al. (2005)** who examined and showed that adolescents who completed the teacher-administered cognitive behavior therapy with yoga did not differ significantly from adolescents in the monitoring control condition. Additional to this, Selvamurthy (1993) highlighted that yogic practices conducted on junior officers of defence produced significant improvement in cognitive and non-cognitive functions.



**Table 3:** Showing the comparison between posttest depression score in major depressed experimental group and posttest depression score in normal control group.

Variable	N	$\bar{X}$	$\sigma$	T	L.S
Posttest depression score in major depressed experimental group	7	13.13	3.67	6.00	5%
Posttest score in normal control group	7	3.70	1.90		

The results summarized in Table 3 show that the obtained 't' value is significant. That is posttest depression score in the depressed experimental group is significantly different from posttest depression score in normal control group. The finding obtained is in conformity with the hypothesis of the present investigation. The outcome of the present study is in line with the study of **Vostanis et al (1996)** who stated that there is significant reduction on severity of depression by cognitive behavior therapy with yoga. With increased evidence Bhushan (1998) found that due to yogic practices, there is significant reduction in depression.

### Conclusion

The present study indicated that the participants in the experimental group significantly recovered from depression after CBT with yoga. The findings of the current study have practical value for mental Health professionals as positive psychologists, counseling psychologists, therapists, and future researchers. The study has indicated that CBT with yoga can help for adolescences reduce mild and moderate level depression. That CBT with yoga sessions can help to improve human wellbeing, academic satisfaction, and resilience, especially in challenging learning pressure. Furthermore, future researchers can use CBT with yoga in other populations for reducing depression.

### Reference

- Beck, A.T. (1967) Depression: Clinical, experimental, and theoretical aspects. New York: Hoeber.
- Bhushan, L.I. (1998) Yogic lifestyle and psychological well-being. Paper presented at the S.P. East West Psychology National Award Lecture on at Hydreabad.
- Bockting et al (2005) Preventing relapse/recurrence in recurrent depression with cognitive therapy: a randomized controlled trial. Journal of Clinical Psychology.

Christensen H, Griffiths KM, Jorm AF (2004) Delivering therapy with yogas for depression by using the internet: randomized controlled trial. *Evidence Based Nursing*, 7(3):78.

Clarke GN,etal (1999)Cognitive-behavioral treatment of adolescent depression: efficacy of acute group treatment and booster sessions. *Journal of American Academy of Child Adolescence Psychiatry*, 38(3):272-9.

Merry S, McDowell H, Wild CJ, Bir J, Cunliffe R. (2004). A randomized placebo-controlled trial of a school-based depression prevention program. *Journal of American Academy of Child Adolescence Psychiatry*, 43(5):538-47.

Rodrigo et al. (2010) Symptoms of anxiety and depression in adolescent students; a perspective from Sri Lanka. *Child and Adolescent Psychiatry and Mental Health*.

Saraswati, Swami Niranjanananda (1996) *Yoga in Prisons of Bihar*. Unpolished paper. Munger. Bihar school of yoga.

Selvamurthy, W. (1993). *Yoga and stress management: physiological perspective*. Proceedings of the 80<sup>th</sup> session of Indian science congress (part IV), Goa,India.

Spence SH, Sheffield JK, Donovan CL. (2005). Long-term outcome of a school-based, universal approach to prevention of depression in adolescents. *Journal of Consulting Clinical Psychology*, 73(1):160-7.

Singhal.S, & Rao, UNB (2004). *Adolescent concerns through own eyes*. New Delhi; Kanishka Publisher 978-8173916229.

Vostanis P, Feehan C, Grattan E, Bickerton WL. (1996). A randomized controlled outpatient trial of cognitive-behavioural treatment for children and adolescents with depression: 9-month follow-up. *Journal of Affective Disorder*, (1-2):105-16.