

Effectiveness of Sleep Hygiene to Reduce Insomnia Among Persons with Suffering with Obsessive Compulsive Disorder-Pilot Analysis

SARADHADEVI.S
RESEARCH SCHOLAR

DR.V.HEMAVATHY
SUPERVISOR
PRINCIPAL

SREE BALAJI COLLEGE OF NURSING
BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

Abstract

Insomnia is a common problem among patients with obsessive-compulsive disorder and patients suffering from acute insomnia with psychiatric comorbidity are more likely to develop chronic insomnia without appropriate intervention. Here we report a case of obsessive-compulsive disorder with acute insomnia, successfully treated with early sleep psychiatric non-pharmacological intervention. Sleep is crucial to brain function and important for maintaining cognitive and emotional process. Insomnia and anxiety disorders are highly prevalent and are associated with significant impairment and disability. There is evidence that insomnia and anxiety disorders commonly co-occur, in addition to both being highly comorbid with major depressive disorder. Sleep hygiene has been incorporated into most psychological interventions for insomnia. Clinically, these instructions provide a good start for treatment.

Key words: Sleep, Insomnia, Obsession, compulsion

Introduction

Psychiatric disorders, such as neurotic disorders including OCD, are often associated with sleep disorders, especially insomnia, which is a crucial element in clinical practice. It is chronic inability to obtain the amount of sleep needed for optimal functioning and well-being. Behavioral interventions for insomnia include relaxation training, stimulus control therapy, sleep restriction therapy, sleep hygiene, paradoxical intention therapy, cognitive restructuring, and other approaches. These are briefly explained. Research indicates that behavioral interventions are efficacious, effective, and likely cost-effective treatments for insomnia that yield reliable, robust, and long-term benefits in adults of all ages. Detailed guidance is provided for the practical management of patients with insomnia.

Materials and Methods

Quantitative evaluative research approach was used to assess the effectiveness of sleep hygiene to reduce insomnia among OCD Persons. Experimental research design was used for the study. The sample was alcohol dependence between the age group of 18 to above 60

years who fulfil the inclusion criteria. Probability simple random sampling technique was used. The tool consists of 3 parts, demographic variables, insomnia severity index scale and interventions.

OBJECTIVES OF THE STUDY

1. To determine the pre and post assessment level of insomnia among persons suffering with obsessive compulsive disorder in study and control group
2. To compare pre and post assessment level insomnia among persons suffering with obsessive compulsive disorder in study and control group
3. To evaluate the effectiveness of sleep hygiene to reduce insomnia for persons suffering with obsessive compulsive disorder between study and control group.
4. To associate demographic variables with posttest level of scores in study group.

RESULTS

Table 1: PRETEST LEVEL OF INSOMNIA SCORE

Level of insomnia	Experiment		Control		Chi square test
	n	%	n	%	
No clinically significant insomnia	0	0.00%	0	0.00%	$\chi^2=0.37$ P=0.54 (NS)
Sub threshold insomnia	1	6.67%	2	13.33%	
Moderate severity	14	93.33%	13	86.67%	
Severe	0	0.00%	0	0.00%	
Total	15	100.00%	15	100.00%	

(Fig 6) $P > 0.05$ not significant NS= not significant

Table no.2 compares the pretest level of insomnia score between Experiment and control group of persons suffering with obsessive compulsive disorder before intervention. Before Multi interventional approach, in Experiment group, 6.67% of them are having Sub threshold insomnia level of score, 93.33% of them having Moderate severity level of score. In control group, 13.33% of them are having Sub threshold insomnia level of score, 86.67% of them having Moderate severity level of score. Statistically there is no significant difference between Experiment and control group. Level of insomnia score between Experiment and control group was calculated using chi-square test.

Table 2 POSTTEST LEVEL OF INSOMNIA SCORE

Level of insomnia	Experiment		Control		Chi square test
	n	%	n	%	
No clinically significant insomnia	0	0.00%	0	0.00%	$\chi^2=3.97$ P=0.05*
Sub threshold insomnia	7	46.67%	2	13.33%	

Moderate severity	8	53.33%	13	86.67%	(S)
Severe	0	0.00%	0	0.00%	
Total	15	100.00%	15	100.00%	

(Fig 8) *** $P \leq 0.001$ very high significant S= significant

Table no.2 compares the post-test level of insomnia score between Experiment and control group of persons suffering with obsessive compulsive disorder before intervention. Before Multi interventional approach, in Experiment group, 46.67% of them are having Sub threshold insomnia level of score, 53.33% of them having Moderate severity level of score. In control group, 13.33% of them are having Sub threshold insomnia level of score, 86.67% of them having Moderate severity level of score.

Statistically there is a significant difference between Experiment and control group. Level of insomnia score between Experiment and control group was calculated using chi-square test.

Level of Insomnia score between Experiment and control group

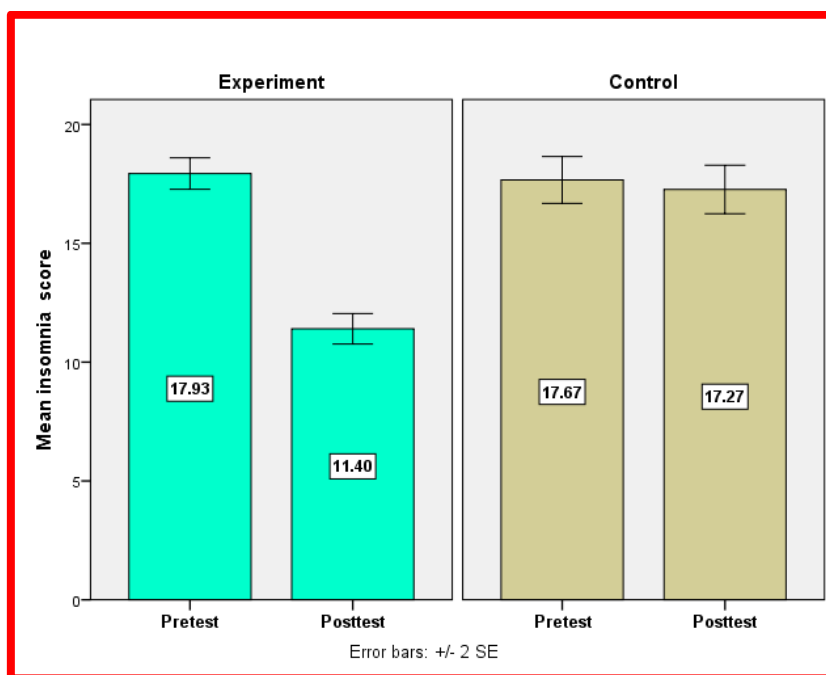


Table 3: COMPARISON OF PRETEST AND POSTTEST MEAN INSOMNIA SCORE

Group		N	Mean	SD	Mean reduction score	Paired t-test
Experiment	Pre-test	15	17.93	1.28	6.53	t=11.55 p=0.001*** (S)
	Post-test	15	11.40	1.24		
Control	Pre-test	15	17.67	1.91	0.40	t=1.57 p=0.14 (NS)
	Post-test	15	17.27	1.00		

Considering Experiment group, in pretest they are having 17.93 score and in posttest they are having 11.40 score, so the difference is 6.53 this difference is large and it is statistically significant.

Considering Control group, in pretest they are having 17.67 score and in posttest they are having 17.27 score, so the difference is 0.40, this difference is small and it is not statistically significant.

Statistical significance difference between pre-test and post-test was calculated using student paired t-test

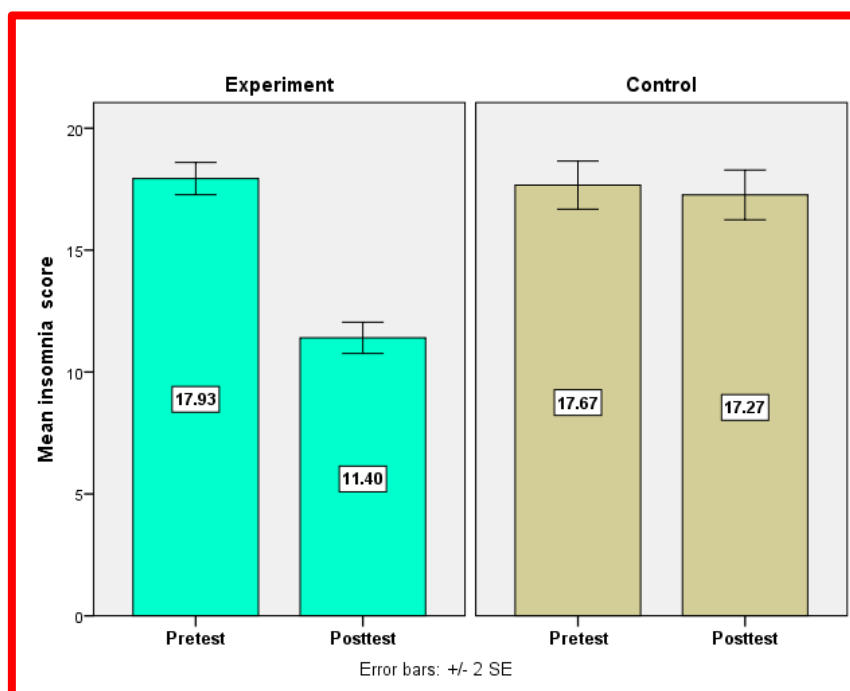
Table 4: COMPARISON OF MEAN INSOMNIA SCORE BETWEEN EXPERIMENT AND CONTROL GROUP

Group		N	Mean	SD	Mean difference score	Student independent t-test
Pretest	Experiment	15	17.93	1.28	0.26	t=0.45 p=0.66 (NS)
	Control	15	17.67	1.91		
Posttest	Experiment	15	11.40	1.24	5.87	t=10.73 p=0.001*** (S)
	Control	15	17.27	1.02		

Considering pretest, Experiment group are having 17.93 score and in control they are having 17.67 score, so the difference is 0.93, this difference is small and it is statistically not significant.

Considering posttest, Experiment group are having 11.40 score and in control group, they are having 17.07 score, so the difference is 14.57, this difference is large and it is statistically significant.

Statistical significance difference between experiment and control was calculated using student independent t-test



Simple bar with 2 standard error diagram compares the pretest and posttest Insomnia score among Experiment and Control group

Table 5: EFFECTIVENESS OF MULTIINTERVENTIONAL APPROACH AND GENERALIZATION OF INSOMNIA REDUCTION SCORE

Group	Test	Maximum score	Mean score	Mean Difference of insomnia reduction score with 95% Confidence interval	Percentage Difference of insomnia reduction score with 95% Confidence interval
Experiment	Pretest	28	17.93	6.53(5.31 – 7.75)	23.32%(18.96% – 27.67%)
	Posttest	28	11.40		
Control	Pretest	28	17.67	0.40(-0.15 – 0.95)	1.42%(-0.54% – 3.39%)
	Posttest	28	17.27		

Table no 5 shows the effectiveness of effectiveness of multiinterventional approach on insomnia.

Experiment group are reduced 23.32% insomnia score whereas control group reduced only 3.39% of score.

Differences and generalization of insomnia reduction score between pretest and posttest score was calculated using and mean difference with 95% CI and proportion with 95% CI

Table 6 : ASSOCIATION BETWEEN POSTTEST LEVEL OF INSOMNIA SCORE AND PERSONS DEMOGRAPHIC VARIABLES(Experiment group)

Demographic variables		Posttest level of Insomnia				n	Chi square test
		Sub threshold insomnia		Moderate severity			
		n	%	n	%		
AGE	31-40 years	4	50.00%	4	50.00%	8	$\chi^2=0.07$ $p=0.78$ (NS)
	41-50 years	3	42.86%	4	57.14%	7	
RELIGION	Hindu	3	20.00%	7	80.00%	10	$\chi^2=0.83$ $p=0.36$ (NS)
	Muslim/Christian	4	100.00%	1	0.00%	5	
TYPE OF FAMILY	Nuclear family	6	54.55%	5	45.45%	11	$\chi^2=1.02$ $p=0.31$ (NS)
	Joint family	1	25.00%	3	75.00%	4	
MARITAL STATUS	Married	7	46.67%	8	53.33%	15	$\chi^2=0.00$ $p=1.00$ (NS)
	Unmarried	0	0.00%	0	0.00%	0	
OCCUPATION	Cooley /Drivers	2	20.00%	8	80.00%	10	$\chi^2=5.65$ $p=0.01$ ** (S)
	Businessman/others	5	100.00%	0	0.00%	5	
SUPPORT	Family	7	63.64%	4	36.36%	11	$\chi^2=4.77$ $p=0.05$ * (S)

SYSTEM	Relatives	0	0.00%	4	100.00%	4	
DURATION OF SLEP PER DAY	2- 3 hours	1	16.67%	5	83.33%	6	$\chi^2=1.88p=0.17NS$
	3- 4 hours	6	66.67%	3	33.33%	9	
SLEEP HABITS	Listing to music/others	1	16.67%	5	83.33%	6	$\chi^2=2.88p=0.17(NS)$
	Watching TV	6	66.67%	3	33.33%	9	

****** $p \leq 0.01$ highly significant ***** $p \leq 0.05$ significant **S**=significant

$p > 0.05$ not significant **NS**= not significant

Table 6 shows the association between the post-test level of insomnia score and demographic variables of persons. businessman/others and family support persons are more benefited than others. Statistical significance was assessed using Chi square test/Yates corrected chi square test.

Discussion

Psychological and behavioural therapies reliable changes in several sleep parameters with insomnia associated with medical and psychiatric disorders. sleep psychiatry (psychiatric therapeutic approach, both biologically and psychologically, based on sleep science) has gathered much attention worldwide. In this case, we attempted an early intervention in the vicious cycle of acute insomnia.

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