

Effectiveness of Self Instruction Module on Quality of Sleep on Adolescents of Government Intercollege Patel Nagar Dehradun

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ABSTRACT

INTRODUCTION: Sleep is so much part of the normal rhythm of our lives that tends to be taken for granted until it is disrupted. Sleep disorder has become a common health problem among adolescents and young adults. Most school students are unaware of how important quality sleep is for optimum health. Sleep hygiene practices and quality can directly impact mental, emotional, and physical health. The Centers for disease control (CDC) reports that about 35% of adults are not getting enough sleep, which account for 84 million people.

METHODOLOGY: The present study adopted quantitative research approach with non-randomized control group research design. Sample of the study comprised of 80 students selected by using non-probability convenient sampling who were further equally divided under experimental and control group. The study was carried out at selected government intercollege of Dehradun. Tools used for data collection consisted of two instruments, Tool I included demographic Performa and Tool II included sleep quality scale. The experimental group underwent a self –instructional module as an intervention which was followed by post-test.

RESULTS: In regards to the present study 87.5% in moderate and 7.5% in severe disturbance in quality of sleep had experimental group and 90% in moderate and 5% in severe disturbance in quality of sleep had control group. The obtained ‘t’ test value was found 11.2985 for experimental group was found significant at $p < 0.05$ level which shows that self-instructional module was effective in improving quality of sleep in experimental group. The pre-test and post-test mean score of experimental group are 14.27 and 11.80 respectively and had mean difference of 2.47. The pre-test and post-test mean score of control group are 14.93 and 14.43 with mean difference of 0.50. The chi-square showed no association between sleep quality with selected demographic variable (age, gender, medication, physical activity, etc)

CONCLUSION: The study conducted concluded that majority of students had moderate disturbance in sleep quality and self-instructional module was effective in improving sleep quality of adolescent students.

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KEYWORDS: assess, sleep quality, effectiveness, self-instructional module, adolescents, Senior secondary school

INTRODUCTION

“Sleep is a precious investment of the energy of today to revitalize an effective tomorrow”

India is a country of youth and the lifestyle has changed at a very fast pace in the last few decades but despite this busy life all individuals, well and ill, require adequate sleep. According to WHO, one-third

of the lifespan of an individual is spent asleep, a state that is crucial for physical, mental, and emotional well-being. According to WHO, (2022) one-third of the lifespan of an individual is spent asleep, a state that is crucial for physical, mental, and emotional well-being. Over the past ten years, it has been

noticed that sleep research has accelerated at a pace never seen before, organization The Sleep Research Society, Centers for Disease Control and Prevention, Mayo Clinic, and national institutes of health have shed more light on the importance of sleep thus sleep is now known as “third pillar” of good health.

According to the Office of Disease Prevention and Health Promotion Initiative in Healthy People 2020, “Sleep Health” was added as a fundamental topic for the improvement of overall health in the United States by 2020 (Sleep Health, 2019). The goal outlined in Healthy People 2020 was to increase the public knowledge regarding adequate sleep and the benefits adequate sleep quantity and quality has to wellness, productivity, and quality of life. Additionally, for unhealthy people in 2030, sleep continues to be a key objective looking to help people get enough sleep, treat sleep disorders, and decrease drowsy driving (Office of Disease Prevention and Health Promotion, 2020).

MATERIALS AND METHODS:-

The main study was conducted in Government Intercollege Patel Nagar, Dehradun. Data collection was done for a period of 2 weeks. The investigator obtained written permission from the principal of the school. Written consent was obtained from each participant of the experimental group and informed consent was obtained from each participant of the control group before the study. Based on the inclusive criteria 40 samples in the experimental group and 40 samples were in the control group by using the convenience sampling technique. The people were divided into 2 groups experimental and control group

Instrument/Tool

The tool was prepared according to the objectives of the study. The researcher used a self-structured questionnaire to collect the socio-demographic data and a standardized tool to assess the level of sleep quality among adolescents in senior secondary school.

Tool 1 self-structured tool for socio-demographic variables

This tool gathered information regarding sample traits. It consists of eight socio-demographic structures like age, gender, family structure, siblings, medication, any physical activities, etc. which provided the researcher with information about the participants.

Tool 2 Sleep Quality Scale

Consisting of 28 items, the SQS evaluates six domains of sleep quality: daytime symptoms, restoration after sleep, problems initiating and maintaining sleep, difficulty waking, and sleep satisfaction. Developers hoped to create a scale that could be used as an all-inclusive assessment tool – a general, efficient measure suitable for evaluating sleep quality in a variety of patient and research population

Statistical Analysis

The data was presented with mean \pm standard deviation (SD). Frequency and percentage distribution were used to evaluate the socio-demographics of adolescent students of government intercollege Patel Nagar Dehradun and the sleep quality scale was used to assess quality of sleep.

Table 1:- Frequency and Percentage distribution of demographic variables of respondent
N=80

S. No.	Demographic Variables	Experimental group (40)		Control group (40)	
		f	%	f	%
1	Age (in years)				
	14-15years	13	32.5%	20	50%
	16-17years	27	67.5%	20	50%
2	Gender				
	Male	13	32.5%	18	45%
	Female	27	67.5%	22	55%
3	Extended family				
	Yes	30	75%	35	87.5%
	No	10	25%	5	12.5%
4	Sibling				
	Yes	30	75%	35	87.5%
	No	10	25%	5	12.5%
5	Medication (expect any neuro-medicine)				
	Yes	1	2.5%	1	2.5%
	No	39	97.5%	39	97.5%

6	Physical activities (more than 30 min)				
	Yes	27	67.5%	29	72.5%
	No	13	32.5%	11	27.5%
7	Sleep affected (last 6 months)				
	Yes	35	87.5%	19	47.5%
	No	5	12.5%	21	52.5%
8	Knowledge about sleep quality				
	Yes	11	27.5%	9	22.5%
	No	29	72.5%	31	77.5%

Table 1 depicts the frequency and percentage distribution of demographic variables of selected samples. Concerning age two-thirds of participants 27 (67.5%) fall into the age group of 15-16 years and less than half 13 (32.5%) students belong to the age group of 13-14 years in the experimental group Similarly half of participants 20(50%) students fall into the age group of 13-14 years whereas half of participants 20 (50%) in 15-16 years.

Out of 80 less than half of the participants 13 (32.5%) were Male and two-thirds of participants 27 (67.5%) were female in the experimental group and the control group more than half 22 (55%) were female and less than half 18 (45%) were male.

The data for the distribution respondents according to having extended family or not that most of the participants 30 (75%) had extended family and 10 (25%) didn't have any extended family in the experimental group likewise in the control group majority participants 35 (87.5%) had extended family and 5 (12.5%) don't have extended family.

The data of respondents for having a sibling in the experimental group are most of the participants 30(75%) have siblings less than one-third of participants 10 (25%) don't have siblings and in the control group majority of participants 35(87.5%) have siblings and less than one third 5 (12.5%) don't have a sibling.

Concerning taking medication (specific other than neurological medicine) 1(2.5%) respondent took medication and the majority of participants 39(97.5%) didn't take any medicine in the experimental group whereas in the control group, less than one-third 1(2.5%) took medication and the majority of participant 39(97.5%) don't take any medication.

Distribution of subjects by physical activities (more than 30 minutes) is more than half participants 27(67.5%) who did physical activities and less than half of participants 13(32.5%) who didn't do physical activities in the experimental group whereas in the control group, most of the participants 29 (72.5%) does physical activities and less than two-thirds of participants 11 (27.5%) who doesn't do physical activities.

Sleep affected in the last 6 months illustrates that the majority of participants 35(87.5%) fall into the category of affected sleep less than one-third of participants 5(12.5%) don't fall in the category of affected sleep in the experimental group and less than half of participants 19(47.5%) fall into the affected sleep quality and more than half of participants 21(52.5%) doesn't fall in the category of affected sleep in the control group.

Knowledge about the quality of sleep tables depict that one-third of participants 11 (27.5%) have knowledge about the quality of sleep of most participants 29 (72.5%) don't have knowledge about the quality of sleep in the experimental group whereas less than one-third of participants 9 (22.5%) have the knowledge and most of participants 31 (77.5%) doesn't have knowledge about the quality of sleep in the control group.

TABLE 4.2:- Effectiveness on Sleep Quality Among Adolescents in Control and Experimental Groups in Pre-Test and Post-Test

N=80							
Assessment	Group	Mean	SD	mean difference	Mean%	't' value	'p' value
Pre-test	Control	45.275	8.4124	3.15	53.9%	1.58	0.252464 NS
	Experimental	42.125	9.37		50.14%		
Post-test	Control	40.2	7.1797	22.075	47.6%	16.97	0.000228 S
	Experimental	18.125	4.0204		21.5%		

Table 2 represents the aspect-wise effectiveness of the sleep instructional module on sleep quality among adolescent students in the experimental group. The result shows that the pre-test assessment of both the control

groups are mean of 45.275 and the experimental group 42.125, the mean difference is 3.15, the 't' value is 1.58 and the p-value is 0.252464.

The result of the Post-test assessment of the control group mean is 40.2 and the experimental group is 18.125, the mean difference is 22.075. The 't' value is 16.97 and the p-value is 0.000228.

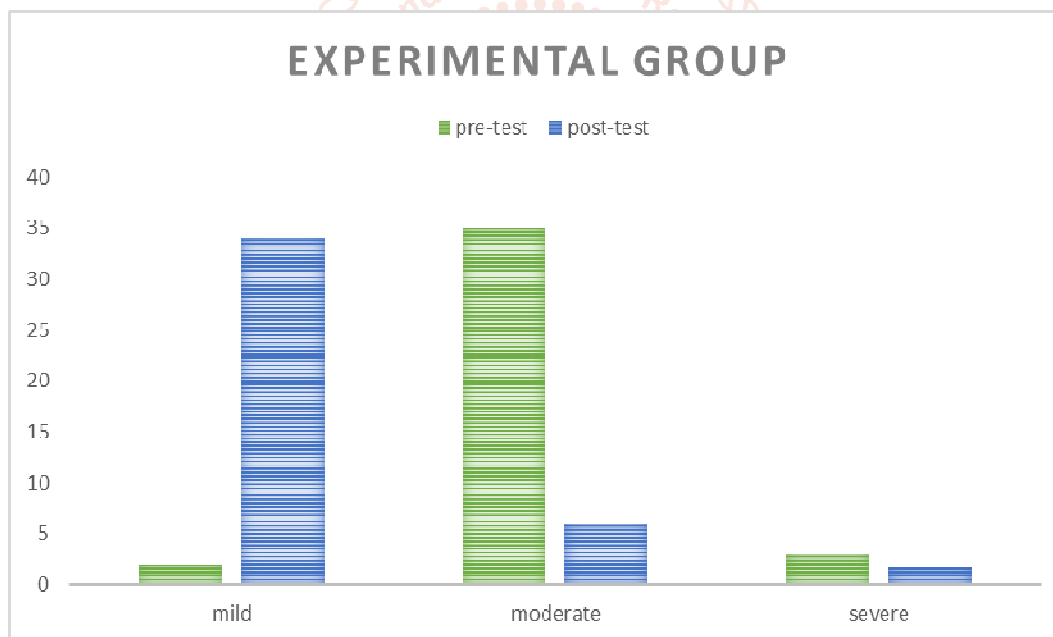
TABLE 4.5:- Comparison between Control and Experimental Pre-Test and Post-Test

Assessment	Group	Mean	SD	Mean difference	Mean %	't' value	'p' value
Control	Pre-test	45.275	8.41	5.075	53.9%	2.9	0.164849 NS
	Post-test	40.2	7.17		47.6%		
Experimental	Pre-test	42.125	9.37	24	50.14%	14.89	0.0001 S
	Post-test	18.125	4.0204		21.5%		

Table 4.3 Represent the comparison between control and experimental pre-test and post-test quality levels of undergraduate students in experimental and control group were the assessment of control group pre-test and post-test are 't' value 2.9 and 'p' value 0.164849 and experimental group are 't' value 14.89 and 'p' value is 0.0001.

Table 4.3:- Assessment score of quality of sleep in experimental group

Experimental group	Pre-test		Post-test	
Sleep quality score	F	%	F	%
Mild	2	5%	34	85%
Moderate	35	87.5%	6	15%
Severe	3	7.5%	-	-



DISCUSSION

In regards to the present study 87.5% in moderate and 7.5% in severe disturbance in quality of sleep had experimental group and 90% in moderate and 5% in severe disturbance in quality of sleep had control group. The obtained 't' test value was found 11.2985 for experimental group was found significant at $p < 0.05$ level which shows that self-instructional module was effective in improving quality of sleep in experimental group. The pre-test and post-test mean score of experimental group are 14.27 and 11.80 respectively and had mean difference of 2.47. The pre-test and post-test mean score of control group are 14.93 and 14.43 with mean difference of 0.50. The

chi-square showed no association between sleep quality with selected demographic variable (age, gender, medication, physical activity, etc)

LIMITATION

The present study had the following limitations.

- The present study was conducted on a large scale of 80 adolescent students.
- Generalization cannot be made due to the limited area of setting and limited sample size.

CONCLUSION

The study conducted concluded that majority of students had moderate disturbance in sleep quality

and self-instructional module was effective in improving sleep quality of adolescent students

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