



## A STUDY OF MORNINGNESS AND EVENINGNESS AMONG SPORTS PERSONS

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### Abstract:

This paper represents the study of Morningness Eveningness among Sports Persons. Total One Thousand (1000) subjects were selected for this study. One hundred (100) subjects were taken from Bachelor of Business Administration (B.B.A), one hundred fifty (150) subjects were taken from Bachelor of Commerce (B.Com), one hundred fifty (150) subjects were taken from Bachelor of Social Work (B.S.W), one hundred fifty (150) subjects were taken from Bachelor of Arts (B.A), one hundred fifty (150) subjects were taken from Bachelor of Science (B.Sc), one hundred fifty (150) subjects were taken from Bachelor of Computer Application (B.C.A) and one hundred fifty (150) subjects were taken from Bachelor of Technology (B.Tech) selected for the present study. The data pertaining to the study was collected by standard questionnaire. In this study, data were analyzed and interpreted with the help of special statistical techniques. The finding of this study shows that most of the sports persons of different Streams of Senior Colleges of Amravati City fall under Intermediate type.

**Keywords:** morningness, eveningness, sports persons, Amravati city

### 1. Introduction

One of the most dramatic features of the world in which we live is the cycle of day and night. Correspondingly, almost all species exhibit daily changes in their behavior and /or physiology. These daily rhythms are not simply a response to the 24-hour changes in the physical environment imposed by the earth turning on its axis but, instead, arise

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from a timekeeping system within the organism. This timekeeping system, or biological “clock,” allows the organism to anticipate and prepare for the changes in the physical environment that are associated with day and night, thereby ensuring that the organism will “do the right thing” at the right time of the day. The biological clock also provides internal temporal organization and ensures that internal changes take place in coordination with one another.

Our body clock is a small group of cells made up of unique ‘body clock’ genes. These cells turn on and off and tell other parts of the body what time it is and what to do. In fact, most of our individual organs have their own internal body clock cells as well. Sunlight helps us to adjust this internal time cycle each day to synchronize it with the world’s 24-hour cycle. It works like this: light hits the back of our eyes and travels into our brains, triggering the release of chemicals onto our body clock cells. This tweaks our internal time to be either slower or faster, making it exactly 24 hours.

## **2. Circadian Rhythms**

The circadian rhythms of humans can be entrained to slightly shorter and longer periods than the Earth's 24 hours. Researchers at Harvard have recently shown that human subjects can at least be entrained to a 23.5-hour cycle and a 24.65-hour cycle (the latter being the natural solar day-night cycle on the planet Mars). All living things, from bacteria, plants, animals to humans have their own biological cycle that oscillates around a 24 hour long period. It drives biological activities like ageing, metabolism, sleeping, hormone production, brain activity or cell regeneration.

This 24 hour cycle is called the circadian cycle and the science behind it can prove very useful for anyone who wants to organize their workday more effectively. Our body has its own internal clock that controls our natural cycle of sleeping and waking hours. In part, our body clock controls how much melatonin our body makes. Normally, melatonin levels begin to rise in the mid- to late evening, remain high for most of the night, and then drop in the early morning hours.

Light affects how much melatonin our body produces. During the shorter days of the winter months, our body may produce melatonin either earlier or later in the day than usual. This change can lead to symptoms of seasonal affective disorder (SAD), or winter depression. Natural melatonin levels slowly drop with age. Some older adults make very small amounts of it or none at all.

### 3. Chronotype

Chronotype is an attribute of species, reflecting the activeness of their physical functions (hormone level, body temperature, cognitive faculties, eating and sleeping). Humans are diurnal species; they remain active during the day time and sleep during the night hour. Chronotype is commonly reduced to sleeping habits only, referring to people as larks and owls where lark people or morning active people usually gets up early in the morning, most alert in the first part of the day and goes to bed early in the evening and owl people or evening type people who are most alert in the late evening hours and prefer to go to bed late.

Chronotype refers to the behavioral manifestation of underlying circadian rhythms of myriad physical processes. A person's chronotype is the propensity for the individual to sleep at a particular time during a 24-hour period. 'Eveningness' (delayed sleep period) and 'Morningness' (advanced sleep period) are the two extremes with most individuals having some flexibility in the timing of their sleep period. However, across development there are changes in the propensity of the sleep period with pre-pubescent children preferring an advanced sleep period, adolescents preferring a delayed sleep period and many elderly preferring an advanced sleep period.

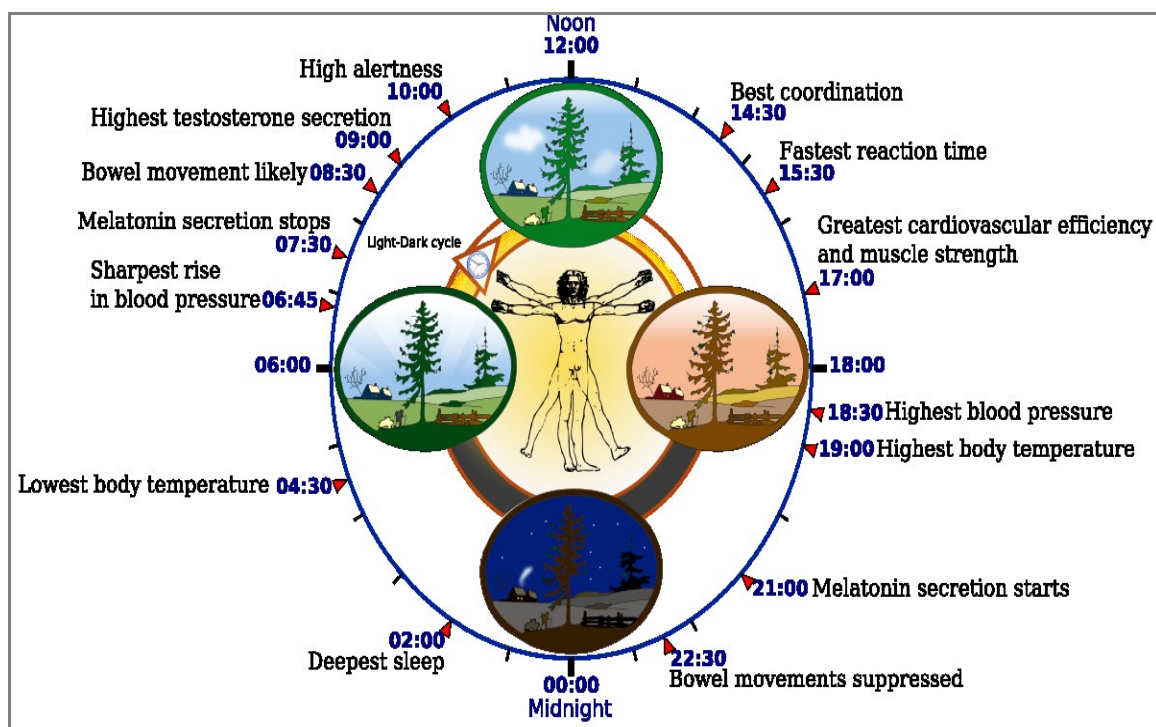


Figure 1: Biological Clock in Mammals

The primary circadian “clock” in mammals is located in the suprachiasmatic nucleus (or nuclei) (SCN), a pair of distinct groups of cells located in the hypothalamus. Destruction of the SCN results in the complete absence of a regular sleep wake rhythm. The SCN receives information about illumination through the eyes. The retina of the eye contains "classical" photoreceptors ("rods" and "cones"), which are used for conventional vision. But the retina also contains specialized ganglion cells which are directly photosensitive, and project directly to the SCN where they help in the entrainment of this master circadian clock.

These cells contain the photopigment melanopsin and their signals follow a pathway called the retino hypothalamic tract, leading to the SCN. If cells from the SCN are removed and cultured, they maintain their own rhythm in the absence of external cues. The SCN takes the information on the lengths of the day and night from the retina, interprets it, and passes it on to the pineal gland, a tiny structure shaped like a pine cone and located on the epithalamus. In response, the pineal secretes the hormone melatonin. Secretion of melatonin peaks at night and ebbs during the day and its presence provides information about night-length.

Several studies have indicated that pineal melatonin feeds back on SCN rhythmicity to modulate circadian patterns of activity and other processes. However, the nature and system-level significance of this feedback are unknown. The circadian rhythms of humans can be entrained to slightly shorter and longer periods than the Earth's 24 hours. Researchers at Harvard have recently shown that human subjects can at least be entrained to a 23.5-hour cycle and a 24.65-hour cycle (the latter being the natural solar day-night cycle on the planet Mars).

All living things, from bacteria, plants, animals to humans have their own biological cycle that oscillates around a 24 hour long period. It drives biological activities like ageing, metabolism, sleeping, hormone production, brain activity or cell regeneration. This 24 hour cycle is called the circadian cycle and the science behind it can prove very useful for anyone who wants to organize their workday more effectively.

### **3.1 Morningness**

Morning active people are considered conscientious, trustworthy and emotionally stable. Owls are described as creative, emotionally unstable and have difficult social and familial relations. Morning type individual's show decreased good mood along the day and the opposite pattern occurs with evening personalities. Evening types show greater behavioral troubles, low academic performances, and higher stress rates in their family lives and more difficulties in social adaptation. Evening type individuals take

frequent night meals, consume more caffeine and alcohol, and smoke more cigarettes than morning types.

Morning people wake up early and are most alert in the first part of the day. Also called larks, early-risers or A-persons, Mood declines over day. Energetic in the mornings, out of steam in the evenings.

A lark, early bird, morning person or, in Scandinavian countries, an A-person, is a person who usually gets up early in the morning and goes to bed early in the evening. The lark (bird) starts its day very early, which explains the choice of the word lark for people who may sleep from around 10 p.m. to 6 a.m. or earlier. Human “larks” tend to feel most energetic just after they get up in the morning. They are thus well-suited for working the day shift.

### **3.2 Eveningness**

Evening people are most alert in the late evening hours and prefer to go to bed late. Also called night owls, late-risers or B-persons. Mood rises over day. Sleepy in the mornings, energetic in the evenings.

A night owl, evening person or simply owl, is a person who tends to stay up until late at night. The opposite of a night owl is an early bird, a lark as opposed to owl, someone who tends to begin sleeping at a time that is considered early and also wakes early. In several countries, early birds are called “A-people” and night owls are called “B-people”.

### **3.3 Benefits of studying in the Morning:**

1. The mind will be fresh after a good night sleep. Mind will be sharp to gather and absorb maximum information.
2. Waking up in ‘Brahmi Muhurtha’ – about half an hour before sunrise is very auspicious and concentration levels will be maximum.
3. If you study in the morning, the other plans of the day will go according to plans. It boosts confidence.
4. If you are facing exams or tests in the class, if you have studied in the morning, chances are more for recollection of the studied subject.
5. If you have a good control over wake up time, then morning hours are suitable for studies for you.

### **3.4 Disadvantage of study in the morning:**

1. If you do not have control on your sleeping hours, and if you do not get up as per the plans, the whole day may go wrong.

2. As the morning progresses, the routine works such as bathing and breakfast may become hurdles for some.

### **3.5 Advantages of studying in the night:**

1. If you have good control over falling it sleep, you may study at night.
2. If you have good control over yourself to keep on studying, without falling a pray to video games or TV, when parents have gone to bed, you may study at night.
3. The calmness and darkness brings clarity to mind and it gets better and better hour after hour.
4. If you complete the studies as per the plans and go to bed, the joy of sleep will be fortified.
5. Do not imitate your friends. Your body and mind patterns are different from anybody else. You will need to take your own decision.

### **3.6 Disadvantages of studying in the night:**

1. Distractions such as TV and Video games, especially after parents retire to bed.
2. If you are going for dance class, or any sports, you may be too tired to concentrate on studies at night.

## **4. Methodology**

As every research demands a systematic method and procedure, likewise this chapter adopts the following procedure including research design, source of data, selection of subjects, sampling method, selection of test and criterion measures, administration of tests and collection of data etc. A research become successful accompanied and supported by some reliable and authentic data. The statistical analysis of the gathered data provides a well-knit picture of complete and successful hypothesis as pre-stated by the researcher. The chapter has been divided into the following heading:

### **4.1 Sources of Data**

For the present study the source of subjects were selected from the Senior Colleges of Amravati City.

### **4.2 Selection of Subjects**

One Thousand (1000) subjects were selected for this study. One hundred (100) subjects were taken from Bachelor of Business Administration (B.B.A), one hundred fifty (150) subjects were taken from Bachelor of Commerce (B.Com), one hundred fifty (150)

subjects were taken from Bachelor of Social Work (B.S.W), one hundred fifty (150) subjects were taken from Bachelor of Arts (B.A), one hundred fifty (150) subjects were taken from Bachelor of Science (B.Sc), one hundred fifty (150) subjects were taken from Bachelor of Computer Application (B.C.A) and one hundred fifty (150) subjects were taken from Bachelor of Technology (B.Tech).

### **4.3 Sampling Method**

The subjects were selected by using simple random sampling method.

### **4.4 equipment used for collection of data**

The standard questionnaire Morningness-Eveningness by (Horne & Osteberg; 1976) was used for the collection of data.

### **4.5 Administration and Procedure**

Before the collection of data, the administration of questionnaire is very important. In administration of any kind of test (questionnaire) three things are very much effective to be taken into consideration:

1. What is to be done before the application of any kind of test.
2. What is done during the application of any kind of test.
3. What things are to keep into the mind before the fulfillment of any kind of test.

The questionnaire is distributed among the students of Bachelor of Business Administration (B.B.A), Bachelor of Commerce (B.Com), Bachelor of Social Work (B.S.W), Bachelor of Arts (B.A), Bachelor of Science (B.Sc), Bachelor of Computer Application (B.C.A) and Bachelor of Technology (B.Tech) in order to fulfill the questionnaire. The research scholar personally met the class Incharge along with the selected subjects and explained them clearly the purpose of the study along with how the questionnaire had to be filled up. After making sure that the subjects were clearly understood the procedure to fill up the questionnaire, then they will be asked to mark the response against each questions. All the items of Morningness-Eveningness Questionnaire must be answered by the subjects. The questionnaire consists of 19 questions each with a number of points.

### **4.6 Scoring**

Scores can range from 16-86. Scores of 41 and below indicate "evening types." Scores of 59 and above indicate "morning types." Scores between 42-58 indicate "intermediate types."

<b>16-30</b>	<b>31-41</b>	<b>42-58</b>	<b>59-69</b>	<b>70-86</b>
Definite Evening	Moderate Evening	Intermediate	Moderate Morning	Definite Morning

Each answer has a code with a corresponding numerical value known to the investigator. An individual were classified either as morning type, intermediate type or evening type based upon sum total of the scores.

### 5. Statistical Analysis and Interpretation of Data

In this chapter, the research scholar has analyzed the gathered data statistically to justify his hypothesis. The data was collected from the sports persons of various streams by using Morningness- Eveningness by (Horne & Osteberg; 1976) and interpretation is done on the basis of special statistical techniques.

The finding of the present study is shown in tabular form as well as in graphical form as below:

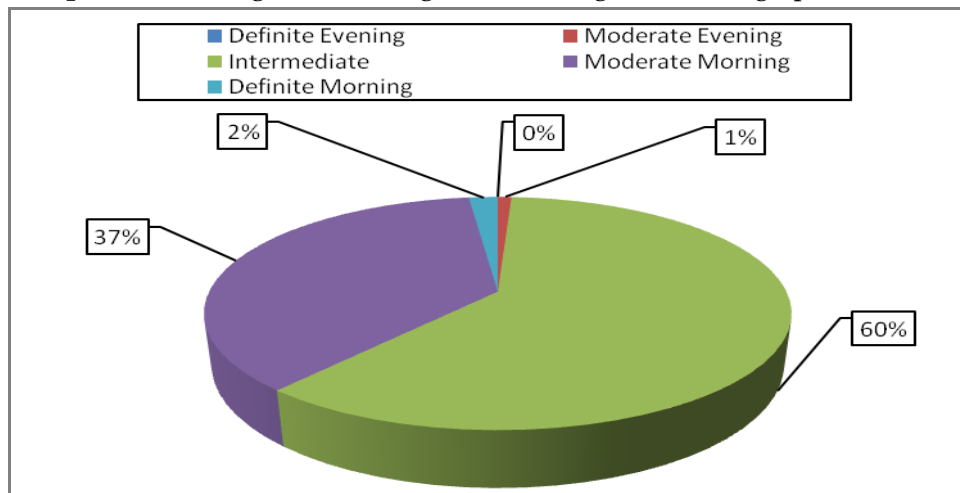
**Table 1:** Showing Morningness-Eveningness among Sports Persons

Type	Choices	Percentage
Definite Evening	0	0.00
Moderate Evening	9	0.90
Intermediate	605	60.50
Moderate Morning	367	36.70
Definite Morning	19	1.90

From the above table Zero percent (0.00%) of the sports person fall under Definite Evening i.e. 0 out of 1000. 0.90 % percent of the students shows Moderate Evening as it is mentioned in the table given above i.e. 9 out of 1000. 60.50% percent students i.e. 605 out of 1000 students fall under Intermediate category as shown in the table. 36.70% percent of the students shows Moderate Morning i.e. 367 out of 1000 shows Moderate Morning. 1.90% percent of the students shows Definite Morning i.e. 19 students out of 1000 shows Definite Morning. At last, it is concluded that most of the students falls under Intermediate.



**Graph 1: Percentage of Morningness-Eveningness Among Sports Persons**



## 6. Conclusion

Within the limitations of the study and from statistical analysis the following conclusion is drawn: there is found that most of the sports persons of different Streams of Senior Colleges of Amravati City fall under Intermediate type.

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