



COMPARISON OF SLEEP PATTERNS IN ATHLETES AND NON ATHLETES.

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ABSTRACT:

INTRODUCTION: Sleep is thought to be critical process for optimal physiological and cognitive functioning and is therefore suggested to be essential for athlete performance. The sleep of athletes may be suboptimal in comparison to aged matched non athletes. Sleep has been proposed as modifiable factor that influences athletic performance. Inadequate sleep has been consistently demonstrated to negatively influence various measure of physical performance (e.g., attention, skill performance and learning).

AIMS & OBJECTIVES: The aim of the study is to compare sleep patterns in athletes and non athletes.

METHOD: A Comparative study was conducted with 33 athletes and 33 non athletes, both males and females were included. Players filled up Pittsburgh sleep quality index scale for sleep patterns.

RESULT: Data was normally distributed hence shapiro wilk test was used. T test used to compare both group ($P > 0.05$). In athletes sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication, daytime dysfunction was worse to compare non athletes.

CONCLUSION: It can be concluded that, in athletes sleep patterns was different than non athletes.

KEYWORDS: Sleep quality, Sleep duration, Sleep disturbances, Sleep pattern

INTRODUCTION

An athlete is defined as an individual who trains for three hours each day, six days a week.¹ Track-and-field events represent some of the earliest organized sports and encompass fundamental human movements such as running, walking, jumping, and throwing.² To sustain peak performance, athletes must find a proper balance between rigorous training and adequate recovery.³

Sleep, a vital biological process, plays a key role in helping athletes recover from both the mental and physical demands of high-performance sports. In recent years, research on the relationship between sleep and athletic recovery, training, and overall performance has increased significantly. Previous studies have shown that elite athletes frequently experience inadequate sleep duration and poor sleep quality.⁴

Additionally, sleep contributes to various physiological functions, including learning, memory consolidation, and cognitive performance. Although sleep requirements differ from person to person, the exact amount needed to support optimal functioning and performance is still widely debated.. According to the National Sleep Foundation, healthy adults should sleep between seven and nine hours per night, with at least eight hours necessary to prevent neurobehavioral impairments that could affect daytime activities. Numerous studies suggest that athletes, in comparison to non-athletes, often require more time to fall asleep, remain awake in bed longer, exhibit reduced sleep efficiency, and encounter more frequent sleep disturbances.³

Although sleep is one of the most effective recovery methods available to athletes, evidence suggests that they often do not get sufficient rest. Various factors can influence the amount, quality, and timing of sleep in elite athletes, including training schedules, exercise intensity, competition anxiety, and sleep disorders. As a result, this study aimed to assess the typical sleep quality observed in highly trained athletes.⁵

Sleep is a fundamental component of human health and performance, playing a critical role in physical recovery, cognitive function, and emotional regulation. For athletes, sleep assumes an even greater importance due to the physical demands of training and competition. Numerous studies have indicated that adequate sleep enhances athletic performance, reduces the risk of injury, and supports effective recovery. In contrast, sleep deprivation or poor sleep quality can lead to decreased reaction times, impaired

decision-making, and reduced endurance⁸. While athletes may have greater awareness of the importance of sleep, their schedules—often marked by early morning training sessions, travel, and competition stress—can disrupt normal sleep patterns⁹. Non-athletes, on the other hand, might not face the same physical demands, but they too can experience sleep disturbances due to lifestyle factors such as screen time, stress, and irregular routines. Comparing the sleep patterns of athletes and non-athletes can help identify unique challenges and inform tailored strategies for improving sleep health across different populations¹⁰.

Recent research has emphasized that sleep is not only essential for general well-being but also a key determinant of optimal functioning in both athletic and non-athletic populations. For athletes, the demands of intensive physical training, competition schedules, and psychological stress can significantly impact both the quantity and quality of sleep (Venter, 2012). These disruptions may lead to a phenomenon known as “athlete sleep syndrome,” characterized by insufficient sleep duration, poor sleep quality, and circadian rhythm misalignment (Walsh et al., 2021). Such patterns can have cascading effects on performance, increasing the likelihood of overtraining, illness, and reduced motivation.¹¹

Non-athletes, although not subject to the same physical stressors, are often affected by academic or occupational pressures, lifestyle habits, and mental health issues that can impair sleep. Interestingly, while non-athletes may have more flexible routines, they often lack the structured schedules that promote healthy sleep hygiene, potentially resulting in irregular sleep patterns or chronic sleep debt.¹²

The comparison of sleep patterns between athletes and non-athletes can reveal critical insights into how different lifestyle demands affect sleep behaviors. It also highlights the importance of individualized sleep interventions. Understanding these differences is essential for coaches, healthcare providers, and individuals aiming to improve health and performance through better sleep management.¹³

So, the purpose of this study is to compare sleep patterns between athletes and non athletes.

METHODOLOGY

Total 33 athletes and 33 non athletes were taken in this study. Participants aged 13 to 25 years, including both males and females, were included. Among athletes, 20 football players, 10 badminton players, 5 tennis players were included. The non-athlete category included 33 participants, all of whom were college students.

The subjects were excluded by taking history of any medical illness, any psychiatric illness or any medications. They were given Pittsburgh Sleep Quality Index (PSQI) questionnaire to assess their sleep patterns. This study protocol was fully explained to the subjects. Ethical clearance was taken from the institution.

PROCEDURE

Athletes and non athletes were asked to fill up Pittsburgh sleep quality scale.

The Pittsburgh Sleep Quality Index (PSQI) is a 19-item questionnaire designed to evaluate seven key aspects of sleep, including subjective sleep quality, sleep efficiency, sleep latency, and total sleep duration, sleep disturbance, Daytime dysfunction and Sleep medication), adding up the component scores results in an overall global score, where global scores greater than 5 signify poor sleepers.

DATA ANALYSIS

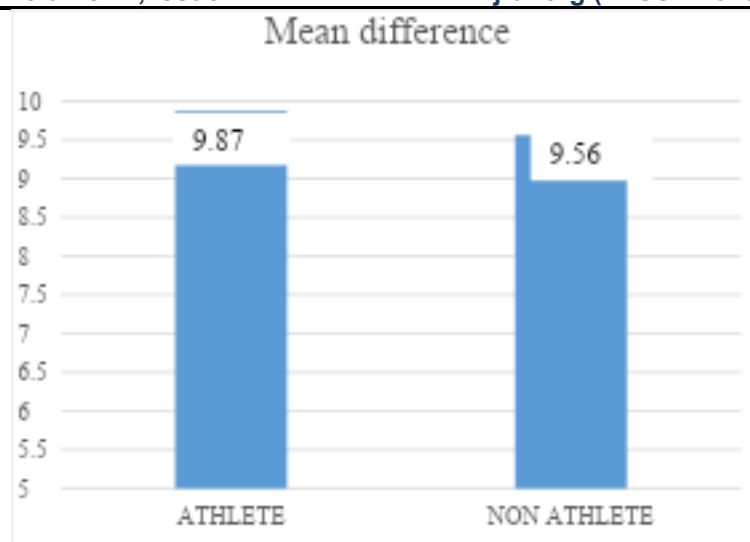
The result was carried out by using SPSS version 20. Normality of the dataset was examined using the Shapiro-Wilk test. Data was normally distributed. Hence, T test was used to compare both the group.

RESULT

33 athletes and 33 non athletes were asked to fill up Pittsburgh sleep quality Index scale.

T test was used to compare both the group. The comparison between athletes and non-athletes showed that the mean score for Athletes ($n = 33$) was 9.87 ± 4.90 , and Non-athletes ($n = 33$), it was 9.56 ± 3.99 . There was no statistically significant difference between athletes and non athletes. ($p = 0.78$)

GROUPS	MEAN $\pm$ SD	T VALUE	P VALUE
ATHLETE	9.87 ± 4.90	0.27	0.78
NON ATHLETE	9.56 ± 3.99		



DISCUSSION

The result of the study showed that there is no statistically significant difference found between athletes and non athletes. $P=0.78$.

Different components of Pittsburgh sleep quality Index questionnaire were assessed in both the group. Component 1 sleep quality, Component 2 sleep latency, Component 3 sleep duration, Component 4 sleep efficiency, Component 5 sleep disturbance, Component 6 use of sleep medication, Component 7 daytime dysfunction was higher score in athletes than non athletes.

Sneha jaiswal et al studied that A Comparative study of sleep quality in athletes & non athletes. They concluded that non athletes have better sleep quality than athletes. The result of the current study indicate that athletes obtain 7-9 hours per night and at least 8 hours of sleep per night is required to prevent neurobehavioural deficits in daytime performance.

Havva Demirel et al studied that Sleep Quality Differs between Athletes and non athletes. They concluded that Athletes had statistically significantly higher pittsburg Sleep quality index parameters compared with non athletes. Long term exercise or physical fitness is advised for better health and a life without stress, anxiety and depression and also for the normal brain function and emotional stability.

Fatima Pires et al studied that Influence of sports on the quality of sleep of athletes and non athletes. They concluded that an athlete seems to contribute to an average number of hours of sleep higher than non athletes. It was also found that there is a greater number of athletes in relation to non athletes.

Guillermo Brito Portugal et al studied that Sleep quality and its predictors in Brazilian marines. They concluded that Marines of the Brazilian navy have a high prevalence of poor sleep quality associated with personal, family, and occupational factors as contributors to the problem, indicating the need to develop health actions that favor good sleep hygiene in these professionals.

Hannah G Lund et al studied that Sleep patterns and predictors of disturbed sleep in a large population of college student. They concluded that insufficient sleep and irregular sleep-wake patterns, which have been extensively documented in younger adolescents, are also present at alarming levels in the college student population. Given the close relationships between sleep quality and physical and mental health, intervention programs for sleep disturbance in this population should be considered.

The present study aimed to compare sleep patterns between athletes and non athletes. The findings revealed there is no statistically significant difference between athlete and non athlete. This suggests that athletic status alone may not be a major determinant of sleep quality or duration. It is possible that other factors- such as academic stress, screen time, daily routines, or psychological well-being-have a stronger influence equally affected both athlete and non athlete on sleep than physical activity alone.

Conclusion

This study aimed to compare the sleep patterns of athletes and non athletes. The findings showed there is no statistically significant difference between athlete and non athlete.

CLINICAL IMPLICATION

The absence of significant differences in sleep patterns between athletes and non-athletes suggests that athletic status alone does not guarantee better sleep. Clinicians should assess sleep quality in all individuals, regardless of physical activity levels. Sleep interventions should be personalized and not based solely on athletic identity. Both groups may benefit equally from sleep hygiene education and stress management. This highlights the need for a holistic approach that considers mental health, lifestyle, and environmental factors when addressing sleep issues.

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