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EFFECT OF EXERCISE HABITS OF UNIVERSITY STUDENTS ON SLEEP QUALITY

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ABSTRACT

Aim: This study aimed to investigate the effect of exercise habits on sleep quality among university students. **Method:** A total of 139 university students, 65 females and 74 males, aged from 17-25 years participated in the study. The Pittsburgh sleep quality index was used to assess quality of sleep in the research. Students were asked whether they exercised regularly at least three days per week to learn their exercise habits. Research data were analyzed with the t test. **Results:** The mean sleep quality points for those who exercised were 6.41 ± 3.60 , with mean sleep quality points in the non-exercise group 7.28 ± 3.07 among students participating in the research. The mean sleep quality points for female students were identified as 7.56 ± 3.50 and the mean sleep quality points for male students were 6.01 ± 3.21 . **Conclusion:** According to our research results, it appears exercise does not cause a difference in sleep quality among university students. The sleep quality of female students who exercised was not different from those who did not exercise. The sleep quality of male students who exercised was similar to male students who did not exercise. Male university students had better sleep quality than female university students.

Key words: student, exercise, sleep quality, university

1. INTRODUCTION AND AIM

Sleep appears to be an important variable for health, affecting quality of life and well-being status of individuals. Sleep leads the basic requirements needed for a healthy life. Additionally, sleep has an important place as it comprises a large proportion of a person's life, and sleep problems lower people's quality of life. Sleep quality is defined as an individual feeling fresh and fit after sleep (Kline, 2013; Karadağ, 2007). Poor sleep quality is an important parameter affecting health (Kline, 2013). Disruption of sleep quality reduces an individual's performance ability, affects daily activities, reduces energy levels and causes daytime drowsiness (Çölbay, 2007). Exercise is recommended as a good tool for general sleep quality (Flausino et al., 2012; Wong et al., 2013). A literature scan shows that healthy sleep is associated with exercise (Driver and Taylor, 2000; Lira et al., 2011; Pender et al., 2015).

Exercise is a necessary health behavior to maintain a healthy lifestyle (Pender et al., 2015). It is important to gain regular physical activity habits to preserve health and reduce health risks and exercise has become an indispensable part of daily life. Regular physical activity is known to have positive effects on physiologic and psychological health (Pender, Murdaugh and Persons, 2015; T.C. Sağlık Bakanlığı, 2014). Additionally, exercise programs are recommended to improve

health status, sleep and quality of life of individuals (Chang et al., 2016; Pender et al., 2015). Exercise is stated to ease sleep, ensure deeper sleep and allow individuals to feel better when they wake in the morning (Vardar, 2005).

The aim of this research is to investigate the correlation between exercise habits and sleep quality among university students.

2. METHOD

A total of 139 university students, 65 females and 74 males, aged from 17-25 years attending Çanakkale Onsekiz Mart University from 2017-2018 participated in the research. The Pittsburgh Sleep Quality Index was used to assess sleep quality in the research. The Pittsburgh sleep quality index (PSQI) was developed by Buysse et al. in 1989 to evaluate sleep quality, with validity and reliability studies performed by the same researchers. The validity and reliability studies in Turkey were completed in 1996 by Ağargün et al. The PSQI ensures reliable, valid and standard measurement of sleep quality (Ağargün et al., 1996). To learn the regular exercise habits of students, they were asked whether they exercised regularly on at least three days per week. Accordingly, two groups were created of students who exercised regularly and students who did not. Data were analyzed with the t test using the SPSS statistical program.

3. RESULTS

Table 1. Sleep quality according to exercise habits

Sleep quality	n	x	±	t	p
Exercise	87	6.41	3.60	1.460	0.147
Don't exercise	52	7.28	3.07		

The mean sleep quality points of students who did not exercise were found to be higher than students who did exercise. It appears the group that exercised had more quality sleep. However, statistically, there was no significant difference between sleep quality points for university students who exercised and who did not exercise ($p>0.05$).

Table 2. Sleep quality of university students who exercise or not according to gender

Sleep quality		n	x	±	t	p
Female	Exercise	31	7.38	3.82	0.397	0.693
	Don't exercise	34	7.73	3.24		
Male	Exercise	56	5.87	3.39	0.652	0.517
	Don't exercise	18	6.44	2.61		

Female students who did not exercise were identified to have better sleep quality than female students who exercised. Similarly, male students who did not exercise were observed to have better mean points for sleep quality compared to male students who exercised. However, in line with these results, there was no statistically significant difference between male and female students who exercised or did not exercise ($p>0.05$).

Table 3. Sleep quality among female and male university students

Gender	n	x	±	t	p	
Sleep quality points	Female	65	7.56	3.50	2.729	0.007
	Male	74	6.01	3.21		

Male students were identified to have better sleep quality compared to female students. There was a significant difference between sleep quality points of female and male students ($p<0.05$).

4. DISCUSSION AND CONCLUSION

In this study researching the effect of exercise habits among university students on sleep quality, students had high exercise rates; however, exercise did not cause a difference in sleep quality. In terms of sleep quality, female and male students who exercised were no different from female and male students who did not exercise, with the sleep quality of male students identified to be better than female students. In line with these results, the study by Yaran et al. found no significant difference in the sleep quality between students who exercised and who did not. Contrary to our study, Alkaya and Okuyan in a study in 2017 found there were more students who did not exercise than did and there were significant differences between those who exercised and those who did not. In our study, it appeared the sleep quality was better for students who exercised. When the literature is reviewed, similar results are reached; in other words, it was stated that sleep quality is better among students who exercise (Yaran et al., 2017; Chang et al., 2016; Alkaya and Okuyan 2017).

Gender is among the factors that may affect individual's sleep (Aysan et al., 2014; Kline, 2013). The comparison of sleep quality between the genders in the study by Alkaya and Okuyan is similar to the findings in our research. Males have better sleep quality compared to females and there is a significant difference between the two groups. The study by Vardar et al. stated that subjective sleep quality of girls who play sport is different compared to those in similar age groups who do not play sport (Vardar et al., 2005).

In conclusion, university students exercise but this does not appear to create a difference in sleep quality. Sleep quality of female students who exercise is not different to female students who do not exercise. The sleep quality of male students who exercise is similar to the sleep quality of male students who do not exercise. Male university students have better sleep quality than female university students.

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