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Research Article

Impact of Advanced Training Program on Cognizance regarding Sleep Disorders and its Effective Management among Nursing Officers from Selected Hospitals of Dahod City

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Abstract

Introduction: Sleep is a vital component of overall health, influencing various physiological and psychological functions. Insufficient or poor-quality sleep has been associated with numerous health problems. Nurses, as health-care providers, play a crucial role in understanding and managing sleep disorders. To address the knowledge gap among healthcare professionals regarding sleep disorders, an advanced training program was implemented.

Aim: The study aimed to assess the impact of an advanced training program on the nursing officers' knowledge regarding sleep disorders and their management.

Materials and Methods: A pre-test, post-test design was employed among 400 nursing officers in a government hospital in Dahod, India. A questionnaire was used to check knowledge levels before and after the intervention. Post-test was conducted after 7 days.

Results: Significant improvement was observed in nursing officers' knowledge of sleep disorders after intervention. The paired *t*-test revealed a significant improvement in the cognizance scores of nursing officers following the advanced training program, with a *t*-value of 89.79 (t(df) = 399; $P < 0.05$), increasing from a pre-test mean of 44.54 to a post-test mean of 73.77. The educational program effectively enhanced understanding across various aspects of sleep disorders, including prevention and management strategies. Pre-test cognizance scores did not have a significant association with demographic factors including age, gender, or level of education.

Conclusion: The study concludes that the advanced training program was successful in increasing nursing officers' knowledge about sleep disorders. This enhanced knowledge base can contribute to improved patient care and outcomes.

Keywords: Advanced training program, educational program, knowledge improvement, nursing officers, sleep disorders

Introduction

Sleep is a physiological and mental state that happens naturally, characterized by reduced sensory activity and altered consciousness, and decreased muscular contraction during fast eye movement. For optimum health, good sleep is essential, affecting hormone levels, mood, and weight. During sleep, most body systems are in an anabolic state, essential for life and optimal health. Although we can alter many of our habits, we cannot forgo sleep for more than short periods. Some professions require inverse work-sleep shifts, with sleep during day time and wakefulness at night. However, poor sleep quality, insufficient sleep, and misaligned sleep cycles negatively affect mental and physical functioning.[1]

The physiology of sleep involves significant changes in the brain, which expends less energy sleeping than when awake. Sleep functions include restoration, memory processing, and

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dreaming. Restoration involves the body's physical repair and removal of metabolic wastes accumulated during activity. Memory processing supports long-term memory formation and enhances recall of prior knowledge and encounters. Dreaming, which occurs during sleep, incorporates components found in a person's mind in ways that would not typically coalesce.

Sleep has two main stages. Rapid eye movement (REM) and non-REM (NREM) are the two primary phases. REM sleep, comprising about a quarter of our sleep, is a time of intense cerebral activity characterized by vibrant dreams and may be in charge of information consolidation and memory processing. NREM sleep has three to four distinct stages, growing progressively deeper, making it tough to be disturbed. During NREM sleep, the body lowers heart rate, temperature, and breathing rate.[2]

Several disorders can affect sleep.[3] The most prevalent type of sleep problem, insomnia, is characterized by trouble sleeping and staying asleep. Its prevalence increases with age and is higher in women, causing impairments such as excessive sleepiness, anxiety, and depression.[4] Obstructive sleep apnea involves significant breathing pauses during the night, which can seriously impair health and interfere with the regular flow of sleep. Hypersomnia, characterized by excessive daytime sleepiness, can lead to unintended sleep episodes.[5] Circadian rhythm sleep disorder involves disruptions in a person's natural sleep-wake cycle.[6] Disorder of periodic limb movement features rhythmic limb movements during sleep. Shift work sleep disorder arises from working night or rotating shifts, causing trouble sleeping.[7,8]

Healthy sleep habits, or good sleep hygiene, can significantly improve quality of sleep. Among them are sticking to a regular sleep pattern, practicing a relaxing bedtime ritual, avoiding naps if sleep is problematic, exercising daily, and evaluating and optimizing the sleep environment. In addition, using bright light to manage circadian rhythms, avoiding stimulants and heavy meals in the evening, and engaging in calming activities before bed are recommended.[9]

Certain drugs, known as hypnotics, induce sleep, including benzodiazepines, though they disrupt the REM sleep. Antihistamines such as doxylamine and diphenhydramine, as well as nonbenzodiazepine hypnotics such as eszopiclone, zaleplon, and zolpidem, are also used. Despite its rebound effect, alcohol and REM interference are sometimes consumed for its sedative effects. Diet also influences sleep, with high carbohydrate diets promoting faster sleep onset and longer sleep duration than high fat diets. High-quality clinical trials are needed to better define the influence of diet on sleep quality.[10]

Despite the importance of good sleep, shift-working nurses often face severe sleep disturbances due to irregular work hours, which adversely impact their quality of life. Studies have demonstrated that shift-work nurses experience poor sleep quality and increased rates of health issues such as cancer, cardiovascular diseases, and digestive disorders. In addition, poor sleep is linked to higher rates of medical errors and occupational injuries.[11,12]

In conclusion, poor sleep quality and insufficient sleep have detrimental impacts on performance and health. Existing research indicates that these sleep issues affect the immune system, digestion, metabolism, and hormone release, leading to health issues include cancer, heart problems, emotional instability, and exhaustion. Nurses with sleep problems are at greater risk for medical errors, compromised healthcare quality, patient safety issues, and occupational injuries.[13]

Problem statement

Impact of advanced training program on cognizance regarding sleep disorders and its effective management among nursing officers from selected hospitals of Dahod city.

Objectives of the study

The objectives of the study are as follows:

1. To assess the prevalence of sleep disorders among nursing officers.
2. To find out the risk factors regarding sleep disorders among nursing officers.
3. To find out the existing cognizance level of sleep disorders and its effective management among nursing officers before the intervention.
4. To implement advanced training programme on sleep disorders and its management among nursing officers.
5. To determine the effectiveness of advanced training programme on cognizance level regarding sleep disorders and its management among nursing officers after the intervention.
6. To compare the post-test with pre-test results regarding sleep disorders and its management among nursing officers.
7. To find out the association between effectiveness of advanced training programme on cognizance level regarding sleep disorders and its management with socio demographic variables.

Hypotheses

Hypotheses will be tested at 0.05 level of statistical significance:

H_0: The mean post-test cognizance score will not be significantly higher than pre-test score.

H_1: The mean post-test cognizance score will be significantly higher than pre-test score.

Research Methodology

Research design

For this study, a pre-experimental one-group pre-test and post-test design utilizing a quantitative research methodology was chosen.

Study setting

The study was conducted at a selected government hospital in Dahod.

Population
The population comprised nursing officers working at the selected government hospital in Dahod.

Sample size and sampling technique
A total of 400 nursing officers were selected using a non-probability convenient sampling technique.

Inclusion and exclusion criteria
Nursing officers were included in the study if they were willing to participate, available during data collection, working in selected hospitals of Dahod city, and registered as a nurse and midwife with the state nursing council.

Variables
- Independent variable: Cognizance regarding sleep disorders and its effective management among nursing officers.
- Dependent variable: Scores on a structured knowledge questionnaire.

Development of the tool
A structured questionnaire was developed to assess the cognizance of nursing officers regarding sleep disorders. The tool was framed after thorough review of research and non-research articles and consultations with experts in the field. The structured educational program, which included all key areas related to sleep disorders, was also developed for this study.

Pilot study
A pilot study was conducted from November 25th, 2019, to December 10th, 2019, at the selected hospital in Dahod. This pilot study aimed to evaluate the feasibility and validity of the structured questionnaire and the overall study design. Approval from the Institutional Ethical Committee and hospital authorities were obtained before the study. Forty nursing officers (10% of the total population of the main study) were selected based on the sampling criteria. Written consent was obtained from all participants before the pre-tests. The structured questionnaire was administered on the 1st, 2nd, and 3rd days in groups of 10 participants. Following the pre-test, the structured educational program was administered on the same day. A post-test was conducted using the same tool on the 7th day after the pre-test. The pilot study confirmed that the tools and study design were feasible, with a reliability score of 0.82, indicating that the tool was reliable.

Content validity
The structured questionnaire was content-validated by a panel of experts in the nursing field and physicians. All items received 100% agreement from the experts, although some suggestions were made for modifications. These were incorporated into the final version of the tool after consulting the research guide.

Reliability of the tool
The reliability of the tool was established through the test-retest method, using Karl Pearson's coefficient of correlation formula. Internal consistency was tested through item analysis, evaluating questions based on difficulty and discriminative indices. The reliability coefficient of the structured questionnaire was found to be r = 0.82, indicating that the tool was reliable.

Tool description
- Section A: Demographic data of the participants.
- Section B: Structured knowledge questionnaire to assess the cognizance of nursing officers regarding sleep disorders and their effective management.

Statistical technique
The data were analyzed using both descriptive and inferential statistics. The analysis was conducted in alignment with the study's objectives and hypothesis. To determine the significant difference between the pre-test and post-test cognizance scores of nursing officers, a paired "*t*" test was employed. In addition, the Chi-square test was utilized to assess the association between pre-test cognizance scores and selected demographic variables. The results indicated that the advanced training program effectively enhanced the nursing officers' knowledge of sleep disorders and their management.

Results
Section A: Distribution of subjects according to their demographic data

Table 1 depicts distribution of various demographic variables of the 400 study subjects in frequency and percentage of job type, age, gender, marital, type of family, qualification, religion, clinical experience, family income, nursing officers' income, and formation acquired about sleeping disorders. All participants were employed permanently, with the majority (65.3%) falling between 31 and 40 years old. The gender distribution was nearly equal (52.5% female, 47.5% male). Nuclear families were the most common (53.3%), followed by joint families (46.8%). General nursing midwifery was the dominant qualification (47.3%), followed by Basic B.Sc. Nursing (38%). The majority practiced Hinduism (86.5%). In terms of experience, 43.3% had 1–5 years, and 47% had 6–10 years. Family income primarily fell within the Rs. 40,000–Rs. 50,000/month range (46%). Nursing officer income data showed similar distribution, with the largest group earning Rs. 40,000–Rs. 50,000/month (43%).

Section B: Pre-test cognizance scores of nursing officers regarding sleep disorders and its management.

The data in Table 2 reveal that the majority of nursing officers, 362 (90.5%), had average cognizance of sleep disorders and their management. A smaller group, 38 (9.5%), had a good cognizance, while no participants displayed very good or poor levels of knowledge in this area.

Section C: Post-test cognizance scores of nursing officers regarding sleep disorders and its management.

The data in Table 3 indicate that a majority of nursing officers, 220 (55%), exhibited good cognizance of sleep disorders and their management. In addition, 180 (45%) demonstrated very good cognizance, while no participants displayed average or poor levels of knowledge in this area.

Section D: Effectiveness of advanced training program regarding sleep disorders and its management.

Table 1: Frequency distribution of the subjects according to their demographic data *n*=400

S. No.	Variables	Frequency	Percentage
1.	Job type		
	a. Permanent	400	100
	b. Part time	00	00
	c. Contract bases	00	00
2.	Age		
	a. 21–30 years	80	20
	b. 31–40 years	261	65.3
	c. 41–50 years	59	14.8
	d. 51–60 years and above	00	00
3.	Gender		
	a. Male	190	47.5
	b. Female	210	52.5
4.	Type of family		
	a. Nuclear	213	53.3
	b. Joint	187	46.8
	c. Extended	00	00
5.	Qualification		
	a. ANM	28	07
	b. GNM	189	47.3
	c. Graduate (Basic B.sc Nursing)	152	38
	d. Post Basic BSc Nursing	31	7.8
	e. Post Graduate (M.sc Nursing)	00	00
6.	Religion		
	a. Hindu	346	86.5
	b. Muslim	30	7.5
	c. Christian	24	06
7.	Clinical experience		
	a. >1 year	12	03
	b. 1–5 years	173	43.3
	c. 6–10 years	188	47
	d. 11–15 years	27	6.8
8.	Family income		
	a. >Rs. 20000.00/month	00	00
	b. Rs. 20000.00–30000.00/month	120	30
	c. Rs. 30000.00–40000.00/month	96	24
	d. Rs. 40000.00–50000.00/month	184	46
	e. Above Rs. 50000.00/month	00	00
9.	Nursing officer income		
	a. >Rs. 20000.00/month	00	00
	b. Rs. 20000.00–30000.00/month	00	00
	c. Rs. 30000.00–40000.00/month	185	46.3
	d. Rs. 40000.00–50000.00/month	172	43
	e. Above Rs. 50000.00/month	43	10.8

ANM: Auxiliary nursing midwifery, GNM: General nursing midwifery

Table 2: Distribution of samples according to their pre-test cognizance *n*=400

Scoring	Grading	Frequency	Percentage
0–25	Poor	00	00
26–50	Average	362	90.5
51–75	Good	38	9.5
76–101	Very good	00	00

Maximum score=101

The data in Table 4 depict that none of the nursing officers had very good cognizance regarding sleep disorders and its management in pre-test whereas in the post-test, around 180 (45.5%) of them had very good cognizance regarding sleep disorders and its management.

The data in Table 5 indicate a significant difference between the mean pre-test and post-test cognizance scores. The calculated *t*-value ($t(399) = 89.79$, $P < 0.05$) exceeded the critical table value ($t(399) = 1.96$) at the 5% significance level. Consequently, the research hypothesis was accepted, demonstrating that the advanced teaching program was effective in enhancing the cognizance of nursing officers regarding sleep disorders and their management.

Table 6 shows the comparison of mean percentage of the cognizance scores of the pre-test and post-test that reveals an increase of 29.42% in the mean cognizance score of the nursing officers after ATP.

The majority of area wise effectiveness was depicted on diet used in sleep disorder which shows the comparison of mean and standard deviation of pre-test mean cognizance score was 24% (0.48 ± 0.500) whereas post-test mean cognizance score was 80.35% (1.607 ± 0.528). This shows that there was increase of 56.35% in the mean cognizance score of nursing officers.

Other areas such as physiology, introduction, incidence, types, risk factors, causes, sign and symptoms, diagnosis, complication of sleep disorders, and the effectiveness (post-test minus pre-test) of mean percentage was between 22% and

Table 3: Distribution of samples according to their post-test cognizance *n*=400

Scoring	Grading	Frequency	Percentage
0–25	Poor	00	00
26–50	Average	00	00
51–75	Good	220	55.0
76–101	Very good	180	45.0

Maximum score=101

Table 4: Distribution of samples according to their pre and post-test cognizance *n*=400

Grading	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Poor	0	0	0	0
Average	362	90.5	0	0
Good	38	9.5	220	55.0
Very good	0	0	180	45.0

Maximum score=101

Table 5: Mean, standard deviation, and "*t*" value of pre- and post-test cognizance score *n*=400

Mean score		Mean difference	SD of difference	Df	"*t*" value
Post-test	Post-test				
44.54	73.77	29.23	6.511	399.00	89.794 *

t (399)=1.96, *P*<0.05 * significant

Table 6: Area wise mean, standard deviation, and mean percentage of cognizance scores in pre-test and post-test *n*=400

Cognizance Area	Max. score	Pre-test (x)		Post-test (y)		Effectiveness (y-x)	
		Mean±SD	Mean%	Mean±SD	Mean%	Mean±SD	Mean%
Introduction of sleep	12	5.16±1.640	43	8.73±2.476	72.75	3.57±0.836	29.75
Physiology of sleep	4	1.79±1.027	44.75	2.6725±0.9708	66.81	0.882±0.0562	22.05
Incidence of sleep disorder	5	1.92±0.993	38.4	3.32±1.496	66.4	1.4±0.503	28
Types of sleep disorder	26	10.59±3.070	40.73	16.36±2.722	62.92	5.77±0.348	22.19
Risk factors of Sleep disorder	6	2.51±1.085	41.83	4.18±1.019	69.66	1.67±0.066	27.833
Causes of sleep disorder	3	1.25±0.701	41.66	2.39±0.644	79.66	1.14±0.057	38
Sign and of sleep disorder	8	3.72±1.694	46.5	6.20±1.434	77.5	2.48±0.26	31
Diagnosis of sleep disorder	5	2.14±1.056	42.8	3.93±0.827	78.6	1.79±0.229	35.8
Drugs in sleep disorder	2	1.12±0.549	56	1.64±0.484	82	0.52±0.065	26
Diet used in sleep disorder	2	0.48±0.500	24	1.607±0.528	80.35	1.127±0.028	56.35
Prevention of sleep disorder	10	4.85±1.408	48.5	6.57±1.829	65.7	1.72±0.421	17.2
Management of sleep disorder	12	5.80±1.840	5.17	10.77±1.523	89.75	4.97±0.317	41.41
Complication of sleep disorder	6	2.68±1.191	44.66	5.36±0.970	89.33	2.68±0.221	44.66
Total	101	44.01±4.253	43.57	73.727±16.9228	72.99	31.278±12.6698	29.422

SD: Standard deviation

Table 7: Association between pre-test cognizance scores and demographic variables *n*=400

S. No.	Variables	<Median	>Median	Total	df	χ^2	*P*-value
1.	Job type						
	a. Permanent	66	334	400	----	----	----
	b. Part time	00	00	00			
	c. Contract bases	00	00	00			
2.	Age						
	a. 21–30 Years	10	70	80	2	1.230	0.541
	b. 31–40 Years	45	216	261			
	c. 41–50 Years	11	48	59			
3.	Gender						
	a. Male	32	158	190	1	0.031	0.861
	b. Female	34	176	210			
4.	Type of family						
	a. Nuclear	38	175	213	1	0.594	0.441
	b. Joint	28	159	187			
	c. Extended	00	00	00			
5.	Qualification						
	a. ANM	4	25	28	3	1.744	0.627
	b. GNM	35	153	189			
	c. Graduate (Basic B.sc Nursing)	21	131	152			
	d. Post Basic BSc Nursing	6	25	31			
	e. Postgraduate (M.sc Nursing)	00	00	00			
6.	Religion						
	a. Hindu	55	291	346	2	1.351	0.509
	b. Muslim	5	25	30			
	c. Christian	6	18	24			
7.	Years of clinical experience						
	a. >1 year	3	9	12	3	2.904	0.407
	b. 1–5 years	23	150	173			
	c. 6–10 years	34	154	188			
	d. 11–15 years	6	21	27			
	e. 16–20 years	00	00	00			
	f. Above 20 years	00	00	00			
8.	Family income						
	a. >Rs. 20000.00/month	00	00	00	2	0.162	0.922
	b. Rs. 20000.00–30000.00/month	21	99	120			
	c. Rs. 30000.00–40000.00/month	16	80	96			
	d. Rs. 40000.00–50000.00/month	29	155	184			
	e. Above Rs. 50000.00/month	00	00	00			
9.	Nursing officer Income						
	a. >Rs. 30000.00/month	00	00	00	2	0.861	0.650
	b. Rs. 30000.00–40000.00/month	33	152	185			
	c. Rs. 40000.00–50000.00/month	25	147	172			
	d. Above Rs. 50000.00/month	08	35	43			

ANM: Auxiliary nursing midwifery, GNM: General nursing midwifery. χ^2: Chi-square. **P*<0.05 is considered as a significant

44%. The least mean percentage effectiveness was 17.2% in the area of prevention of sleep disorder.

Section E: Association between pre-test cognizance score with demographic variables of nursing officers.

The data presented in Table 7 show that the calculated χ^2 value is less than the table value in the entire demographic variable. Hence the H_2 is not accepted, therefore there is no any significant association between mean pre-test cognizance scores and all the demographic variables of nursing officers at $P < 0.05$.

Discussion

The results of this study demonstrate that the structured teaching program (STP) significantly improved nursing officers' knowledge regarding the avoidance and management of sleep problems. This result aligns with the research conducted by Sahu *et al*., which reported similar outcomes for a STP aimed at improving knowledge and attitudes about tobacco cessation among hospital housekeeping personnel. Sahu *et al*. observed significant gains in knowledge and a shift in attitudes following their intervention, which aligns with the improvements in cognizance and attitude found in our study.[14]

In addition, the study by Sousa *et al*. evaluated the impact of an education program on sleep habits and knowledge among the students of 12th grade. Their findings showed that the sleep education program led to an increase in correct responses to sleep-related questions, improvements in sleep-wake cycles, and constructive modifications to sleeping patterns among adolescents. These results, although observed in a different population, support the notion that structured educational interventions can effectively enhance understanding and modify behaviors related to sleep.[15] Wolfson *et al*. (2015) in their research study concluded that self-reported sleep hygiene through the teaching intervention about sleep and gain in knowledge about sleep hygiene and stress management and improvements are reported.[16] Further supporting our findings, the pilot study by Davis *et al*. evaluated the healthy sleep for healthy schools (HS4HS) program, an online course on sleep education resource delivered by teachers. The HS4HS program resulted in notable advances in the understanding of sleep and the adoption of healthy sleep habits among adolescents. While changes in sleep duration and sleepiness were not statistically significant, the study highlighted that teacher-delivered programs could be successfully implemented and integrated into school curricula, offering a sustainable approach to sleep education.[17] Gruber *et al*. (2017) in their research study concluded that sleep educational programmes have generally been effective at enhancing sleep knowledge, this has not usually led to a change in sleep behavior.[18]

Thus, this study conducted by the researcher had a significant impact on cognizance of nursing officers regarding prevention and management of sleep disorders in the selected government hospitals of Dahod city.

Conclusion

The study revealed that a structured educational program significantly improved nursing officers' knowledge about sleep disorder prevention and management. The use of demonstrations and PowerPoint presentations was highly effective in enhancing learning outcomes.

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Conflict of Interest

A conflict of interest does not exist.

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References

1. Ben Simon E, Walker MP. Sleep loss causes social withdrawal and loneliness. Nat Commun 2018;9:3146.
2. Brown RE, Basheer R, McKenna JT, Strecker RE, McCarley RW. Control of sleep and wakefulness. Physiol Rev 2012;92:1087-187.
3. Panossian LA, Avidan AY. Review of sleep disorders. Med Clin North Am 2009;93:407-25, ix.
4. Colten HR, Altevogt BM. In: Institute of Medicine (US) Committee on Sleep Medicine and Research, Colten HR, Altevogt BM, editors. Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem. Washington, DC: National Academies Press (US); 2006.
5. Bhatia M, Arif MA. Narcolepsy an often missed diagnosis: First documented case from India. Neurology India 2009;57:509-11.
6. Taylor A, Wright HR, Lack LC. Sleeping-in on the weekend delays circadian phase and increases sleepiness the following week. Sleep Biol Rhythms 2008;6:172-9.
7. Drake CL, Roehrs T, Richardson G, Walsh JK, Roth T. Shift work sleep disorder: Prevalence and consequences beyond that of symptomatic day workers. Sleep 2004;27:1453-62.
8. Chaabane S, Chaabna K, Khawaja S, Aboughanem J, Mittal D, Mamtani R, *et al.* Sleep disorders and associated factors among medical students in the Middle East and North Africa: A systematic review and meta-analysis. Sci Rep 2024;14:4656.
9. Booker LA, Magee M, Rajaratnam SM, Sletten TL, Howard ME. Individual vulnerability to insomnia, excessive sleepiness and shift work disorder amongst healthcare shift workers. A systematic review. Sleep Med Rev 2018;41:220-33.
10. Riemann D, Baglioni C, Bassetti C, Bjorvatn B, Dolenc Groselj L, Ellis JG, *et al*. European guideline for the diagnosis and treatment of insomnia. J Sleep Res 2017;26:675-700.
11. Shao MF, Chou YC, Yeh MY, Tzeng WC. Sleep quality and quality of life in female shift-working nurses. J Adv Nurs 2010;66:1565-72.
12. Hsieh ML, Li YM, Chang ET, Lai HL, Wang WH, Wang SC. Sleep disorder in Taiwanese nurses: A random sample survey. Nurs Health Sci 2011;13:468-74.
13. Thapa D, Malla G, Asim KC. Sleep quality and related health problems among shift working nurses at a tertiary care hospital in Eastern Nepal: A cross sectional study. J Nurs Health Stud 2017;2:23.
14. Sahu M, Nattala P, Philip M, Kandasamy A. Effectiveness of a structured teaching program (STP) on cessation of tobacco chewing, on knowledge and attitude among female hospital housekeeping personnel - a pilot study. Asian J Psychiatr 2017;29:73-6.

15. Sousa IC, Souza JC, Louzada FM, Azevedo CV. Changes in sleep habits and knowledge after an educational sleep program in 12th grade students. Sleep Biol Rhythms 2013;11:144-53.
16. Wolfson AR, Spaulding NL, Dandrow C, Baroni EM. Middle school start times: The importance of a good night's sleep for young adolescents. Behav Sleep Med 2007;5:194-209.
17. Davis J, Blunden S, BoydPratt J, Corkum P, Gebert K, Trenorden K, *et al*. Healthy sleep for healthy schools: A pilot study of a sleep education resource to improve adolescent sleep. Health Promot J Austr 2022;33:379-89.
18. Gruber R, Somerville G, Bergmame L, Fontil L, Paquin S. School-based sleep education program improves sleep and academic performance of school-age children. Sleep Med 2016;21:93-100.

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