

The Relationship between Sleep Pattern and Pulse Rate of Recovery in Cimahi City Tarung Derajat Athletes

Dedi Supriadi

STKIP Pasundan, Cimahi, , Indonesia

dedis25121960@gmail.com

Abstract

This study aims to determine whether there is a relationship between sleep patterns and the recovery pulse of Cimahi Tarung Derajat athletes. The method used is the correlational method. The population in this study were all PORPROV Tarung Derajat athletes in Cimahi City, totaling 8 people. Researchers used the total sampling technique so that the sample numbered 8 people. The research data was taken using the Pittsburg Sleep Quality Index (PSQI) sleep pattern questionnaire and a measuring instrument to measure the pulse oximeter. The results of the study show that the coefficient level is 0.73 or has a strong relationship level. The conclusion of the study is that there is a relationship between sleep patterns and the recovery pulse of Cimahi tarung derajat athletes

Keyword : Sleep Patterns, Recovery Pulse, Tarung Derajat.

I. INTRODUCTION

Tarung derajat martial arts has become one of the sports achievements. To obtain this, an athlete must have achievement motivation, namely the desire to achieve maximum ability (Hadyansah, 2019). Efforts to realize achievements in the sport of tarung derajat is not an easy thing. but it requires a process that is quite heavy and requires a hard struggle. Speaking of achievements in the tarung derajat sport, there are several factors that greatly influence the appearance of a tarung derajat athlete, one of which is physical condition. Improving the athlete's physical condition aims to improve physical abilities and is useful for supporting performance in order to achieve maximum performance (Ruslan, 2011).

The physical condition of athletes greatly influences the performance of fighters including speed, accuracy, strength and explosive power. where a fighter needs fast movements when carrying out attacks and defenses, in addition to that mastery of basic techniques is something that must be mastered by fighters (Budiman, 2021), basic movements that must be mastered are foot movements and techniques for carrying out punches and kicks such as upper circle, inside circle, fast punch, side, back circle, front hook, and back hook (Chairad & Derajat, 2014). With good speed of punches and kicks, fighters will be able to easily score points. Speed in a technique performed by an athlete is obtained from a qualified physical condition so that a good technique will be owned by an athlete both during training and matches. An athlete's physical condition must be maintained including matters related to physical condition such as a healthy lifestyle, good sleep patterns and good eating patterns.

Adequate sleep patterns or rest time, especially for an athlete, must meet the prerequisites, including an average of 6-8 hours per day, and people who are sick are no exception. An athlete must have sufficient rest time in order to get optimal performance during practice or during competition. The World Book Encyclopedia explained that sleep can restore the body's energy, especially in the brain and nervous system. Disruption of the physiological and psychological balance in the human body occurs due to inadequate sleep and poor quality sleep. In physiological terms, this includes decreased daily activities, fatigue, weakness, decreased immune system, and unstable vital signs. While the psychological impact includes depression, anxiety, and not

concentrating (Prasetya, 2017). An athlete's good sleep pattern will also have an effect on the recovery rate of a good pulse, so that the training process can run optimally and is able to achieve its achievements. Pulse is a wave that is felt in the arteries caused by the pumping of blood by the heart into the blood vessels (Nikmatuzaroh, 2019). One way to speed up the pulse of recovery is to carry out active recovery (Fushalat, 2019).

Optimization of training or achievements in the tarung derajat sports, especially in Cimahi City, has not been maximized because: 1) The pulse rate of the Taung Derajat athlete is not good. 2) The performance of the tarung derajat athletes is not optimal. 3) Sleep time for tarung derajat athletes is less than optimal. 4) The slow recovery of the pulse rate of the tarung derajat athletes. The author's interest in researching the things described above became one of the things that made the researcher want to examine further to conduct research on "Relationship of Sleep Patterns with Pulse Rate of Recovery Athletes Tarung Derajat Cimahi City".

II. METHOD

The research method used in this study was an experimental method with a correlational research design as shown in Figure 1. The population involved in this study were Cimahi City tarung derajat athletes who competed in West Java PORPROV with a sample of 8 people. The sampling technique uses total sampling. The research instrument used to measure sleep patterns was the Pittsburg Sleep Quality Index (PSQI) (Buysse et al., 1989), while the pulse used an oximeter. The research was started by calculating the initial pulse before running for 12 minutes and continued by calculating the pulse after exercise and 5 minutes after exercise as the recovery pulse. Then the researchers calculated the difference between the pulse after running 12 minutes with the recovery pulse. Then the sleep pattern score was correlated with the difference between the pulse after running and the recovery pulse.

III. RESULT AND DISCUSSION

Result

Below is presented data on sleep patterns and pulse rate of Cimahi tarung derajat athletes as follows:

Table 1. Heart Rate of the Athlete of Tarung Derajat in Cimahi City

No	Name	Sleep patterns	Initial pulse	After run pulse 12 Menit	Recovery pulse	difference
1	Ahmad	16	95	180	125	55
2	Gressiana	4	85	165	94	71
3	Hanhan	3	80	160	90	70
4	Muarif	9	90	180	100	80
5	Disa	10	95	185	128	57
6	Rahmi	5	80	170	98	72
7	Putri	2	80	173	96	77
8	Kevin	13	95	178	122	56

Table 2. Product Moment Correlation

Korelasi Product Moment
0.73

After analyzing the data using the product moment correlation as shown in table 2, a coefficient of 0.73 is obtained or has a "strong" relationship level. This means that sleep patterns have a strong relationship with recovery pulse. This shows that with an adequate sleep pattern, you will have a good recovery pulse.

Discussion

Based on the results of the above study, the relationship between sleep patterns and recovery pulse is in the Strong category. A good sleep pattern is adequate sleep duration according to age requirements, while the Tarung Derajat athletes who are respondents to the research are adults who need approximately 7-8 hours of sleep and good rest time from 9:00 p.m. to 5:00 p.m. And bad sleep patterns are sleep duration that is less according to age while Tarung Derajat athletes who have less sleep duration than 7 hours are included in the unfavorable category. In this study, the researchers got the results of 8 tarung derajat athletes in Cimahi City, 4 athletes had good sleep patterns and 4 athletes had poor sleep patterns. The poor sleep patterns practiced by tarung derajat athletes in the city of Cimahi are motivated by demands outside of training such as work, college assignments or family. When an athlete has a poor sleep pattern, there are several factors that can be detrimental to the athlete himself, such as: delays during training, lack of focus during training, fatigue, and sleepiness during training. Sleep has a huge effect on physical, mental, emotional health and the body's immune system (Covid- et al., 2021). A person who has less quality and quantity of sleep tends to be more susceptible to disease, including heart attacks, anemia and high blood pressure. (Madeira et al., 2019) Other research shows that sleep patterns have a relationship with recovery pulse in male basketball athletes (SAEPUDIN, 2017).

Tarung Derajat athletes must have a good pulse and pulse recovery, especially for fighters where when fighting in a championship it takes 9 minutes which is divided into 3 rounds where each round lasts 3 minutes then rest time per round is 1 minute. Athletes will be faced with a difficulty that is enough to affect their performance. When the 1 minute rest period is not enough to get new stamina or pulse recovery does not recover quickly, then what often happens When difficulties come, usually the athlete just continues the stamina he has in the next round and rarely if the athlete's condition is like he was able to bring out all the techniques he mastered during practice and not a few who suffered defeat as a result of this happening.

IV. CONCLUSION

This study shows that there is a relationship between sleep patterns and the recovery pulse of Cimahi Tarung Derajat athletes. The relationship that occurs between the two variables is a strong relationship so that having a good sleep pattern will support fast recovery.

V. REFERENCES

- Budiman, A. (2021). Implementasi Media Audio Visual terhadap Hasil Tendangan T pada Pencak Silat. *Musamus Journal of Physical Education and Sport*, 03(02), 50–59.
- Buyse, D. J., Reynolds, C. F., Monk, T. H., Berman, S.R., A., & Kupfer, D. J. (1989). PITTSBURGH SLEEP QUALITY INDEX INSTRUCTIONS: *Psychiatry Research*, 1–4.
- Chairad, M., & Derajat, P. (2014). SEJARAH DAN PERKEMBANGAN BELADIRI TARUNG DERAJAT Muhammad Chairad *. *Jurnal Ilmu Keolahragaan*, 13(2), 29–37.
- Covid-, M. P., Jurusan, S., Kepelatihan, P., Olahraga, F. I., & Surabaya, U. N. (2021). ANALISIS POLA TIDUR TIM ELIT FUTSAL MENUJU PON PAPUA DI MASA PANDEMI COVID-19. *Journal of Sport Sciences and Fitness*, 7(1), 63–73.
- Fushalat, A. (2019). *Pengaruh Recovery Aktif dan Pasif Terhadap Denyut Nadi Pemulihan pada Atlet Sepak Bola SMA Negeri Keberbakatan Olahraga*. Universitas Negeri Makassar.
- Hadyansah, D. (2019). Analisis Motivasi berdasarkan Gender dan Jenis Olahraga Info. *Jurnal Olahraga*, 5(1).
- Madeira, A., Wiyono, J., & Ariani, N. L. (2019). Hubungan Gangguan Pola Tidur Dengan Hipertensi Pada Lansia. *Nursing News*, 4(1), 29–39.
- Nikmatuzaroh, R. E. dan N. Maziyyah. (2019). Pengaruh Pemberian Jus Tomat Terhadap Denyut Nadi Pemulihan Setelah Beraktivitas Fisik Maksimal Pada Atlet BKMf Hockey FIK UNM. *Skripsi*.
- Prasetya, R. G. (2017). *HUBUNGAN KUALITAS TIDUR TERHADAP KUALITAS DENYUT NADI PEMULIHAN ATLET BASKET PUTRA*. 6–18.
- Ruslan. (2011). MENINGKATKAN KONDISI FISIK ATLET PUSAT PENDIDIKAN Ruslan. *Jurnal*

ILARA, 11(02), 45–56.

SAEPUDIN, N. R. M. (2017). *HUBUNGAN KUALITAS TIDUR TERHADAP KUALITAS DENYUT NADI PEMULIHAN ATLET BASKET PUTRA*. University of Muhammadiyah Malang.