

# Efficacy of Cognitive Behaviour Therapy and Behaviour Therapy in Insomnia

Brijesh Saran<sup>1\*</sup>, Amoolya K. Seth<sup>2</sup>, Anuradha Singh<sup>3</sup>, Gautam Anand<sup>4</sup>

<sup>1\*</sup> Assistant Professor,

<sup>2</sup> Professor Psychiatry Dept. of Psychiatry Santosh Deemed to be University, Ghaziabad, NCR Delhi,

<sup>3</sup> Professor Obstetrics and Gynaecology Lady Hardinge Medical college Delhi,

<sup>4</sup> Professor Department of Psychiatry, Muzaffarnagar Medical College and Hospital

Corresponding Author: <sup>1\*</sup> Brijesh Saran

## ABSTRACT

**Background:** The most widespread of all sleep disorders is insomnia. In recent years, nonpharmacological approaches have become the therapy of choice for nonorganic insomnia. Cognitive Behavior Therapy for Insomnia (CBT-I) is helpful, according to research. main insomnia treatment The Logo-therapeutic technique of paradoxical purpose is based on the existential roots of its originator, Viktor E. Frankl. Past research on the effectiveness of therapies utilising paradoxical Intention has been inconsistent. There is a dearth of evidence that Paradoxical Intention Therapy is more beneficial than CBT-I in treating insomnia.

**Aim's & objectives:** to evaluate and compare the efficacy of CBT-I and PIT and to investigate their impact on mental health in young individuals with Non-Organic Insomnia.

**Methods & Materials:** Twenty young adults of both genders with a mean age of 25.45 years. Participants were recruited using the Insomnia Severity Index and an online survey. 120 individuals replied to the online Insomnia Severity Index questionnaire, of which 24 met the inclusion criteria and 20 consented to participate in the intervention modules.

**Discussion:** Ten participants were randomly assigned to the CBT-I group (n=15) and the PIT group (n=15). Both treatments were administered for two months. As outcome measures, the Insomnia Severity Index, the Pittsburg Sleep Quality Index, and the Mental Health Inventory were collected at baseline (Pre-Intervention), at the conclusion of the intervention (Post-Intervention), and in a follow-up assessment after 45 days to study the maintenance of the therapeutic effect and relapse. Before the intervention, subjects provided their informed consent.

**Results:** Both CBT-I and PIT were proven to be beneficial. Despite the fact that CBT-I was associated with greater improvement than PIT, Both groups demonstrated statistically significant gains on outcome measures. There were statistically and clinically significant improvements in the severity of insomnia symptoms, as well as statistically significant differences in sleep quality and mental health, as a result of treatment.

**Conclusions:** Both CBT and PIT are successful in treating non-organic insomnia, although CBT-I may be the treatment of choice due to its more persistent and potent effect when compared to PIT.

**Keywords:** Insomnia, Cognitive Behavior Therapy, Behaviour therapy, Paradoxical intention.

## 1. INTRODUCTION

Insomnia is the most prevalent sleep condition in the general population and one of the most often reported health concerns practitioners.

1. Non-organic insomnia is classified under Dyssomnias in the ICD–10, one of the most often used categorization systems in clinical settings.

2. Insomnia Disorders are categorised as sleepwake disorders in the proposed edition of ICD-11. Chronic Insomnia and Short-Term Insomnia are subcategories of insomnia disorders. Non-Organic Insomnia or Primary Insomnia refers to sleep disturbances that are unrelated to another health disease or issue. Individuals with insomnia report more psychological distress and difficulties in daytime functioning compared to those who sleep well.[4] Additionally, insomnia raises the likelihood of developing future depression.[5] Insomnia is typically undiagnosed and untreated, despite its high frequency and detrimental effects. The majority of people with insomnia initiate treatment without professional assistance and with self-help therapies (e.g., alcohol, over-the-counter medicines) of low efficacy and dubious safety.[6]

Typically, when insomnia is brought to the attention of a primary care physician, only medication is prescribed. Even though hypnotic drugs are only useful for the short-term treatment of insomnia, and there is limited evidence of their long-term effectiveness.[7] Increased interest in non-pharmaceutical treatments for insomnia has resulted from the recognition of the psychological variables that play a significant role in perpetuating sleep disruptions. In recent years, especially for the management of chronic insomnia, non-pharmacological or behavioural therapies have been developed in response to the numerous limitations of pharmaceutical treatment and the recognition of the mediating role of psychological factors. These treatment strategies typically involve techniques for modifying maladaptive sleep patterns, educating about more suitable sleep hygiene practises, shifting dysfunctional beliefs and attitudes about sleep, reducing autonomic and cognitive arousal, etc. Cognitive Behavior Therapy for Insomnia (CBT-I) is beneficial for primary insomnia, according to research. [8,9]

Because sleep is primarily an involuntary physiological activity, attempts to place it under human control are likely to exacerbate the situation. It is believed that Paradoxical Intention works by reducing performance anxiety (the inability of a bad sleeper to meet the criteria for good sleep) and by reducing associated sleep anxiety and sleep preoccupation. Long ago, paradoxical procedures in psychotherapy were documented.

Michael Ascher and others adopted Paradoxical Intention for insomnia from Viktor Frankl's work<sup>10</sup> in the late 1970s [11,12], when it was noticed that patients with insomnia were more successful at falling asleep when they tried to stay awake than when they wanted to fall asleep. There is no evidence to suggest that PIT affects sleep start and maintenance differently in insomnia. [13] There is a need for robust sleep research, including testing and implementation of evidence-based treatments for sleep deprivation and insomnia.[14] These days, online-delivered therapies are also popular and in demand, but there is a need for more research to evaluate their efficacy; therefore, the following objective was formulated.

## 2. METHODOLOGY

Twenty young individuals of mixed gender (CBT-I group; n=15 and PIT group; n=15). In the CBT-I group, there were six male participants. The average age of the four girls was 25.8

years. In the PIT group, there were seven men and three women, with a mean age of 24.9 years. All were enrolled in either undergraduate or graduate programmes. The technique of convenience sampling or opportunity sampling was employed to pick the sample. The Pittsburgh Sleep Quality Index 18 will be utilised to determine the level of sleep quality within the chosen sample. This scale has 18 self-reported items.

Those who responded. The items assess seven facets of sleep quality, with scores ranging from 0 (no trouble) to 3 (severe difficulty) for sleep length, sleep disturbance, sleep latency, daytime disturbance, habitual sleep efficiency, sleep quality, and usage of sleep drugs. The sum of these variables yields an indicator known as global sleep quality that spans from 0 to 21. The PSQI has strong internal consistency ( $\alpha = 0.80$  to  $0.85$ ) and test-retest reliability ( $r=0.85$  to  $0.87$ ), according to measures of reliability. It also has acceptable concurrent validity; PSQI scores are substantially associated with other subjective sleep quality measures ( $r>0.69$ ). Pre-Posttest Design was adopted for the present study.

### Mental Health Inventory (MHI)

Mental Health Inventory [19] responses are also self-reported. This inventory contains 38 elements that characterise the various mental states. It consists of six subscales, namely Anxiety, Depression, Lack of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, and Life Satisfaction on Two Global Scales, that is, Psychological Distress and Psychological Well-Being. There is also a Global Mental Health Index provided. Conversely, higher scores on General Positive Affect, Emotional Ties, Life Satisfaction, and Psychological Well-Being suggest a positive condition of Mental Health. The better mental health is deemed, the higher the Mental Health Index score.

## 3. RESULTS AND DISCUSSION

The primary purpose of the study was to evaluate and compare the efficacy of CBT-I and PIT and to investigate their impact on sleep quality and mental health in young adults with nonorganic insomnia adults. A group of 20 young adults of both sexes was taken.

Table 1 shows that there are significant differences between the preintervention and postintervention groups of cognitive behaviour therapy participants on the ISI, PSQI, and all domains of the MHI, namely Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, and Life Satisfaction on Two Global Scales, namely Psychological Distress and Psychological Well-Being, and the overall Mental Health Index. The outcomes of the present study are congruent with the findings of previous CBT-I research investigations. This finding implies that cognitive behavioural therapy (CBT) is now the most effective treatment for chronic insomnia.[12] A recent pilot research in a student population revealed that CBT-I produced treatment outcomes comparable to those commonly observed in the general population. [13. Recent research from a number of nations demonstrates that unguided internet-based CBT-I is highly effective in treating students and adults with chronic insomnia.[14,15] The preliminary data imply that CBT-I is implementable for the treatment of insomnia in adolescents. [16]

**Table-1: It shows the Means and SDs of the scores obtained by the CBT-I group (Pre and Post Intervention) on ISI, PSQI, and MHI domains and the corresponding values with their level of significance**

n=15 Variables		CBT-I Group		CBT-I Group		t-values	
		Level of (Pre-Intervention)		Level of (Post-Intervention)		Significance	
		Means	SDs	Means	SDs		
Insomnia Severity Index (ISI)		21.60	2.55	9.23	5.09	12.76	.000
Pittsburg Sleep Quality Index (PSQI)		14.10	2.10	7.30	3.09	12.19	.000
Anxiety		38.20	8.10	21.50	9.36	7.34	.000
Depression		15.90	3.43	9.40	4.26	8.56	.000
Loss of Behavioral/Emotional Control		38.60	8.53	22.30	11.24	7.74	.000
General Positive Affect		22.40	3.52	39.70	10.68	6.61	.000
Emotional Ties		4.30	1.76	6.20	2.14	6.00	.000
Life Satisfaction		3.80	1.23	4.50	1.16	2.63	.025
Psychological Distress		83.90	9.58	54.80	16.37	7.55	.000
Psychological Wellbeing		33.50	5.21	57.20	12.56	7.88	.000
Mental Health Index		99.40	11.43	121.40	13.95	5.93	.000

**Table-2: Shows the Means and SDs of the scores obtained by the PIT-I group (Pre and Post Intervention) on ISI, PSQI, and MHI domains and the corresponding values with their level of significance**

N = 15 variables		PIT-I Group		PIT-I Group		t-	
		values (Post-Intervention)		Level of (Pre-Intervention)		Significance	
		Means	SDs	Means	SDs		
Insomnia Severity Index (ISI)		21.48	3.03	18.12	4.46	3.65	.004
Pittsburg Sleep Quality Index (PSQI)		13.81	2.27	10.81	3.31	4.12	.003
Anxiety		38.78	7.06	33.48	8.30	4.73	.002
Depression		15.72	3.37	11.47	3.15	4.95	.002

Loss of Behavioral/Emotional Control	39.21	9.33	34.00	9.22	3.99	.002
General Positive Affect	23.43	3.54	22.28	3.31	0.58	.575
Emotional Ties	4.64	1.41	6.57	2.12	4.25	.002
Life Satisfaction	4.12	1.36	4.60	1.08	2.21	.051
Psychological Distress	84.46	10.2	77.22	7.94	5.53	.000
Psychological Wellbeing	33.01	5.02	39.79	9.47	3.03	.012
Mental Health Index	99.63	14.3	111.47	12.91	3.66	.005

Table 2 reveals that there are substantial changes between the Paradoxical Intention Therapy groups before and after intervention. Anxiety, depression, loss of behavioral/emotional control, emotional ties, and life satisfaction on Two Global Scales for ISI, PSQI, and MHI participants. I.e. Psychological Distress And Psychological Well-Being, as well as the overall Mental Health Index, excluding General Positive Affect. It is believed that Paradoxical Intention works by reducing performance anxiety (the inability of a bad sleeper to meet the criteria for good sleep) and by reducing associated sleep anxiety and sleep preoccupation. [17-18].

Ascher and Turner 12 examined the effectiveness of progressive relaxation, sensory control, and paradoxical intention for treating sleep-onset insomnia. Their research revealed that all three were equally effective.

There were substantial differences between the CBT group and the PIT group in the majority of assessment scores, as shown in measures. On the MHI domains, the CBT-1 group has improved much more than the PIT group (post-intervention). In the areas of Emotional Ties and Life Satisfaction, however, there are no significant variations between the groups. After intervention, both groups demonstrated improvements in their evaluation scores relative to their scores prior to intervention.[21-24] The study's initial hypothesis, that both CBT and PIT therapies would result in a significant improvement in assessment scores, was confirmed. In ISI, PSQI, and the majority of MHI domains, there was a significant improvement between the pre-intervention and post-intervention scores of both groups, as shown in Tables 1 and 2. A recent comprehensive analysis revealed that there are substantial disparities in treatment effects across intervention modalities, with sleep hygiene therapies yielding small effect sizes and cognitive-behavioral therapy for insomnia (CBT-I) producing significant effect sizes. [19-20]

#### 4. CONCLUSION

In conclusion, cognitive behavioural therapy given online is more effective than paradoxical intention treatment for increasing sleep in young adults with insomnia. Primary care practitioners should take into account Efforts should be made to educate the public about sleep issues and psychological therapies are useful for alleviating insomnia symptoms. Expand access to these therapies for persons with sleep disorders.

#### Implications of the research



There are significant clinical consequences associated with this type of research. These data indicate that it is viable to utilise CBT-I and PIT with young adults, that sleep patterns are highly changeable, and that brief targeted treatments for insomnia are an especially promising area of intervention. In conclusion, this study supports the feasibility of delivering CBT-I and PIT interventions online to young adults with insomnia complaints. Future study is required to determine preliminary efficacy on sleep outcomes and to investigate whether changes in sleep can result in alterations in psychological and physical functioning.

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