

Differences in Students Cricket Players Sleeping Behavior Based on Age and Achievement

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Abstract

There is growing scientific evidence that athletes' sleep quality has a direct and indirect effect on their performance, making this an intriguing topic. The primary goal of this research was to compare players of varying ages and levels of success from the Malaysian Cricket Association Academy in terms of their sleeping behavior. In total, 56 cricket players from the National, State, and Bukit Jalil Sports School teams in Malaysia were surveyed. This research provides a quantitative analysis of the sleeping behavior of cricket players, using both descriptive and inferential statistics. The Athlete Sleep Behavior Questionnaire (ASBQ) is the instrument employed. The study found a statistically significant correlation ($p < 0.05$) between athletes' sleep behavior and age, but not with best achievement. As a result of this research, coaches, and players will have a better understanding of how each athlete sleeps. Further research into athletes' sleeping behavior is recommended so that coaches and trainers can better understand the sleep behavior of Malaysian Cricket Association Academy athletes and design effective interventions to raise their slumbering standards.

Keywords: Job Stress, Coping Strategy, Healthcare Workers, Hospital, Covid-19 Patients

Introduction

Increased emphasis has been paid to the practical application of enhancing sleep practices in the athlete environment due to the exponential growth in the research literature describing and influencing the quantity and quality of sleep in elite athletes over the past decade (Halson, 2019). Getting the appropriate amount of sleep each night can be particularly difficult for athletes, and there is mounting evidence that this is the case (Driller et al., 2019). Previous research has suggested that adults need seven to nine hours of sleep per night; less sleep than this is considered suboptimal and may affect health, both existence and the athlete's performance (Driller, et al, 2022). However, the exact amount of sleep needed by an athlete has yet to be obtained by the individual. Because of the higher demands placed on athletes' bodies and minds, the optimal duration of sleep is more likely to fall toward the upper end of this range. Athletes' sleep quality and quantity can be negatively impacted by

physiological, psychological, and schedule aspects; these factors may vary across individual and team sports athletes (Halson et al., 2022). Team sports athletes may have less control over their training schedules and more organised week-to-week competition forms, with several personality features that might affect how they behave and how they sleep.

Literature Review

Every living thing requires sleep as a means of recharging their energy stores. But how well do we really grasp the nature and function of sleep? According to research by Kunz and Herrmann (2000), sleep helps you concentrate better by recharging your mental batteries and refreshing your memory. There are unquestionably people in the world who experience sleep problems like insomnia, chronic sleep deprivation, and dermatological conditions that cause central nervous system disruption (Gupta & Gupta, 2013). It appears simple because people routinely perform it. It's not easy to put into practise in a way that ensures people's safety and happiness. Athletes can benefit from sleep therapy since it enhances their ability to complete the tasks required of them during competition. Athletes typically need 9 or 10 hours of sleep per day, as opposed to the 7 or 8 hours recommended for the average person.

Athletes who wish to bulk up their muscles may require as much as 10 hours of sleep every day (Mănescu, 2013). Then there are the athletes who put forth effort every day to play a sport like football, rugby, basketball, etc. Understanding the problem is a necessary first step. Raising awareness of the negative health and well-being effects of lack of sleep may be worthwhile given that sleep behavior does not appear to be in people's thoughts when thinking about health, as detailed previously in this chapter. The goal of raising consciousness should be to help individuals develop a more accurate perception of their own actions. When polled, many respondents said they either didn't get enough sleep or slept too late, but few considered trying to get to bed sooner. According to the cybernetic model (e.g., Carver & Scheier, 1998), the first step towards self-regulation is to keep tabs on one's own conduct and take note of the gap between one's actual and ideal states.

Keeping a food diary is one method of monitoring behavior that has been shown to lead to behavioral change (Verhoeven et al., 2014). In terms of putting off bedtime, this means considering how one spends evenings and whether that fits with their personal sleep preferences. People can try asking themselves questions like "What bedtime do I really want?" "What will I do tonight?" "Why might I end up delaying sleep?" and "How will I feel about that tomorrow?". Athletes are people who take part in sporting events, whether they do so as professionals for pay or as amateurs for free. In addition, a great athlete is ideally suited for physical activities, especially competitions, because of his or her superior physical skills (in terms of strength, agility, and endurance) compared to those of the average person. Most professional athletes, and especially those that compete at the highest levels, have achieved their toned bodies via years of hard work in the gym and dedication to a good diet.

Problem Statement

Most athletes are susceptible to making seemingly insignificant errors that detract from their overall performance. Evidence of this can be found in how well athletes perform both in and out of competition. Since this was not the level of performance expected by the coach, the athlete underperformed. Another reason athletes aren't doing as well is that they aren't getting enough sleep. Each athlete needs a sufficient amount of rest for their bodies and

minds to fully recover, thus it's important to stress the need of discipline to them. Furthermore, sleep issues are commonly experienced when the individual does not get enough sleep due to disruptions that can disrupt normal sleep. There are various causes of poor sleep, including staying up late because of work, a bed that has been recently altered and no longer provides adequate comfort, and many others (Reilly & Edwards, 2007).

Athletes' performance, recovery, and general health are all affected by how they sleep. Better physical performance has been linked to better sleep (Miles et al., 2019). Reaction time, accuracy, speed, coordination, and endurance are all likely to improve for athletes who consistently obtain enough restful sleep. However, sleep loss has been linked to performance declines, weakness, delayed recovery, and even an increased risk of injury among athletes. Concentration, focus, decision-making, and reaction time are just a few of the cognitive abilities that benefit greatly from enough sleep (Biggins et al, 2019). When athletes get enough sleep, they are better able to retain information, acquire new skills, and make split-second decisions in both practise and competition. Growth hormone is secreted during sleep and plays a role in tissue repair, muscle growth, and post-workout recovery (Huang et al., 2020). Repairing muscles and replenishing glycogen stores are two of the most crucial functions of sleep. By giving their bodies enough time to rest and rejuvenate, athletes can improve their performance in subsequent workouts and games.

Maintaining a strong immune system requires adequate sleep (Yousfi et al., 2020). Athletes are more likely to get sick because of the stress they put on their bodies during training and performance. Getting enough shut eye strengthens the immune system, lowering the likelihood of contracting an illness that could prevent you from meeting your training or competition goals. Athletes who don't get enough sleep are more likely to get hurt (Dobrosielski et al, 2021). Accidents and injuries are more likely to occur during practise or competition when an athlete is sleep deprived and therefore unable to concentrate as well. To be mentally and emotionally healthy, sleep is essential (Morin et al., 2020). Improvements in disposition, stress, emotional regulation, and mental resilience have all been linked to getting a good night's sleep. Sleep-deprived athletes are less likely to have a positive mental and emotional state, which can hinder their ability to practise and compete well. Hormones, such as those involved in growth, metabolism, and appetite, are affected by sleep (Lateef & Akintubosun, 2020). Athletes' energy levels, muscle growth, body composition, and hunger control may all be negatively affected by sleep disruptions because of the way hormones are regulated.

Objectives

The purpose of this study is to identify differences between the sleep behavior of Malaysian Cricket Association Academy athletes based on their age and highest achievement.

Research Hypothesis

Ho₁ There is no significant difference between the sleep behavior of Malaysian Cricket Association Academy athletes on age.

Ho₂ There is no significant difference between the sleep behavior of Malaysian Cricket Association Academy athletes on the highest achievement.

Methods

The study was done using an ex post facto design at the Malaysian Cricket Association Academy (MCAA). Probability sampling is employed, and the sampling is conducted using the Random Sampling method. In addition to facilitating data collecting, this strategy can help you save time. This method will allow us to collect data from a broad cross-section of MCAA athletes and the research sample consisted of 56 MCAA athletes aged 13 and up. The current investigation relied on a survey created especially for this purpose, the Athlete Sleep Behavior Questionnaire (ASBQ) by Driller et al. (2018). There has been previous research using and validating this instrument. The ASBQ is a practical tool for identifying areas where improvements in sleep behavior could be made; it is a short (18-item) survey that covers questions on sleeping behavior and habits regarded to be prevalent areas of concern for elite athletes. Respondents are asked how often they engage in certain actions (never, seldom, sometimes, frequently, always) as part of the study.

The total ASBQ score was calculated by adding up the weights assigned to each response option on the scale from 1 (never) to 5 (always). Insufficient sleep habits are reflected in a higher global score. Google Forms were used to administer the survey to participants based on whatever athletic events they were interested in. The Google form provides clear instructions and procedures, making it simpler for respondents to provide honest answers. The researcher allowed three days for responses to be submitted. The normality test is performed to determine whether the distribution patterns of the study data acquired follow a normal distribution. To ensure that we are using valid and reliable statistical tests, we also conduct a normality test. The study compares sleep patterns across age groups and levels of athletic participation using One-Way ANOVA analysis statistics at the $\alpha = 0.05$ level.

Results***Demographic***

Cricket players' sleep habits were investigated through surveys filled out by 56 athletes from the Malaysian Cricket Academy's three tiers (National Athletes, SUKMA Athletes, and Bukit Jalil Sports School Athletes). Table 1 shows the demographics of players in cricket and the majority are 30 National Athletes (53.6%). Next, most of the race among the athletes is Malay with a total of 46 people (82.1%). In addition, the majority age is 18 to 22 years and a total of 27 people (48.2%). In addition, most of the highest achievements were at the international level with a total of 24 people (42.9%). Whereas most positions in the game of cricket are bowlers with a total of 29 people (51.8%).

Table 1

Respondents Demographic

	Demography	Frequency (n)	Percentage (%)
Level:	National Athletes	30	53.6%
	SUKMA Athletes	13	23.2%
	Bukit Jalil Sports School Athletes	13	23.3%
Race:	Malay	46	82.1%
	Indian	7	12.5%
	Others	3	5.4%
Age:	13 -17	12	21.4%
	18 - 22	27	48.2%
	23 & above	17	30.3%
Highest Achievement:	International	24	42.9%
	National	23	41.1%
	State	9	16.1%
Position in Cricket:	Throwers	29	51.8%
	Batters	16	28.6%
	Wicket Keeper	11	19.6%

Sleep Behavior of Professional Cricket Players.

Athletes from the Malaysian Cricket Academy's sleeping habits are broken down in Table 2, which also displays the total number of players and the proportion of analytical and descriptive data. The data was collected using a five-point Likert scale and broken down into the following groups: never, rarely, sometimes, often, and always.

Table 2

Sleep Behavior of Professional Cricket Players

No.	Items	Never 1	Rarely 2	Sometimes 3	Often 4	Always 5
1.	I napped for two or more hours	14 (25.0%)	19 (33.9%)	19 (33.9%)	4 (7.1%)	0 (0%)
2.	I use stimulants when training or competing	29 (51.8%)	9 (16.1%)	8 (14.3%)	8 (14.3%)	2 (3.6%)
3.	I exercise (practice/compete) at night (>7 PM)	16 (28.6%)	11 (19.6%)	18 (32.1%)	7 (12.5%)	4 (7.1%)
4.	I drink alcohol within 4 hours before going to bed	51 (91.1%)	2 (3.6%)	3 (5.4%)	0 (0%)	0 (0%)
5.	I started sleeping at erratic times	13 (23.2%)	15 (26.8%)	12 (21.4%)	12 (21.4%)	4 (7.1%)
6.	I began to sleep in a state of thirst	17 (30.4%)	23 (41.1%)	12 (21.4%)	3 (5.4%)	1 (1.8%)
7.	I began to sleep in a state of pain	16 (28.6%)	19 (33.9%)	14 (25.0%)	5 (8.9%)	2 (3.6%)
8.	I use a device that emits light, before going to bed	19 (33.9%)	14 (25.0%)	6 (10.7%)	10 (17.9%)	7 (12.5%)

9.	I think and worry about my sports performance when I go to sleep	9 (16.1%)	15 (26.8%)	16 (28.6%)	12 (21.4%)	4 (7.1%)
10.	I think and worry about issues unrelated to sports when I go to sleep	11 (19.6%)	23 (41.1%)	14 (25.0%)	5 (8.9%)	3 (5.4%)
11.	I take sleeping pills to help me sleep	50 (89.3%)	4 (7.1%)	2 (3.6%)	0 (0%)	0 (0%)
12.	I wake up in the middle of the night more than once every night	28 (50.0%)	22 (39.3%)	6 (10.7%)	0 (0%)	0 (0%)
13.	I wake myself/my bed partner with my snoring	37 (66.1%)	14 (25.0%)	3 (5.4%)	1 (1.8%)	1 (1.8%)
14.	I wake myself/ bed partner when muscle spasms	28 (50%)	16 (28.6%)	8 (14.3%)	4 (7.1%)	0 (0%)
15.	I wake up in the morning at different times	13 (23.2%)	16 (28.6%)	14 (25.0%)	9 (16.1%)	4 (7.1%)
16.	The environment and sleeping atmosphere at my house are less than perfect/comfortable	33 (58.9%)	11 (19.6%)	6 (10.7%)	6 (10.7%)	0 (0%)
17.	I sleep in foreign environments (e.g., hotel rooms)	32 (57.1%)	11 (19.6%)	9 (16.1%)	3 (5.4%)	1 (1.8%)
18.	Traveling disrupts the process of building a consistent sleep routine	21 (37.5%)	15 (26.8%)	10 (17.9%)	8 (14.3%)	2 (3.6%)

The results show that the highest percentage 91.1% (51 people) do not drink alcohol within 4 hours before going to bed. Next, the second highest percentage is 89.3% (50 people) which is the respondents never using sleeping pills to help them sleep. The third highest percentage with a total of 66.1% (37 people) they never wake or their bed partner with their snoring. 12.5% (7 people) always use a device that emits light, before going to bed.

Comparison Of Sleep Behavior by Age.

To examine the variance in sleeping habits amongst the three age groups (13–17, 18–22, and 23–and up), an ANOVA was performed at the $\alpha = 0.05$ level. One-way analysis of variance (ANOVA) for ASBQ scores by age is presented in Table 2. The results of the analysis reveal that ASBQ scores are significantly affected by age; $F(2, 53) = 5.231, p = .002$. It is possible to reject the null hypothesis if P is smaller than Alpha. This ruling makes it clear that there is a major distinction in sleep habits between the three age groups.

Table 3

One-way ANOVA test for ASBQ scores by age

Model	SS	df	MS	F	p
Between	1.521	2	1.342	7.104	.012
Groups Within	30.101	53	0.156		
Groups					
Total	31.622	55			

If the value of the main effect is statistically significant, then post hoc tests must be conducted to establish the finer distinctions between the groups. The post hoc test results by age range are presented in Table 3. Mean scores differed significantly between the 13–17 and 18–22 age groups ($P=.002$), the 13–17 and 23–and–older age groups ($P=.003$), and the 18–22 and 23–and–older age groups ($P=.001$), according to post hoc tests conducted using the Turkey HSD method. The results suggest that respondents between the ages of 13 and 15 have better sleep habits than those between the ages of 18 and 22 and those aged 23 and up. Those between the ages of 18 and 22 have healthier sleeping habits than those aged 23 and up.

Table 3

Post Hoc Test Using Turkey HSD According To Age Group

Age		Mean diff	SE	p
13-17	18-22 years old	-.323*	.088	.002
	23 above	-.310*	.084	.003
18-22	13-17 years old	.323*	.088	.002
	23 above	-.340*	.096	.001
23 above	13-17 years old	.310*	.096	.001
	18-22 years old	.340*	.084	.003

* Mean difference is significant at α level = 0.05

Comparison Of Sleep Behavior According to Highest Achievement.

To examine the variance in sleeping habits amongst the three age groups (13–17, 18–22, and 23–and up), an ANOVA was performed at the = 0.05 level. One-way analysis of variance (ANOVA) data for ASBQ scores by highest achievement is presented in Table 4. $F(2, 53) = 7.104$, $p = .012$ indicates that there is no statistically significant effect on reaching the highest possible score on the ASBQ. The null hypothesis cannot be rejected if the value of P is greater than Alpha. This ruling makes it clear that there is no statistically significant difference in sleep habits among the top three performing groups.

Table 3

One-Way ANOVA Test for ASBQ Scores by Highest Achievement

Model	SS	df	MS	F	p
Between	1.521	2	1.342	7.104	.012
Groups Within	30.101	53	0.156		
Groups					
Total	31.622	55			

Discussion

Malaysian Cricket Academy Athletes Sleep Behavior is Based on Age.

There was a statistically significant variation in the sleeping habits of athletes across the three age groups. Athletes between the ages of 13 and 17 have better sleep behaviors than those aged 18 and up, according to post hoc testing results utilising the Turkey HSD method. Better sleep habits are common among athletes between the ages of 18 and 22, compared to athletes aged 23 and up. Espiritu (2008) corroborated this observation by stating that slumber habits shift with aging. Meanwhile, Lastella et al. (2020) report that aging influences how long people sleep. One behavior that differed significantly between groups was how much and how well they slept. One of the common sleep behaviors that occurs with aging is a change in sleep schedule. A longer adjustment period is required for a person to become accustomed to the new nighttime routine. Age also tends to increase the frequency of nighttime awakenings during sleep (Mander et al., 2017). The way you sleep during the day shifts as you get older, with naps becoming more common as you get older (Monk et al., 2001).

Adolescents typically prefer later bedtimes and later wake-up times due to a natural change in sleep habits known as the delayed sleep phase. This change, influenced by biological variables, might lead to sleep deprivation if early mornings are required for school or training. Adolescent athletes really need enough sleep for proper growth, development, and overall performance. Athletes in their twenties need the same amount of sleep as the average adult, which is between 7 and 9 hours. Insufficient sleep is a common problem, but it can be difficult to avoid due to the pressures of training, competition, and school or work. Maintaining a healthy sleep-wake cycle is crucial for peak performance, recuperation, and well-being, thus striking the right balance between these aspects is crucial.

Masters' athletes are those who continue to compete in their chosen sport well into their later years, typically after turning 40 or 50. Alterations to one's sleep schedule are not uncommon with advancing age. Sleep in the elderly is typically less restful, lighter, and more prone to interruptions. To optimise their performance and recuperation, master's athletes must pay close attention to the quality of their sleep and treat any age-related sleep disorders they may be experiencing. These guidelines based on age provide a good starting point, but it's crucial to keep in mind that everyone is unique. Depending on their individual circumstances, training schedules, and needs, athletes should set their sleep priorities accordingly. Athletes of any age can benefit from regularly assessing their sleep habits, dealing with sleep disorders or concerns as soon as they are recognised, and obtaining advice from healthcare professionals or sleep specialists.

Malaysian Cricket Academy Athletes Sleep Behavior Based on The Highest Achievement

The findings revealed that Malaysian Cricket Academy sleep behavior of athletes did not have a significant association with groups of athletes' highest achievement. According to a study conducted by Hafizah and Mohd (2022), Sports School Malaysia Sabah athletes' sleep behavior had no significant association with both groups of athletes' performance-level engagement. Athletes' sleep patterns can also be influenced by their level of achievement in their sport. Elite and professional athletes frequently have hard training regimens, travel obligations, and tight competition schedules. As a result, their sleeping habits become crucial to their performance and recovery. These athletes often prioritize sleep as an important component of their training program, and they collaborate closely with coaches, trainers, and sleep specialists to optimize their sleep habits. They understand the need of getting enough sleep on a regular basis to maintain peak physical and mental performance. Competitive and semi-professional athletes who have not reached the elite or professional level but still compete at a high level realize the importance of sleep in their performance. Along with their training responsibilities, they attempt to prioritize sleep and recovery. While they may have other responsibilities such as employment or education, they try to maintain consistent sleep cycles and create an atmosphere favourable to quality sleep.

Amateur and recreational athletes may devote various amounts of time to their sports and have distinct lifestyle requirements. They can still gain from knowing the value of sleep for recovery, general health, and pleasure of their sport, even though their sleep habits may not be as structured or regulated as those of top or competitive athletes. These athletes can develop consistent sleep schedules, aim for proper sleep durations, and be aware of the effects of insufficient sleep on their performance and general well-being. A holistic strategy is necessary to achieve high levels of performance in sports, and sleep is only one component of a comprehensive training and lifestyle programme. To maximise their athletic potential, athletes of all levels can gain from understanding the importance of sleep and integrating healthy sleep habits into their daily routines.

This research can help coaches and athletes learn more about how each athlete sleeps. Athletes from the Malaysian Cricket Association Academy were able to self-evaluate and profile their nocturnal habits according to this research. Do they have healthy and appropriate habits when they sleep? According to Kellmann et al. (2018), exposing athletes to information about the right sleep behavior including the right time, training, and additional sleep period to replace the shortened night's sleep during the competition season—is one of the effective steps in supplemental physical preparation, and so it is hoped that this study will help the athletes of the Malaysian Cricket Association Academy change their sleep behavior for the better to maintain and improve their sports performance. Further research into athletes' sleeping habits is recommended so that coaches and trainers can better understand the sleep habits of Malaysian Cricket Association Academy athletes and design effective interventions to raise their slumbering standards. It was also suggested that this research be carried out at other academies for sports.

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