

Assessment of Sleep Hygiene Knowledge Among Adolescents in Selected Schools in Pathanamthitta District

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Abstract: *This study examines the level of knowledge regarding sleep hygiene among adolescents in selected schools of Pathanamthitta district. A quantitative descriptive cross-sectional design was used with a sample of 60 adolescents aged 10 to 16 years selected through non-probability sampling. Data were collected using a structured questionnaire. Results showed that 15 percent had poor knowledge, 36.6 percent had average knowledge, 30 percent had good knowledge, and 18.3 percent had excellent knowledge. Significant associations were found between knowledge levels and age, educational status, area of residence, and source of information, while gender showed no association. The findings highlight the need for targeted educational interventions to improve sleep hygiene awareness among adolescents.*

Keywords: Sleep Hygiene, Adolescent, Knowledge assessment, school health, health education

Abbreviation

ADHD : Attention Deficit Hyperactive Disorder
ASHS : Adolescent Sleep Hygiene Scale
CDC : Centres for Disease Control and Prevention
HBM : Health Belief Model
SHAPS : Sleep Hygiene Awareness and Practise Scale
SHI : Sleep Hygiene Index
SPSS : Statistical Package for Social Sciences

1. Introduction

Sleep is a basic human need; it is a universal biological process common to all people. Humans spend about one-third of their lives asleep. We require sleep for many reasons: to cope with daily stresses, to prevent fatigue, to conserve energy, to restore the mind and body, and to enjoy life more fully. Sleep enhances daytime functioning and is vital for cognitive, physiological and psychological function.¹

As children reach adolescence, their circadian rhythms tend to shift. The National Sleep Foundation found that although more than half of adolescents knew they were not getting enough sleep, 90% of the parents believed their children were getting enough sleep.²

Sleep is necessary for preserving both the physical and mental health of humans. Additionally, it is essential for maintaining cognitive capabilities such as memory, learning and the capacity to perform complex mental tasks.³

2. Need for the study

Maslow's hierarchy of needs designates sleep as one of the most basic and critical human requirements. It is a psychological framework that categorizes human needs into five levels: physiological, safety, love and belonging, self-esteem, and self-actualization. Sleep is a fundamental physiological need that plays a critical role in maintaining

overall health and well-being. By examining sleep hygiene through the lens of Maslow's Hierarchy, we can gain a deeper understanding of the complex relationships between sleep and various aspects of human needs.⁴

Sleep is a basic physiological need that is essential for physical recovery, mental refreshment, and overall quality of life. During sleep, our bodies repair and rejuvenate tissues, build bone and muscle, and strengthen our immune systems. Poor sleep hygiene can lead to sleep deprivation, which can have severe consequences on our physical and mental health. By prioritizing good sleep habits, individuals can ensure that their physiological needs are met, laying the foundation for overall well-being. Adequate sleep is also crucial for safety. Sleep deprivation can impair cognitive function, judgment, and reaction time, increasing the risk of accidents and injuries. Furthermore, chronic sleep deprivation has been linked to an increased risk of chronic diseases, such as diabetes, cardiovascular disease, and obesity. By getting enough quality sleep, individuals can reduce their risk of accidents and injuries and promote overall safety and well-being.⁵

An observational cross-sectional study was conducted to assess the prevalence of poor sleep hygiene practices and poor sleep quality among medical students and to test the hypothesis that poor sleep hygiene is correlated with poor sleep quality among undergraduate medical students enrolled at the Faculty of Medicine, Tanta University, Egypt. The community surrounding Tanta University has only eight cities, and the rest are mostly rural communities. The targeted population included students from all five academic years during the 2023–2024 academic year, with a total of 6258 medical students. The sample size was calculated via Epi Info 7 software (Atlanta, Georgia, USA). Using a confidence interval of 95% and setting an expected prevalence of 50%, with a margin of error of 5% and 80% power, the calculated minimum sample size was 363. We added a design effect of

1.5, as the sample was taken from different clusters, which increased the sample size to 546.⁶

Statement of the problem

A study to assess the knowledge regarding sleep hygiene among adolescents of selected schools in Pathanamthitta district with a view to develop an information booklet.

Objectives

- 1) Assess the knowledge regarding sleep hygiene among adolescents
- 2) Find out the association between knowledge of adolescents regarding sleep hygiene with selected socio-demographic variables.
- 3) Develop an information booklet regarding adolescent sleep hygiene.

Operational definitions

- 1) **Assess:** In this study, it refers to the estimates of adolescents' knowledge levels regarding sleep hygiene.
- 2) **Knowledge:** In this study, knowledge refers to correct responses or awareness about these practices as measured by developing an informational booklet.
- 3) **Sleep hygiene:** In this study, sleep hygiene refers to the behaviours, routines, and environmental factors that promote restful, high-quality sleep and a consistent sleep-wake cycle.
- 4) **Adolescents:** In this study, it refers to adolescents 10-16 years.
- 5) **Information booklet:** A booklet containing information about sleep hygiene for adolescents.

Hypothesis

H₁: There will be a significant association between the level of knowledge regarding sleep hygiene among adolescents with selected demographic variables.

3. Methodology

Research approach: Quantitative Approach

Research design: Descriptive Research Design

Population: Adolescents 10-16 years

Sampling technique: Non-probability technique

Sample size: 60 Adolescents

Inclusion criteria

- Adolescents belonging to the age group of 10-16 years
- Adolescents available at the time of data collection
- Adolescents who are willing to participate in the study
- Adolescents who understand Malayalam and English

Exclusion criteria

- Adolescents who have undergone the same type of study
- Adolescents who are diagnosed with conduct problems, oppositional defiant disorder, autism, or intellectual disability

Tool/ Instruments

It comprises a self-administered questionnaire consisting of two sections.

Tool 1: Questionnaire to assess the socio-demographic variables

Tool 2: A Structured knowledge questionnaire to identify the knowledge regarding sleep hygiene

4. Analysis and Interpretation

Section- 1

Description of socio-demographic variables.

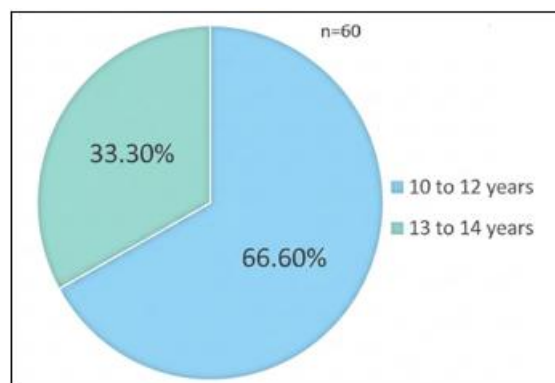


Figure 2.2: Distribution of adolescent students according to age

The figure shows that out of 60 students, 66.6% (40) belongs to 10-12 years of age and 33.3% (20) were 13-16 years of age.

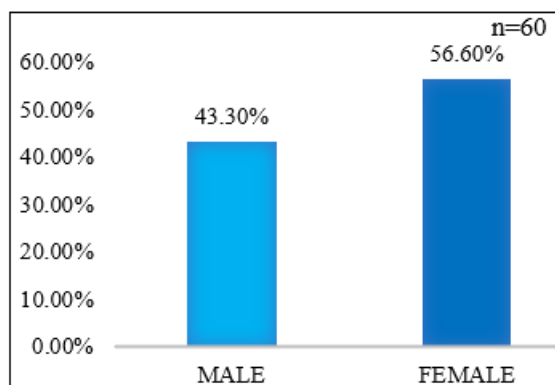


Figure 2.3: Distribution of school students according to gender

The figure shows that out of 60 students 43.3% (26) were male and 56.6% (34) were female.

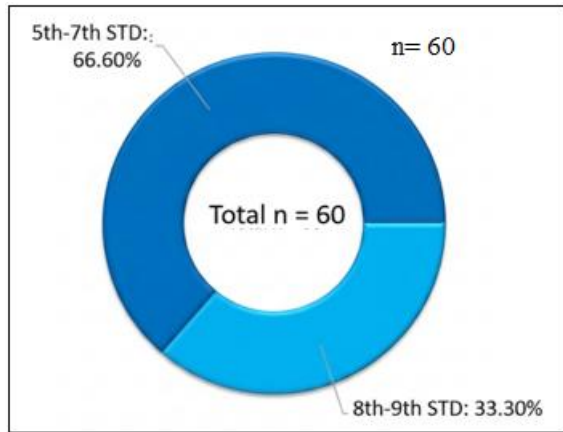


Figure 2.4: Distribution according to educational status

Figure reveals that out of 60 students 66.6% (40) of students are from 5th -7th std and 33.3% (20) are from 8th - 11th std.

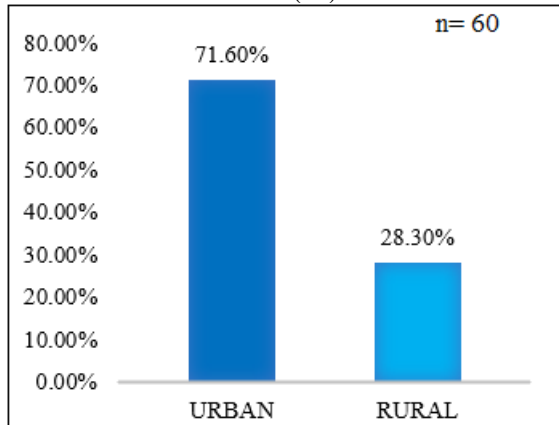


Figure 2.5: Distribution of students according to area of living

Figure reveals that out of 60 students 71.6% (43) were residing in urban areas and 28.3% (17) were residing in rural areas.

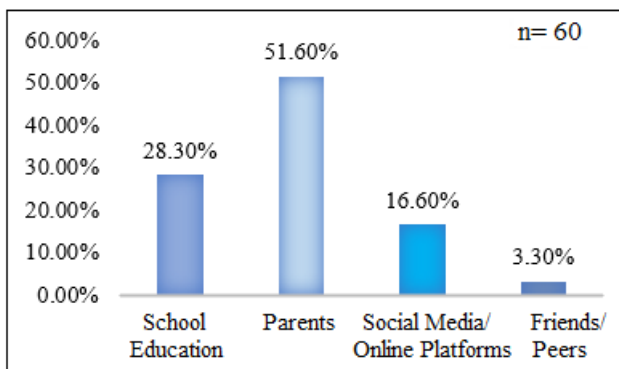


Figure 2.6: Distribution of participants according to their primary source of information about sleep hygiene

Figure reveals that out of 60 students (28.30%) have primary source of information from school education, (51.60%) have primary source of information from parents, (16.60%) have primary source of information from social media, (3.30%) have primary source of information from friends

Section 2

Assess the Knowledge Regarding Sleep Hygiene among Adolescents

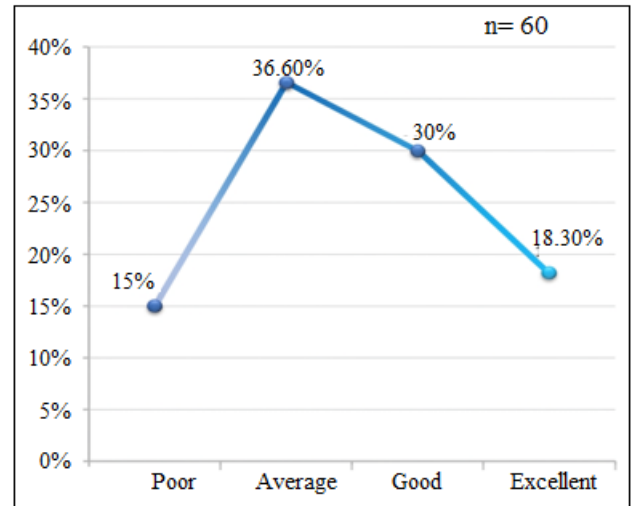


Figure 2.7: Distribution of students with regard to the level of knowledge

Figure reveals that out of 60 students 15% were having poor knowledge, 36.60% were having average knowledge, 30% were having good knowledge, 18.30% were having excellent knowledge.

Section 3

Association between Knowledge of Adolescents Regarding Sleep Hygiene with Selected Socio-Demographic Variables.

To test the association between sleep hygiene and selected socio-demographic variables. Chi-square test was computed. The hypothesis as stated below:

H1: There is a significant association between the level of knowledge regarding sleep hygiene among adolescents with selected demographic variables.

There is a significant association between age, educational status, area of residence, primary source of information and there is no significant association between gender.

5. Findings

- The age group of adolescents 66.6% (40) belongs to 10-12 years of age and 33.3% (20) were 13-16 years of age.
- According to gender, 43.3% (26) were male and 56.6% (34) were female.
- According to educational status 66.6% (40) of students are from 5th -7th std and 33.3% (20) are from 8th - 11th std.
- According to area of living 71.6% (43) were residing in urban areas and 28.3% (17) were residing in rural areas
- According to their source of information, 51.60% have primary source of information from parents, 16.60% have primary source of information from social media, 3.30% have primary source of information from friends

6. Recommendation

- A similar study can be replicated in a large sample in a different setting to generalise the findings.
- A case study can be conducted to identify the problems related to sleep hygiene.

- More studies can be conducted to find out the factors that enhance sleep hygiene.

7. Suggestions of the Study

The researchers emphasize the following suggestions based on the finding that a significant portion of adolescents (over 50%) possess only poor to average knowledge regarding sleep hygiene:

Implementation of Structured Education:

The study suggests that schools should integrate structured teaching programs or "sleep health" modules into their regular curricula to bridge the gap between biological needs and actual habits.

Information Booklet Utilization:

The developed information booklet should be made readily available in school libraries and health corners as a practical, self-help resource for students to improve their sleep-wake cycles.

Targeted Outreach for Specific Demographics:

Since the study found a significant association between knowledge levels and variables like age, educational status, and area of residence, education programs should be tailored specifically to these groups to be more effective.

Role of Nursing Administration:

Nursing administrators should provide support to conduct educational programs in school settings, ensuring that cost-effective teaching materials are produced and utilized.

Collaborative Health Teams: Similar to the request for maternal feeding teams, this study supports the creation of health teams in schools and colleges- including nursing students- to provide ongoing counselling on sleep-related hygiene.

8. Conclusion

Knowledge is very essential to improve sleep hygiene. This study indicates that adolescents have average knowledge regarding sleep hygiene. There is a significant association between age, educational status, area of living, and source of information. However, there is no association between gender with sleep hygiene.

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