

# Sleep Pattern among +2 Students with Physics as Main Subject

**A. Peter Raja**

*Part-Time Ph.D. Scholar, Department of Education  
Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India*

**OPEN ACCESS**

**Dr. K. Krishnamoorthy**

*Assistant Professor in Education, Department of Education (DDE)  
Alagappa University, Karaikudi, Tamil Nadu, India*

Volume: 7

Issue: 1

Month: December

Year: 2018

ISSN: 2320-2653

Received: 15.11.2018

Accepted: 29.12.2018

Published: 31.12.2018

Citation:

Peter Raja, A., and

K. Krishnamoorthy.

“Sleep Pattern among +2 Students with Physics as Main Subject.” *Shanlax International Journal of Education*, vol. 7, no. 1, 2018, pp. 1–4.

DOI:

<http://doi.org/10.5281/zenodo.2529396>

## Abstract

*Sleep is an important physiological process which is very much essential to lead a healthy life. Sleep was once considered an inactive, or passive, state in which both the body and the brain “turned off” to rest and recuperate from the day’s waking activities. The quality of sleep determines the well being of an individual. Adequate amount of sleep is very much essential to have better academic performance and also to maintain good health. Two interacting systems—the internal biological clock and the sleep-wake homeostatic largely determine the timing of our transitions from wakefulness to sleep and vice versa. Adolescents face many problems which includes sleep problem also. The sleeplessness of adolescents mostly due to academic stress. Abnormal sleeping habits not only affect the physiological well being but also the psychological well being. Sleep is an important factor to have successful academic performance as well as personal life. Hence the study is intended to find out the sleep habits, Duration of sleep and sleep pattern among higher secondary students with physics as one of the main subjects. Survey method was adopted for this study. The sample consists of 850 +2 Physics students in Sivakasi District. Simple Random Sampling Technique was used. Sleep pattern Inventory developed by the investigator and guide was used to collect the data. The statistical technique used was mean, standard deviation and ‘t’ test. The findings of the study were: i) The level of sleep pattern of +2 physics students is low. ii) There is significant difference between male and female +2 Physics students in their sleep pattern and iii) there is no significant difference between dayscholar and hosteller +2 Physics students in their sleep pattern. Survey method was adopted for this study.*

**Keywords:** Sleep pattern, +2 Physics Students.

## Introduction

Sleep is an important physiological process which is very much essential to lead a healthy life. Sleep was once considered an inactive, or passive, state in which both the body and the brain “turned off” to rest and recuperate from the day’s waking activities. The quality of sleep determines the well being of an individual. Adequate amount of sleep is very much essential to have better academic performance and also to maintain good health. Two interacting systems—the internal biological clock and the sleep-wake homeostatic largely determine the timing of our transitions from wakefulness to sleep and vice versa.

## Need for the Study

Adolescents face many problems which includes sleep problem also. The sleeplessness of adolescents mostly due to academic stress.

Abnormal sleeping habits not only affect the physiological well being but also the psychological well being. Sleep is an important factor to have successful academic performance as well as personal life. Hence the study is intended to find out the sleep habits, Duration of sleep and sleep pattern among higher secondary students with physics as one of the main subjects.

## Operational Definitions of the Key Terms

### Sleep Pattern

Sleep pattern can be affected by many factors, including age, the amount of recent sleep or wakefulness, the time of the day or night relative to an individual's internal clock,

### +2 Physics Students

In this investigation is concerned the investigator has considered +2 Physics students as 'the students those who are studying in twelfth standard under State Board of Education, Government of Tamilnadu after completion of their SSLC/X Standard'.

## Objectives of the Study

1. To find out the level of examination writing style of +2 physics students is moderate.
2. To find out there is no significant difference between male and female +2 Physics students in their examination writing style.
3. To find out there is no significant difference between dayscholar and hosteller +2 Physics students in their examination writing style.

## Null Hypotheses of the Study

1. The level of examination writing style of +2 physics students is moderate.
2. There is no significant difference between male and female +2 Physics students in their examination writing style.
3. There is no significant difference between dayscholar and hosteller +2 Physics students in their examination writing style.

## Methodology

The researcher adopted the survey method to study the sleep pattern of +2 Physics students.

## Population and Sample

The population for the present study consisted of the +2 Physics students in Sivakasi district. 850 +2 Physics students were taken for this investigation. The investigator collected the data from schools in Sivakasi district.

## Tool use for the Study

The investigator has used self made tool. Sleep pattern Inventory for +2 Physics students.

## Statistical Techniques Applied

### Delimitations of the study

- The study is conducted in +2 Physics students under Tamil Nadu Government State Board in Sivakasi District only.

## Data Analysis and Findings of the Study

### Null Hypothesis 1

**Table Level of Sleep pattern of +2 Physics students**

Variable	Low		Average		High	
	Count	%	Count	%	Count	%
Sleep pattern	347	40.8	446	52.5	57	6.7

Forty point eight percentage of the +2 Physics students has low, 52.5 percentage has average, and 6.7 percentage has high level of sleep pattern.

### Null Hypothesis 2

**Table Difference between Male and Female +2 Physics Students in their Sleep pattern**

Gender	N	Mean	S.D	Calculated 't' value	Remarks
Male	384	237.11	7.316	2.326	S.
Female	466	286.31	9.382		

Table value for df 850 is 1.96 at 0.05 level of significance.

It is inferred from the above table that there is significant difference between male and female +2 Physics students in their sleep pattern.

### Null Hypothesis 3

#### Table Difference between Dayscholar and hosteller +2 Physics Students in their Sleep pattern

Residence	N	Mean	S.D	Calculated 't' value	Remarks
Dayscholar	193	285.77	15.224	1.081	N.S.
Hosteller	657	286.99	7.125		

Table value for df 850 is 1.96 at 0.05 level of significance.

It is inferred from the above table that there is no significant difference between dayscholar and hosteller+2 physics students in their sleep pattern.

### Educational Implications

1. Female +2 physics students perceive more sleep pattern than male +2 physics students. This may be due to that the female +2 physics students are spending more time for weak subjects, preparing notes while studying and worked in time. These pupils are not studying in holidays. Nearly half of the students are omitting difficult portions not follow through question banks, studied only interest subjects, practice of memorizing, studying during examination, studying whenever find time and also in bed, reading additional books, avoid group study and studied the subjects taught by teachers whom like most.
2. The study revealed that one third of the +2 physics students suffered with sleeping and in turn it affects the physics achievement. Therefore this has been taken as a serious issue and remedy for those students who will be given to the sleep disturbed students for saving their academic carriers. Meditation, yoga and other physical fitness activities will ensure mental comfort may be given to those students for secure them. The parents also may be intimated regarding the defect of sleep of their own wards for further monitoring in their respective home.

### Suggestions for Further Research

1. A similar study may be undertaken for college students, student teachers and polytechnic students.

2. This study can be extended to school and college teachers.
3. The sample is taken from Sivakasi district only. It can be extended to other districts.
4. Some more dimensions were included in sleep pattern and can be taken into account for further investigation.

### Conclusion

Educational planners and administrators will make efforts to make change in the organizational set up to eradicate the causes of poor academic achievement. The teachers can keep constant vigil on the parents' behaviour and can rectify their declining attention towards their children. Parents can take preventive steps to keep maladaptive behavior from arising at the very outset. As a result of the knowledge of the findings of this research, the parents and other members of the family will make maximum efforts to bring about behavioural changes in themselves in order to enhance the academic achievement of their wards. Knowledge of the extent to which anxiety, self concept and level of aspiration exert their influence on academic achievement will enable the students to have an insight into their own strengths and weaknesses in order to enhance their academic achievement.

### References

- Aggarwal, J.C. "Educational Research." *New Delhi: Arya Book Depot*, 2002.
- Aggarwal, J.C. "Development of Education System in India." *New Delhi: Shirra Publications*, 2005.
- Arne et al. "conducted a study on association of sleep and academic performance." 2018.
- Kothari, C.R. "Research Methodology, Methods and Techniques." *New Delhi: New Age International Pvt. Limited*, 2008.
- Thanavathi, C. "Teacher Education." *Thoothukudi: Perumal Publications*, 2012.
- Tanavathi, C. "Advanced Research and Statistics." *Salem: Samyukdha Publications*, 2017.
- Thanavathi, C. "Teacher Education in India: at Secondary Level." *Salem: Samyukdha Publications*, 2018.

**Web Sources**

<http://healthysleep.med.harvard.edu/healthy/science/what/sleep-patterns-rem-nrem>  
<https://www.toppr.com/bytes/the-sleep-cycle/>  
<https://www.ajol.info/index.php/ejc/article/viewFile/52649/41253>  
<https://community.myfitnesspal.com/en/discussion/10313639/slightly-disappointed>

<https://www.youtube.com/watch?v=nPZa9Ho6OzY>  
<https://files.eric.ed.gov/fulltext/ED545803.pdf>  
[https://www.worldwidejournals.com/indian-journal-of-applied-research-\(IJAR\)/recent\\_issues\\_pdf/2016/August/August\\_2016\\_1470034445\\_\\_99.pdf](https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2016/August/August_2016_1470034445__99.pdf)