



THE STATE OF QUALITY AND QUANTITY OF SLEEP AMONG AMATEUR FEMALE ATHLETES

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Abstract

This study has been undertaken to assess the sleep quality and quantity of female athletes by using Pittsburgh sleep quality index questionnaire (PSQI). The purpose of this study is to examine sleep quality, sleep duration, and daytime sleepiness among university female athletes. Hundred female athletes (State/national level players of age: 18-25 years) participated in this study. Their sleep quality and quantity were assessed by using Pittsburgh sleep quality index (PSQI) Questionnaire. Only seven female athletes had sleep quality rated as “good”, leaving the overwhelming majority 93% classified as having their sleep quality rated as “bad”. Our findings highlight sleep hygiene is an important component of health that is often ignored by sports medicine professionals, with such a large majority of female athletes having very low sleep quality scores. Additionally, this study clearly provides evidence that this health need is not being addressed or being ignored. Further, our results suggest that there is a need for further education of student-athletes so that they understand the importance of sleep and the impact it can have on athletic and academic performance.

Key words – Sleep, Athletes, PSQI, Sleep quality, Female athletes, Questionnaire

INTRODUCTION

Athletes are unique since they not only deal with the physiological stress of training and participating in activities, but must also deal with the stress associated with their academic studies and the significant pressures of their social environment.

When it comes to sleep, student athletes are an intriguing group to examine. On the other hand, with psychological and physical stress from their academics, sports endeavours, and may be jobs to finance their academic career, their demand for excellent quality sleep is exceedingly high. This mix of demands, in addition to possible early mornings for scheduled sports practice or other obligations, and likely late nights for social events, academics or a full day of lessons and training. The paradox is that, although having one of the highest needs, they are highly likely to sleep less than the ordinary person. Although there is a well – established relationship between sleep, health, and performance, research on this topic among university student athletes is still in its early stages. A vast amount of research suggests that university athletes do not get enough sleep, but little.

In this regard Furthermore, studies have focused on to determine the sleep patterns of college students (athletes and non-athletes) and also examine the quality of sleep and the factors affecting the sleep quality within a specific gender (i.e.,

either male or female) [5,7,15]. However, sleep quality and quantity (using questionnaires such as PSQI) among male and female athletes and their relationship with academic and sports performance has received little attention in the literature.

Therefore, the primary aim of this study was to examine sleep duration, sleep quality and quantity among LNIPE female athletes. The second purpose was to find out the sleep pattern which is characterized by insufficient sleep duration during the day. It was predicted that student-athletes would not meet the recommended standard of 10 hours/night of sleep and that their sleep quality would not be classified as “good”. We also hypothesized that quality and quantity of sleep of LNIPE female athletes will be considered as bad sleepers.

Sleep plays a crucial role in day-to-day life of an individual, especially for student athletes. A valid and reliable sleep pattern assessment can have wide ranging application in different sports skills too. Improving sleeping hours help for the better health status in field of sports.

2.METHODS

2.1 Procedure

All the responses from the subjects were collected online through the google form. All participants were explained and instructed about the purpose and techniques of attempting the questionnaire before the collection of the data. All undergraduate and graduate students living in university hostels were sent an e-mail asking them to participate in the study. A link in the e-mail sent them to the Google form site. Data collection occurred in 4 weeks all students living in residence halls were targeted (n = 100).

2.2 Participants

The sample was selected by using convenience sampling method. The data were collected from a total sample of 100 university athletes (Players who participated in state and national level) aged 18 – 25 years and were enrolled in various courses at LNIPE.

2.3 Materials

The online questionnaire consisted of 20 questions. The sleep measure was the Pittsburgh Sleep Quality Index (the PSQI), a 19-item questionnaire designed to measure self-reported sleep quality and disturbance over a 1-month period. The PSQI has strong internal consistency (Cronbach’s $\alpha = .83$) across its 7 subscales, which include questions to assess subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction. Global PSQI scores have been found to differ significantly across groups, with patients diagnosed with either insomnia or depression showing higher PSQI scores. The PSQI has been administered to female athlete’s populations, including college students. The questionnaire also included 6 items to address student demographics (4 of which, including age, name, college-year classification, and specific sport). Five items were researcher-developed questions designed to capture factors associated with inadequate sleep-in female athlete’s students. Many of these items asked about consequences of inadequate sleep (for example, “In the past month how often have you fallen asleep in class?”), whereas others pertained to potential sleep disrupters (for example, “How often does activity/noise level in the residence hall interrupt your ability to sleep?”). Subjects were also assured that the data collected from them will be kept confidential and used only for interpreting the results of the present study.

2.4 Statistical analysis

Descriptive analysis has been used to find the maximum, minimum, standard deviation and mean of the data. To find out the result whole data was analysed by statistical package for social science (SPSS) version 20. The Principle sleep-related dependent variables analysed were self-reported amount of sleep (i.e., PSQI score). Data were also evaluated for sleep quality and sleepers were categorised as “good” sleepers or “bad” sleepers

3.RESULTS

3.1 PSQI Scores

According to the authors of the PSQI, a global score of > 5 indicates that “a subject is having severe difficulties in at least two [of the seven components] areas, or moderate difficulties in more than three areas”. In other words, a score of > 5 generally denotes that the subject has poor perceived sleep quality and may in fact have a clinically diagnosable sleep disorder.

3.2 RESULTS OF THE STUDY

The purpose of this study is to determine the sleep quality and quantity among female athletes and the data was collected by using Pittsburgh Sleep Quality Index (PSQI) Questionnaire. There were Hundred female-athletes who responded to the questionnaire and comprised the sample for this study. Athletes involved in either individual or team sports responded to the questionnaire. There were at least fifteen respondents from each class. The age ranged from 18-25 years.

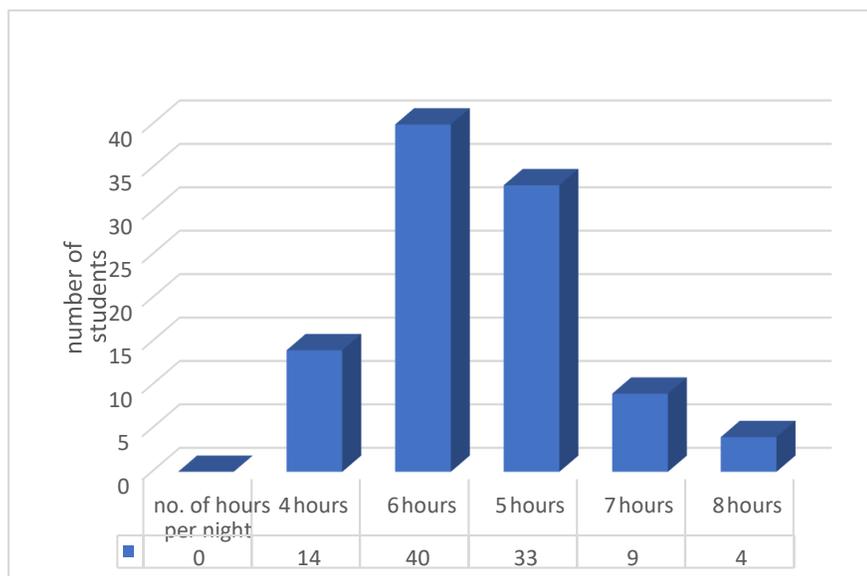
TABLE 3.4 Descriptive Statistics

	N	Minimum	Maximum	Mean	St. Deviation
VAR00001	100	0	3	1.28	.964
Valid N (listwise)	100				

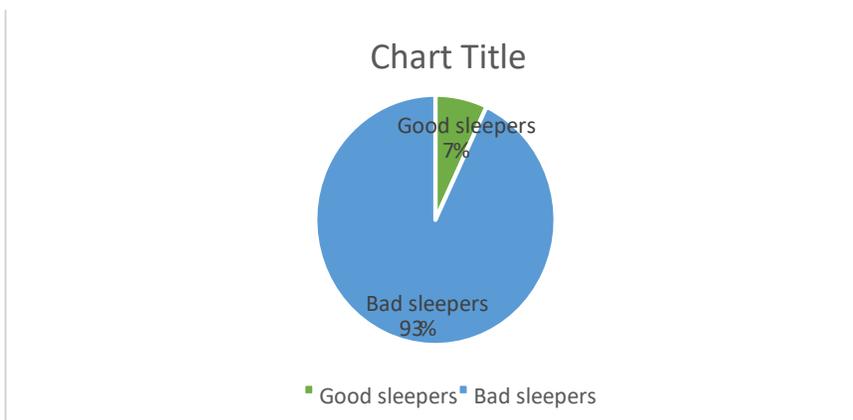
Sleep Duration

The median sleep duration for the entire sample was 7 hours per night. The range of the responses were from 4-10 hours per night. Only one respondent self-reported averaging the recommended 9 hours of sleep per night, while 5 respondents were in the 8-9 hour per night range, which is recommended for the average college student.

Graph 3.5 shows the number of hours the female athletes got sleep.



Graph 3.6 depicts that from the whole sample only 7% of the female student athletes possessed good sleep quality and can be considered as “good sleepers” assessed with the help of PSQI questionnaire and that of 93% from the whole sample of female student athlete possessed bad sleep quality and can be considered as “bad sleepers”.



4.DISCUSSION

This study aimed to assess the Sleep quality and quantity of LNIPE university female athletes through PSQI (Pittsburgh sleep quality index) questionnaire. Although the last few years have brought more attention to the topic of sleep among university student's athletes, research conducted by college health professionals and results aimed at this audience are still rare. Our findings support much of what is reported in the literature about sleep's negative impact on academic and sports performance. Global PSQI scores and sleep-timing measures reveal a pattern of insufficient and poor-quality sleep in this largely female student athlete's population. The main finding clearly indicates that LNIPE female athletes' sleep quality is not rated as "good". Only seven female-athletes had sleep quality rated as "good", leaving the overwhelming majority (93%) classified as having their sleep quality rated as "bad". This questionnaire has been validated for use in college-aged populations [5,12,23,28,31]. In addition, these data suggest that introducing a sleep education program should be considered to understand the importance on sleep and its impact on health. Not only they hampering their ability to perform, but are also missing out on potential performance benefits of obtaining additional sleep [33].

Mendelson [18] also suggested that the Decreased sleep duration and altered sleep quality are risk factors for obesity in youth. Therefore, being considered bad sleepers may affect female athletes' health. This study was administered online included the Pittsburgh Sleep Quality Index which is used by previous studies also [5,23] to measure the sleep quality and quantity among different population. Therefore, this questionnaire is used to assess sleep quality and quantity among female athletes. It was studied that Poor sleep interacted with academics and mental health [5]. Our results shows that majority of the subject considered bad sleepers only a slight number of female athletes considered to be a good sleeper, which is in agreement with previous studies. Mara Elizabeth [23] detected "poor" sleepers in her study as, only three of the 42 respondents rated their sleep quality as "good". Similarly, Forquer, L. M. et al. [15] students have sleep problems that may interfere with daily performance, such as driving and academics.

As with any research, the project described here in had a number of limitations. First, Questionnaire has its limitations, any bias that might have entered into the subject on this account may be considered as limitation to this study. Second, limitation of this study is that data collection was by student self-report. Although this was the most effective way to obtain data from a relatively large number of students, accuracy may be compromised in some cases by athletes' perception towards own behaviour may be different, the impact of training or coaching technique of the coaches for various players might influence the answers given. Third, this study was conducted on female athletes only. Therefore, future research may be conducted on male athletes. Finally, the study was only administered to students residing in hostels at a university not off campus.

While further study is needed to determine causality between increased athletics related time demands and a lack of sleep, there must be some modifications that can be made to improve the schedule in a day. If participation in intercollegiate games/sports are shown to negatively impact female-athlete health, then steps should be taken to educate student athletes and improve policies so that an atmosphere can be created to promote healthy sleep habits. Further, there is a well-established relationship between sleep, health, and performance, research on this topic among university student athletes is still in its early stages.

5.CONCLUSION

This research collected qualitative data and explored specific factors that affect female student athletes' sleep experience in the residence halls, and play grounds. This research Acknowledgement supports the fact that poor sleep is a challenge for many students residing on campus, and that sleep may be linked to student concerns related to their academics and sports performance. Our study revealed that students have a strong interest in sleep, and that discussions of sleep might be a useful

starting point to address more sensitive issues of physical and mental health. As sleep relates to many aspects of student health and performance.

In the current study, according to the findings in the light of this research, female athletes have bad sleep quality and quantity. To raise awareness among university students, coaches, managers, P.E teacher, fitness experts and to the stake holders need a broader and deeper understanding about the concept of sleep quality and the factors affecting the sleep quality and to increase the quality and quantity of sleep for the betterment of athlete's performance and overall health.

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