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Prof. Meera Saravanan
HOD Psychiatric Nursing,
PSG College of Nursing,
Peelameedu, Coimbatore,
Tamil Nadu, India

Dr. A Jayasudha
Principal, PSG College of
Nursing, Peelameedu,
Coimbatore, Tamil Nadu,
India

Dr. R Sureshkumar
Assistant Professor,
Department of Psychiatry,
PSGIMSR, PSG Hospitals,
Peelameedu, Coimbatore,
Tamil Nadu, India

Chinchu S Giju
IV BSc Nursing, PSG College
of Nursing, Peelameedu,
Coimbatore, Tamil Nadu,
India

A Srinidhi
IV BSc Nursing, PSG College
of Nursing, Peelameedu,
Coimbatore, Tamil Nadu,
India

Sri Gayathri
IV BSc Nursing, PSG College
of Nursing, Peelameedu,
Coimbatore, Tamil Nadu,
India

M Tamilselvi
IV BSc Nursing, PSG College
of Nursing, Peelameedu,
Coimbatore, Tamil Nadu,
India

Correspondence
Prof. Meera Saravanan
HOD Psychiatric Nursing,
PSG College of Nursing,
peelameedu, Coimbatore,
Tamil Nadu, India

Managing levels of insomnia in psychiatric patients

Meera Saravanan, Dr. A Jayasudha, Dr. R Sureshkumar, Chinchu S Giju, A Srinidhi, Sri Gayathri and M Tamilselvi

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Abstract
Sleep is important in homeostasis, memory, learning and wellbeing. Objectives were to assess the level of insomnia among psychiatric patients, to evaluate the effectiveness of structured teaching programme regarding management of level of insomnia among psychiatric patients and to associate the level of insomnia of psychiatric patients with selected demographic variables. Pre Experimental Design with One group pre-test and post-test design was used. Purposive sampling technique was applied and thirty psychiatric patients were selected. Insomnia severity index tool was used for data collection. Structured teaching programme on management of insomnia for a period of 30 minutes included sleep wave cycle, factors affecting sleep, sleep disturbances and sleep promotion measures. In the pre-test, 46.6% patients have sub threshold, 36.6% have moderate level and 16.7% have severe level of insomnia. In the post-test, 20% patients have no significant insomnia, 60% have sub threshold and 20% have moderate insomnia. Table 4 shows that statistically signified improvement in psychiatric patients after the intervention. The mean and the standard deviation of pre-test level of insomnia is 15.16 ± 2.78 respectively whereas in the psot-test it was 10.53 ± 2.65 respectively. The t-value was 8.0793 at $p > 0.001$. It shows that structured teaching programme on mangement of level of insomnia was effective to reduce the level of insomnia among psychiatric patients. Thus, there was a statistically significant improvement between pre and post-test level of insomnia among psychiatric patients.

Keywords: sleep, insomnia, structured teaching programme, psychiatric patients.

Introduction

"Sleep is the golden chain that ties health and our bodies together"-Thomas Dekker.

Everyone sleeps! Sleep is familiar to us all, yet still remains a medical mystery. Sleep is a fascinating and the daily experience of every human being. It occupies almost one-third of a person's life and undergoes considerable variation in its pattern as a person grows and matures. Sleep is a state of consciousness, distinct from working, during which we are generally unaware of our bodies and minds.

Sleep is a naturally recurring state of mind, characterized by altered consciousness, relatively inhibiting sensory activity, reduced muscle activity and inhibition of nearly all voluntary muscles during rapid eye movement (REM) sleep and reduced interaction with the surroundings.

Sleep is important in homeostasis, memory, learning and wellbeing. Sleep is essential to survival. It increases in slow wave activity after learning a task have been associated with improved performance of the task. Although the mechanism is not entirely clear, numerous studies support the instrumental role sleep plays in memory consolidation and learning.

Background of the study

Chronic sleep problems affect 50% to 80% of patients in a typical psychiatric practice, compared with 10% to 18% of adults in general US population. (Ford, 2009)

The overall prevalence of symptoms of sleep disorders in the psychiatric outpatients sample was 40.75%. The prevalence of symptoms of narcolepsy, sleep breathing disorder, PLM/RLS, circadian rhythm disorder and parasomnia were 12.5%, 14.5%, 14.8%, 4.5% and 13.8% respectively. (Adhiti Hombali, 2019)

Lack of sleep may lead to a number of problems. Patients who have poor night time sleeps are more likely to have confusion, frustration, depressed mood, attention and memory problems excessive day time sleepiness, more night time falls, and use more over the counter or prescription sleep aids. Disturbed sleep is also associated with a poor quality of life.

Body chronically deprived of sleep is a walking time bomb.17 hours of sustained wakefulness leads to a decreasing performance. Reducing a person's normal sleep time at night by half decreases the activity of T-cells, the cells that destroys bacteria, virus and tumour cells. Better management of sleeping problems in patients can improve these patients health and quality of life.

A study was conducted on promoting rest and sleep with non-pharmacological program was designed to enhance rest and sleep among 250 patients which was implemented in a hospital medical unit. Nursing assistants provided patients with various modalities to improve sleep, including back rubs, warm drinks, blankets warmed in a blanket warmer, aromatherapy, relaxation music, and earplugs. Additional interventions were taken to reduce noise. The outcomes of the study showed 63.45% patients had improved sleep quality and quantity. (Holzinger, Brigitte, 2019).

Effectiveness of sleep management strategies was studied on residents of aged care facilities for the promotion of sleep. Findings suggested that multidisciplinary strategies such as combining a reduction in environmental noise, reduction of night-time nursing care and promotion of daytime activity, were 69% more effective for promoting sleep in the population of interest. Wrist actigraphy was found to be the most accurate objective sleep assessment tool. It was found that lack of sleep, disturbed sleep and the overuse of medications especially sedations reduced the quality of life in older people. Effective safe sleep interventions should be promoted and practiced by nurses. (Matsuda, Risa; Shun, 2019).

A study was conducted on hospitalized patients for the frequency of sleep disruption and daytime function and effectiveness of cognitive behavior therapy and exercise on sleep. There was good evidence supporting the effectiveness of cognitive behavior therapy on sleep. Results of the study showed that exercise improves sleep as effectively as benzodiazepines. (Navarro-Bravo, 2019)

Sleep disturbance is the most common cause of insomnia in psychiatric patients. So, good quality sleep is important to body and mind's ability to renew and refresh. Role of nurse includes preventing the factors that disturbs the sleep and provide environment that is congenial for good sleep. They should provide sufficient information regarding quality of sleep to the patients by sleep promotional measures such as bedtime rituals which help in improving sleep pattern.
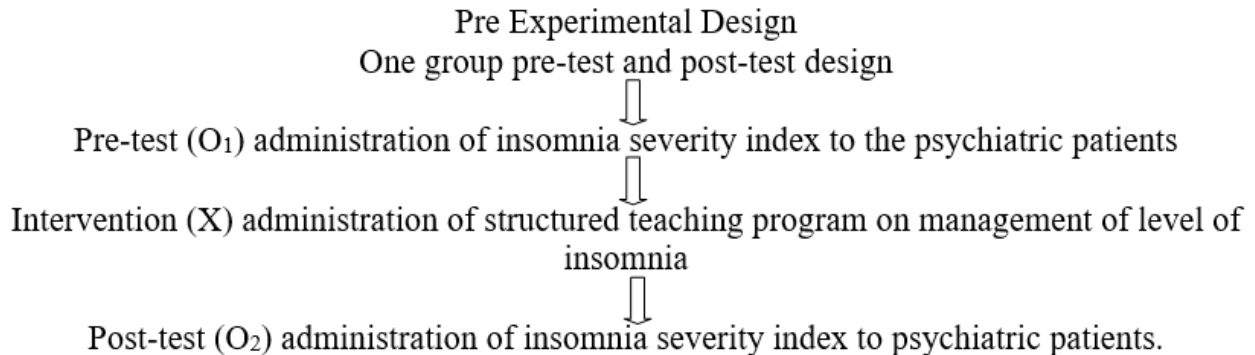
Problem Statement: Effectiveness of structured teaching programme on management of level of insomnia among psychiatric patients in a tertiary care Hospital, Coimbatore.

Objectives
- To assess the level of insomnia among psychiatric patients.
- To evaluate the effectiveness of structured teaching programme regarding management of level of insomnia among psychiatric patients.
- To associate the level of insomnia of psychiatric patients with selected demographicvariables.

Methodology
Research design

Pre Experimental Design
One group pre-test and post-test design
⇩
Pre-test (O_1) administration of insomnia severity index to the psychiatric patients
⇩
Intervention (X) administration of structured teaching program on management of level of insomnia
⇩
Post-test (O_2) administration of insomnia severity index to psychiatric patients.

Setting of the study: Psychiatric wards of PSG Hospitals.

Population: Psychiatric patients of both sex with psychiatric disturbance from PSG Hospitals, Coimbatore.

Sampling technique: Purposive sampling technique

Sampling selection criteria
Inclusive criteria
- Those who are cooperative to participate in the study.
- Those have partial/total insight present.
- Those who stay more than a week.
- Both male and females.

Exclusive criteria
- Psychiatric patients who are aggressive.
- Psychiatric patients who are taking sleep medications.

Instrument and tools for data collection
Section-A: Demographic variables : Baseline data information such as name, age, education, religion, occupation and family data like type of family, member of family, income of family of psychiatric patients.

Section-B: Insomnia severity index: Insomnia severity index is a brief self-report instrument measuring the patients perception of both nocturnal and diurnal symptoms of insomnia.

The insomnia severity index has 7 questions. The 7 answers are added up to get a total score. When the patients have total score, should look at the guidelines of scoring/interpretation to check the sleep difficulties.

Scoring

Score	Interpretation
0 – 7	No clinically significant insomnia
8 – 14	Sub threshold insomnia
15 – 21	Moderate insomnia
22 – 28	Severe insomnia

Section-C: Structured teaching programme on management insomnia for a period of 30 minutes. It includes sleep wave cycle, factors affecting sleep, sleep disturbances and sleep promotion measures.

Findings

Tables 1: Frequency and percentage distribution of demographic variables of psychiatric patients n=30

S. No	Demographic variables		Frequency	Percentage (%)
	Age in years			
1.	a)	Below 40	9	30
	b)	Above 40	21	70
	Educational status			
	a)	Illiterate	10	33.33
2.	b)	Higher education	9	30
	c)	Graduate	8	26.66
	d)	post graduate	3	10
	Occupational status			
	a)	Private	10	33.33
3.	b)	Government	5	16.66
	c)	House wife	10	33.33
	d)	Business	5	16.66
	Monthly family income			
	a)	3000	0	0
4.	b)	4000-6000	11	36.66
	c)	7000-12000	19	63.33
	Type of family			
5.	a)	Nuclear family	24	80
	b)	Joint family	6	20

Table 1 shows the 21 patients (70%) were at the age group of >40 years, 10(33.3%) patients were illiterate 10 patients (33.3%) were working at private sector, 19 patients (63.3%) income were above 10000, 24 patients (80%) belongs to a nuclear family.

Table 2: Assessment of pre-test level of insomnia among psychiatric patients n=30

S. No	Level of sleep disturbance	Pre-test	
		Frequency	Percentage (%)
1.	No significant insomnia	0	0%
2.	Sub threshold insomnia	14	46.6
3.	Moderate insomnia	11	36.7
4.	Severe insomnia	5	16.7

Table 2 revealed with respect that 14 patients (46.6%) have sub threshold insomnia, 11 patients (36.6%) have moderate level of insomnia, 5 patients (16.7%) have severe level of insomnia.

Table 3: Assessment of post level of insomnia among psychiatric patients. n=30

S. No	Level of Insomnia	Post Test	
		Frequency	Percentage (%)
1.	No significant insomnia	6	20
2.	Sub threshold insomnia	18	60
3.	Moderate insomnia	6	20
4.	Severe insomnia	0	0

Table 3 shows that 6 psychiatric patients (20%) have no significant insomnia,18 psychiatric patients(60%) have sub threshold insomnia and 6 psychiatric patients (20%) have moderate insomnia in post-test.

Table 4: Comparison of pre-test and post-test level of insomnia among psychiatric patients n=30

S. No		Mean	S.D	t-value
1.	Pre-test	15.16	2.78	8.0793
2.	Post test	10.53	2.65	

Note: Statistically significant-***p>0.001

Table 4 shows that statistically signified improvement in psychiatric patients after the intervention. The mean and the standard deviation of pre-test level of insomnia is 15.16 ± 2.78 respectively after providing management of insomnia the level of insomnia is reduced whereas the mean and standard deviation of post-test level of insomnia among psychiatric patients is 10.53 ± 2.65 respectively. The t-value is 8.0793 at p>0.001. It shows that management of insomnia is effective to reduce the level of insomnia among psychiatric patients. Thus, there was a statistically significant improvement between pre and post-test level of insomnia after the management of level of insomnia among psychiatric patients.

Table 5: Association of pre-test level of management of insomnia with selected demographic variables n=30

S. No	Demographic variables	Sub threshold insomnia	Moderate insomnia	Severe insomnia	Calculated value	Tabulated value
	Age in years					
1.	a. Below 40	3	4	2	0.2380	3.841 NS
	b. Above 40	11	7	3		
	Educational status					
	a. Illiterate	6	3	1		
2.	b. Higher education	4	3	2	2.454	7.815 NS
	c. Graduate	3	4	1		
	d. post graduate	1	1	1		
3.	**Occupational status**					
	a. Private	3	2	2		
	b. Government	3	3	1	4.5359	7.815 NS
	c. House wife	3	3	3		
	d. Business	4	1	2		
	Monthly family income					
4.	a. 3000	0	0	0		
	b. 4000-6000	9	2	0	3.394	5.991 NS
	c. 7000-12000	5	9	5		
	Type of family					
5.	a. Nuclear family	12	8	4	0.035	3.841 NS
	b. Joint family	2	3	1		

Note:**$p< 0.005$, S-significant, NS-Non significant

Table 5 shows that there is no significant association between insomnia and selected demographic variables like age, education, occupation, income and type of family.

Nursing implications
Nursing Education
- Nursing students should explore more on various approaches in management of insomnia.
- Conferences, workshops, seminar and symposium can be held for all health personnel in bringing about behavioural changes among psychiatric patients towards sleep hygiene.
- In-Service education can be given to the staff nurses and faculty members regarding management of level of insomnia in order to improve the good sleeping pattern among psychiatric patients.

Nursing practice
- The nurses working in the health services should be equipped with the knowledge on management of level of insomnia.
- Planned structured teaching programmes on management of level of insomnia to be scheduled for health care workers.
- Pamphlets can be provided with appropriate pictures and explanations to improve sleeping pattern.

Nursing Administration
- Advanced clinical nursing should focus on normal sleeping pattern for patients in any ward setting in hospital
- The administrator shall initiate educating the psychiatric patients and family members about sleep hygiene.
- Promote awareness about management of insomnia to public

Nursing Research
Nurse researchers can do similar study on patients with medical illnesses

Recommendations
- Similar studies can be conducted for large sample of psychiatric patients.
- Similar studies can be conducted among IT professionals and older adults

Conclusion
Structured teaching programme helped to reduce the level of insomnia, from severe level to sub threshold level of insomnia among majority of the psychiatric patients.

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