

The Relation Between The Success Level And The Subjective Sleeping Quality Of The Turkish National Team That Participated In The Wrestling World Cup¹

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Abstract: It is thought that lack of concentration and reduction of the cognitive function parallel to insomnia during the night time affect the performance of the sportsman directly. The aim of this study is to examine the relation between sleeping quality within the competition environment and the success level of the most elite sportsmen of wrestling. Study group composed of Men's Turkish National team of Freestyle wrestling that participated in the Freestyle wrestling World cup held in Teheran city of Iran in 2013 ($\bar{X}_{age}=25,86 \pm 3,436$). To obtain the results of the study Pittsburgh Sleeping Quality Scale was used. Kolmogorov-Smirnov test, Mann-Whitney U, Pearson correlation analysis was used to analyze and interpret the data and meaningfulness of $P < 0,05$ was achieved. SPSS (Statistical package for Social Sciences) 18.0 was used to evaluate and to find the calculated numbers. As a result of the study, between the degree that the wrestlers achieved and the Pittsburgh sleeping quality index scores ($r=768^*$) strong positive relation was acquired. The meaningfulness of that relation modulus ($P = ,044 < 0,05$) was acquired as meaningful. As a result of the data acquired through that study, it is thought that as the sleeping quality increases the success level of the wrestlers increases as well parallel to that fact.

[Yakup Akif AFYON¹ Hüdaverdi MAMAK² Gökhan ACAR³ Kemal FİLİZ⁴ Ahmet ŞAHİN⁵ Nazmi BAYKÖSE. **The Relation Between The Success Level And The Subjective Sleeping Quality Of The Turkish National Team That Participated In The Wrestling World Cup.** *Life Sci J* 2013;10(3):1361-1364] (ISSN: 1097-8135). <http://www.lifesciencesite.com>. 204

Keywords: Sleeping Quality, Wrestling, Success Level

¹ This study International 30 May, 02 June 2013 between the Balkan and sports science congress of the papers presented in the symposium.

1. Introduction

A sportsman needs to be motivated sufficiently to be prepared physically and psychologically. Motivation is one of the key factors that affect performance. As it is known, anxiety, depression, neurotic etc. affect the sportsman negatively. According to scientists the performance and success level of the sportsman depends on the control of emotions and mental processes in accordance with body-mind interaction, besides genetical structure and regular training (1). Insomnia is a general and a common problem of the majority of the population. (2) Studies show that insomnia is related with variables such as concentration, mental wellness, success and life quality in a day time (11,12). A remarkable relation was noticed between night-long insomnia and the decrease in

concentration and the reduction of performance in cognitive activities(10).

Sleeping quality is that one feels well, fit and ready to a new day after day wake up. It is affected by various variables such as sleeping quality, life style, environmental factors, work, social life, economical structure, general health condition and stress (5). In this study, It is aimed to study the effects of sleeping quality on the Men's Freestyle National Team of Wrestling that participated in the Freestyle Wrestling World Cup that was held in Iran.

2. Material and Methods

2.1. Study Group

Study group is composed of the Men's Freestyle National Team of Wrestling (n=7) that participated in the Freestyle Wrestling World Cup.

The sportsmen who participated in the study were informed on the last day of the preparations for World Cup and after their confirmation all the participants filled out the Pittsburgh Sleeping Quality Scale along with the demographic information under the supervision of the researcher to evaluate the sleeping quality. In the study, taking into consideration the fact that the sleeping quality can affect the success level, the relation between sleeping quality and the success level of the Freestyle National Team of Wrestling that was composed of a total number of 7 sportsmen from 7 different weight category were analyzed.

2.2. Data Collection

In this study, PUKÖ (Pittsburgh Sleeping Quality Scale) which is a generally accepted scale in examining sleeping quality and which was based on question form that was configured with the aim of examining the sleeping quality was used. To achieve the aims of the study, Turkish validity and reliability study of the scale that was developed by Buysse et al 1989 was conducted by Agargün (1996).

2.3. Pittsburgh Sleeping Quality Scale

PUKÖ is a scanning and evaluation test based on self-report that provides detailed information regarding the type and the intensity of sleeping quality and sleeping disorders within the last one month. In the form that was composed of 24 questions, scores that belong to 7 components are collected. Those are subjective sleeping quality, time to fall asleep, duration of the sleeping, habitual sleeping activity, sleeping disorder, the use of sleeping pills, and dysfunction during the daytime. The scale includes 5 questions that are answered by the roommate of the sportsman. However those 5

questions do not affect the overall score. Each question is evaluated by a number of 0-3. The scores regarding the 7 components give the overall PUKÖ score. The overall PUKÖ score can have a number between 0 and 21. The score of 5 and below is regarded as good and the score above 5 is regarded as poor sleeping quality. The sensitivity and the subjectivity PUKÖ in identifying the good and poor sleepers (%89.6 and %86.5 respectively) found to be high (Buysse et al,1989 and Buysse et al,1991). Scores over 5 shows that one suffers serious problems at at least 2 areas or suffers minor or moderate problems at more than 3 areas. Turkish validity and reliability study of this scale was conducted by Ağargün et al (1996).

2.4. Analysis of the data

To analyze and interpret the data, Kolmogorov-Smirnov test, t test, one way anova test was used and meaningfulness of $P < 0,05$ was acquired. SPSS (Statistical package for social sciences) 18.0 package program was used evaluate the data and find the calculated values.

3. Results

When table 1 is analyzed, It is seen that the difference between the averages of subjective sleeping quality, one of the sub-dimensions of the scale, is meaningful statistically ($P > 0,05$). The difference between the averages of the sleeping duration, and the difference between the averages of the sleeping disorder are statistically meaningless ($P > 0,05$).

When the total score of the scale is examined, the difference between the averages of the scores is meaningful ($Z = -2,223$; $p = 0,026 < 0.05$).

Table 1: man whitney u results of sleeping quality accoring to the success level of the sportsmen

	Degree	N	Mean Rank	z	P
Subjective	Sportsmen who won medal	3	3,50	-,866	,386
	Sportsmen who couldn't win medal	4	4,38		
	Total	7			
Sleeping Duration	Sportsmen who won medal	3	3,50	-,866	,386
	Sportsmen who couldn't win medal	4	4,38		
	Total	7			
Sleeping disorder	Sportsmen who won medal	3	3,00	-1,323	,186
	Sportsmen who couldn't win medal	4	4,75		
	Total	7			
Puki	Sportsmen who won medal	3	2,00	-2,223	,026
	Sportsmen who couldn't win medal	4	5,50		
	Total	7			

Table 2. The results of the Pearson correlation test that illustrate Puki, subjective sleeping quality, sleeping latency, sleeping duration, sleeping disorder, dysfunction during daytime and success level modulus

		Degree
Subjective sleeping quality	r	0,679
	P	0,093
sleeping latency	r	0,935**
	P	0,002
sleeping duration	r	0,354
	P	0,437
sleeping disorder	r	0,51
	P	0,243
dysfunction during daytime	r	0,354
	P	0,437
Puki	r	0,768*
	P	0,044
Derece	r	1

*. Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

** . Correlation is significant at the 0.01 level (2-tailed).

768* of positive relation was observed between the Pukis and the degree that the wrestlers acquired. The meaningfulness of that relation modulus was found to be ,044 as meaningful.

Those findings illustrate that as the sleeping quality increases the success level of the wrestlers increases as well.

4. Discussions

In this research it is examined that how the sleeping quality of our sportsmen that succeeded and failed affects their successes by examining the sleeping quality of our Men's national team who participated in the wrestling world cup in Iran.

When we look at the results of the studies in literature that are about the effect of sports and exercise on sleeping quality, a positive correlation is found between the sleep latency and sleeping quality total score, and a strong correlation is reached between the sleep latency and the success levels that sports players get.

After a dense preparing camp process like three months, after the completing the preparing to the competition the sportsmen that are involved in the study join the competitions in the league actively before the camp, and continue their trainings for the league. Therefore, when it is considered that the sportsmen are in a long training process, in a study of King et al...1997 the importance of the continuing of the exercise activity in a long time is presented, and it is emphasized that medium level exercise that is done for 16 weeks increase the subjective sleeping quality in healthy men and women that do not do sports, however this effect does not appear in the first 8 weeks, appears later and becomes clearer.

The exercise done in the day in this situation will cause more sleeping by causing spending more energy and increasing the restoration need of the

tissues. Besides these traditional theories, it is known that the extending of the sleeping time is not certainly with more relaxing effect. It is important that how much the deep sleeping (with other words slow wave sleep) which is accepted as the real relaxing part covers in total sleeping duration. It is shown in the previous studies that the exercise increases the deep sleeping. (Driver HS et al... 1988, Horne JA 1981)

Besides, because of the fact that the success levels of sports players who won medal and who do not show difference in statistical meaning, sleeping quality is very important about success effect.

While evaluating this study results the study can be strengthen with more subjects. In our study a grouping has been done between the sportsmen who won medal and who do not. However a grouping is not done in cultural differences or age variables. It is seen that the sportsmen in the study consists of our national Men's wrestling team. Therefore it is thought that sleeping quality and success relation in different sports branches can be examined and the effect of sleeping on performance can be presented.

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25/07/2013