IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Comparative Analysis Of Sleep Cycle In Males And Females

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Abstract: **Background:** Sleep is essential for health but gender differences might impact the sleep patterns. Extensive study has revealed physiological and behavioral differences in sleep cycles between men and women including duration, phases and rhythms. Community actions are critical for increasing awareness and teaching about gender-specific sleep requirements. Creating comfortable sleeping conditions and managing stress are also critical. Communities that promote sleep awareness can empower individuals to priorities their sleep health, hence enhancing overall quality of life. **Objectives:** To study the difference between the sleep cycles of males and females along with the factors affecting it. To make people aware about the importance and benefits of adequate sleep and measures to maintain regular sleep cycles. **Methodology:** 400 participants were taken for the data collection. Global Sleep Assessment Questionnaire (GSAQ) which contained 11 questions regarding sleep experiences of an individual was used. Patients were prescribed with various relaxation techniques and recommendations to improve their sleeping habits. For the very purpose data has been collected from January 2024 to April 2024. **Results:** The analysis of the GSAQ Score showed that sleep cycle of Males is more disturbed than that of Females. The average score of males was 7.3 while as in females it was 6.65. **Conclusion:** The study concluded that on gender differences in sleep patterns, with males experiencing more interrupted sleep cycles than females. This highlights the importance of targeted therapies to improve sleep quality, particularly among men. Community sleep awareness projects can empower people to priorities their sleep health, resulting in a higher quality of life overall.

Index Terms **- Sleep Cycle, Global Sleep Assessment Questionnaire, Sleep Quality, Sleep Disorder, Health**

INTRODUCTION

Sleep plays a fundamental role in maintaining our physical and mental health, with its absence or inadequacy posing significant risks to well-being. Studies consistently link insufficient sleep, defined as less than 8 hours per night, to a range of health issues including cardiovascular diseases, mental health disorders, diabetes, insomnia, and compromised immunity. This underscores the critical need for individuals to prioritize and attain sufficient rest. Factors contributing to sleep deprivation encompass various aspects of modern life, such as demanding academic schedules, work responsibilities, late-night usage of electronic devices, and hormonal fluctuations.

Young adults and late adolescents encounter particular challenges in maintaining healthy sleep patterns due to their demanding lifestyles. The necessity to wake up early for school or college often results in insufficient sleep, exacerbated by the inability to fully compensate for lost sleep during the week on weekends. Gender differences further influence sleep patterns, with females often contending with additional responsibilities like new-born care and hormonal fluctuations associated with menstruation, which can disrupt sleep routines.

Beyond its implications for academic success, the quality of sleep significantly impacts emotional and behavioral well-being. University students experiencing poor sleep quality are susceptible to negative emotional states and have an elevated risk of developing psychological disorders. External factors, including academic pressures, socioeconomic circumstances, workload, caregiving duties, and personal stress levels, play pivotal roles in shaping sleep quality. Recognizing and addressing these factors is paramount in fostering healthy sleep habits and enhancing overall well-being and academic performance.

OBJECTIVES

The objective of this investigation was to identify and study the difference between the sleep cycles of males and females along with the factors affecting it and also to make people aware about the importance and benefits of adequate sleep and measures to maintain regular sleep cycles

METHODOLOGY

Study Design – Survey Sample Method
Global Sleep Assessment Questionnaire which contained 11 questions regarding sleep experiences of an individual was used to carry out the Survey Sample Method.

RESULTS AND DISCUSSION

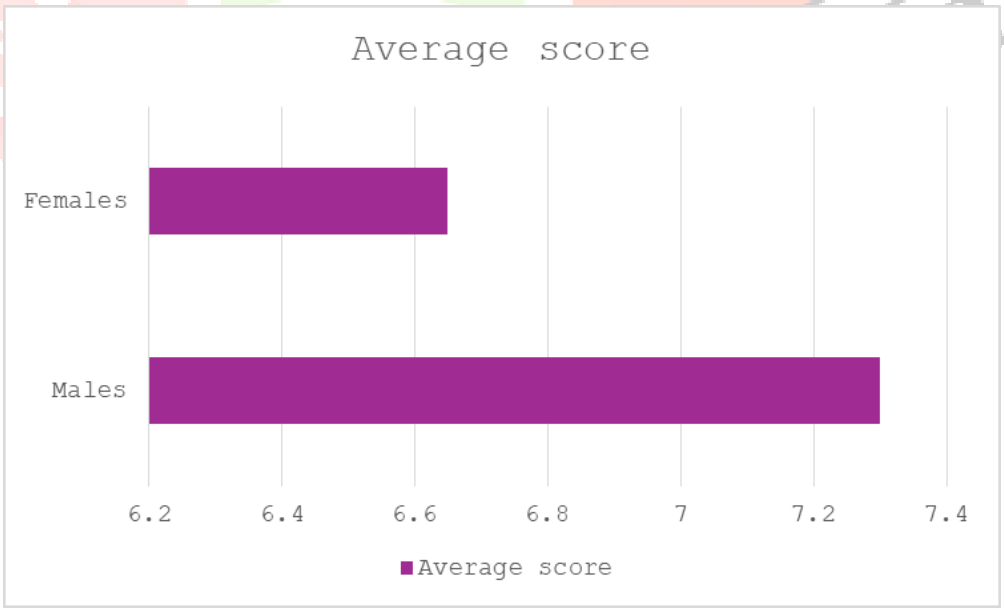

Fig (A)

Figure A displays the graphical representation of the difference between the average GSAQ Scores of males and females.

The survey results derived from the Global Sleep Assessment Questionnaire (GSAQ), present a clear discrepancy in sleep quality between males and females. With males scoring an average of 7.3 and females

scoring 6.65, it's evident that males are more prone to experiencing disrupted sleep cycles as compared to their female counterparts. This statistical contrast prompts an exploration into the underlying factors contributing to such gender-based variations in sleep patterns.

One notable contributor to these differences is the impact of hormonal fluctuations, particularly in women. The menstrual cycle, characterized by hormonal shifts, can significantly disrupt sleep patterns. Fluctuations in menstrual cycle can lead to changes in sleep architecture, resulting in difficulties falling asleep, maintaining sleep, or experiencing restorative sleep. These hormonal influences may manifest as symptoms like insomnia or disrupted sleep, affecting overall sleep quality among females. Moreover, sociocultural expectations and gender roles play a pivotal role in shaping sleep practices and experiences. Societal norms and responsibilities may impose different stressors on men and women, ultimately influencing their sleep behaviors. For instance, traditional gender roles may place greater pressure on men to fulfill provider roles, leading to heightened stress levels and potential sleep disturbances. On the other hand, women may experience sleep disruptions due to caregiving responsibilities or societal expectations related to family and household management. These divergent societal pressures can impact sleep quality in distinct ways for males and females.

Additionally, physiological differences between genders, such as body composition, can contribute to variations in sleep quality. Factors like body mass index (BMI) and distribution of fat tissue can influence breathing patterns during sleep, potentially predisposing individuals to conditions like sleep apnea or snoring. These physiological traits may vary between males and females, consequently affecting their susceptibility to sleep-related disorders and disturbances.

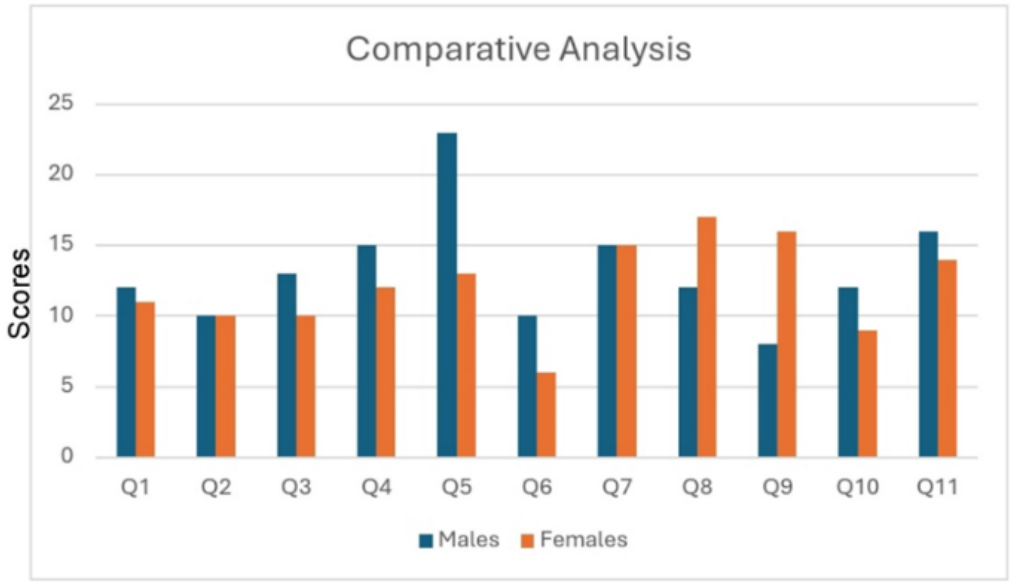

Fig (B)

Figure B Displays the difference between the scores of each question (total 11 questions) of the GSAQ answered by the 400 participants including 200 males and 200 females.

In light of these findings, it becomes imperative to develop targeted interventions for managing disturbed sleep cycles, particularly among men. Recognizing and addressing the unique challenges faced by each gender in relation to sleep quality is essential for designing effective strategies to promote optimal sleep and overall well-being. By implementing tailored approaches that consider hormonal, sociocultural, and physiological factors, healthcare professionals can work towards mitigating sleep disturbances and improving the sleep health of individuals across diverse gender identities.

CONCLUSION & IMPLICATIONS

In conclusion, our study looked at how sleep differs between males and females. We used a questionnaire called the Global Sleep Assessment Questionnaire (GSAQ) to ask 200 males and 200 females about their sleep. What we found was that males tend to have more interruptions during sleep compared to females. This suggests that there are differences in how males and females experience and deal with sleep. Understanding these differences is important for helping both males and females sleep better. Different things like hormones, society, and body differences can affect how males and females sleep. By knowing these things, we can make plans to help everyone sleep better and feel healthier overall.

In the future, more research is needed to figure out why these differences happen. By learning more about why males and females sleep differently, we can make better plans to help everyone sleep well. Our study shows that it's important to think about these differences when we try to help people with their sleep, so that everyone can feel their best during the day.

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