

# Investigation of the Relationship Between Body Appreciation and Sleep Quality

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Conflicts of Interest: The authors has no conflict of interest to declare.

Copyright & License: The authors declare that there were no potential conflicts of interest with regard to the research, authorship and/or publication of this article.

Ethical Statement: The study was approved in accordance with the Declaration of Helsinki, with the decision taken by the Local Ethics Committee of the Dean's Office of Selcuk University Faculty of Medicine.

(Date Of Received): 16.11.2023 (Date of Acceptance): 21.04.2024 (Date of Publication): 30.04.2024

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## Abstract

Sleep causes many psychological effects in individuals. A person's body image, which is their subjective evaluation of their physical appearance, can have a significant impact on their emotions, behaviors, and overall well-being. In order to investigate the effect of sleep on body image, 395 female participants aged between 18-27 years, who were evaluated subjectively and objectively using the sleep assessment and body image scale, were included. The primary outcome of the study are the determination of the relationship between objective and subjective results of sleep quality and body appreciation. Secondary outcome are the determination of the relationship between exercise and body appreciation, which is an effective factor in determining body appreciation. After missing data scanning, 35 participants were excluded from the study and analysis were performed on 360 people (Age 20,76+1,62; Height 163,65+5,81; Weight 57,78+ 10,42). Body Appreciation Scale-2 and Sleep Quality Scale were applied to the participants. While there was no statistical significance in the sleep hygiene values according to the subjective sleep evaluations of the participants, a significant difference was found between very poor sleep and very good sleep in the subjective sleep evaluations. In addition, a statistical significance was found between women's body image and subjective sleep evaluations ( $p<0.05$ ). In line with these results, sleep is seen as a variable that affects body perception in women. Sleep, which has many psychological effects, negatively affects the body image of the person in its deficiency. It can be said, sleep, which affects many psychological states, also affects women's body image.

**Keywords:** Sleep, Body Appreciation, Exercise, Sport, Insomnia

## Özet

### Beden Değerinin Uyku Kalitesiyle İlişkisinin İncelenmesi

Uyku, bireylerde birçok psikolojik etkiye neden olmaktadır. Kişinin; duygularını, davranışlarını ve hayatını etkileyen bu durum kendine olan bedensel değerine karşı olan tutumunun etkilenmesine sebep

olmaktadır. Çalışmaya, uykunun beden algısına etkisini araştırmak üzere, farklı bir bakış açısıyla, subjektif ve nesnel olarak uyku değerlendirilmesi ve beden algısı ölçeği kullanılarak yapılan, yaşları 18-27 arasında olan, 395 kadın katılımcı dahil edildi. Çalışmanın birincil sonuçları uyku kalitesinin objektif ve subjektif sonuçlarının beden değeri ile ilişkisinin tespitidir. İkincil sonuçları ise, beden değerini belirlemede etkili bir faktör olan egzersiz ve beden değerinin ilişkisinin tespitidir. Katılımcılara Beden Değeri Ölçeği-2 ve Uyku Kalitesi Ölçeği uygulanmış olup 35 katılımcıdan alınan verilerin noksanlığı sebebiyle araştırmaya dahil edilmemiş olup, 360 kişi üzerine analizler yapıldı (yaş 20,76±1,62; boy 163,65±5,81; kilo 57,78± 10,42). Katılımcıların, subjektif uyku değerlendirmelerine göre uyku hijyeni değerlerinde herhangi bir istatistiksel anlamlılık bulunmazken ( $p>0,05$ ), subjektif uyku değerlendirmelerinde çok kötü uyku (14,48±1,65) ile çok iyi uyku (15,14±2,48) arasında istatistiksel bir anlamlılık ( $p<0,05$ ) tespit edilmiştir. Ek olarak, kadınların beden algısı ile subjektif uyku değerlendirmeleri arasında istatistiksel bir anlamlılık bulunmuştur ( $p<0,05$ ). Bu sonuçlar doğrultusunda uyku, kadınlarda beden algısını etkileyen bir değişken olarak görülmektedir. Birçok psikolojik durumu etkileyen uykunun kadınlarda beden değerini etkilediği söylenebilir.

**Anahtar Kelimeler:** Uyku, Beden Değeri, Egzersiz, Spor, Uykusuzluk

## INTRODUCTION

Many factors that individuals encounter while living their lives can be effective on human psychology. One of these factors is the concept of " body appreciation ". Body appreciation is a complex concept that includes individuals' positive or negative perceptions of their own body and appearance (3). These perceptions may affect self-esteem, self-esteem and overall quality of life (2, 25).

Body body appreciation can be defined as love, trust, respect, appreciation and acceptance of one's physical appearance and abilities (31). Positive body apprection perceptions can positively affect individuals' psychological well-being, life satisfaction, self-acceptance, healthy lifestyle choices and social relationships (7, 16). However, negative body appreciation perceptions have been associated with psychological problems such as low self-esteem, low self-esteem, depression and anxiety. Especially youth is a period in which individuals' perceptions about their bodies change intensely, and the effects of negative body appreciation perceptions may become even more pronounced in this period (1, 4, 7). A continuous effort to overcome negative body appreciation perceptions can affect an individual's mental and emotional balance (13). This can lead to reduced sleep quality by triggering sleep problems such as difficulties falling asleep, waking up during the night, and insomnia (22).

Sleep quality is a concept that includes an individual's sleep experience and factors such as comfort during sleep, feeling of rested and energy level after waking up (14). Sleep has a major impact on our physical, mental and emotional health and sleep quality is an important factor determining overall quality of life (24). Low sleep quality can have negative effects on mental and emotional health. Insomnia or poor sleep quality can increase individuals' stress levels, lead to emotional imbalances and reduce overall life satisfaction (5). This situation may also affect body appreciation perceptions. This is because a weakened mental state may increase negative body valence perceptions and cause individuals to have more critical thoughts about their own physical appearance. On the other hand, a good sleep quality may support general mental health and positively affect body appreciation perceptions (6). A good sleep can help individuals cope better with stress, maintain emotional balance and increase overall life satisfaction. Therefore, it can enable individuals to approach their bodies and physical appearance in a more positive picture (11).

Women's body perception is in interaction with society's beauty standards, media and other environmental factors (18). These factors can create emotional and mental pressure on women's bodies and body appreciations. On the other hand, sleep quality is an essential component of physical and mental health and can have profound effects on body appreciation perception. This study aims to examine the relationship between women's body valence perception and sleep quality. It will also highlight the strategies that women

can use to improve sleep quality and develop a positive body perception and contribute to raising awareness on this issue.

## **METHOD**

Sociodemographic questions including psychological and characteristic features and two different scales were presented to the study group by the researchers. This research form was applied to female university students who were actively studying. The main reason why the sample group consists entirely of women is that the gender factor is effective in body appreciation perception (10). In order to ensure the accuracy of the data, the researchers (SK, AK) collaborated closely and the data entry was analysed by two researchers. The data of all participants will be stored in an online repository accessible only by the researchers.

### **Sample Selection Criteria**

- To be between the ages of 18-27
- Being in an active learning process at the university
- The study will be conducted on women only.

### **Primarily Outcome: Body Appreciation And Sleep**

In order to obtain the primary results of the study, the researchers used the Body Appreciation Scale-2 (BAS-2), which was developed by Tylka and Wood-Barcalow (26) and the Turkish validity and reliability of which was conducted by Oktan and Saylan (15), which assesses the extent to which individuals have positive thoughts about their own bodies and whether they respect these thoughts. The scale is a 5-point Likert type measurement tool and consists of ten items. The reliability of the scale was found to be .90. In the Turkish adaptation study of the scale, it was revealed that it had a unidimensional structure as in the original form. If the total score obtained was low, body appreciation perception was evaluated as negative, and if it was high, body appreciation perception was evaluated as positive. In this study, the scale alpha was found to be .92.

The other scale used was the Sleep Quality Scale, which consists of seven questions and is used to determine sleep quality, total sleep time, sleep midpoint and sleep efficiency. The Turkish validity and reliability study of the scale was conducted by Önder et al. (17) and it was deemed appropriate to use it as a specified scale. In this study, the reliability of the scale was found to be alpha ,51.

### **Secondary Outcome: Sleep or Sport**

In order to investigate whether exercise and sport, which are important variables in body appreciation perception (20), have a relationship with body appreciation perception in female participants, the researchers asked whether they exercise regularly or have a sports history (sports licence year (SYL)). The total score obtained from the scales and the meaning relationship in the relevant variables were examined.

The obtained data were analysed in SPSS package programme, after checking the normality distribution of the data ( $\pm 2,00$ ) (8), for the parameters that meet the assumption; Independent Samples T test was used for pairwise comparisons, Mann Whitney U for those that do not meet the assumption, Pearson correlation test was used for correlation test.

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## FINDINGS

**Table 1:** Demographic information of the participant group

|  |           | N      | %     |
|--|-----------|--------|-------|
| <b>Do You Exercise Regularly ?</b>                                 | Yes       | 42     | 11,7  |
|  | No        | 318    | 88,3  |
| <b>What is your frequency of activity/exercise participation ?</b> | Never     | 83     | 23,1  |
|  | Rarely    | 120    | 33,3  |
|  | Often     | 119    | 33,1  |
|  | Usualy    | 36     | 10,0  |
|  | Always    | 2      | ,6    |
| <b>Licenced Sports Background</b>                                  | Yes       | 56     | 15,6  |
|  | No        | 304    | 84,4  |
|  |           | X      | Ss.   |
| <b>Age</b>   |           | 20,77  | 1,61  |
| <b>Height</b>  |           | 163,62 | 5,79  |
| <b>Weight</b>  |           | 57,75  | 10,42 |
| <b>Daily Sleep Duration</b>  |           | 7,56   | 3,08  |
| <b>Body Appreciation (Whole Group)</b>                             |           | 38,98  | 8,22  |
| <b>Sleep Quality (Whole Group)</b>                                 |           | 14,42  | 1,51  |
| <b>Considering the last month, how would you rate your sleep?</b>  | Very Bad  | 66     | 18,3  |
|  | Bad       | 98     | 27,2  |
|  | Avarage   | 138    | 38,3  |
|  | Good      | 51     | 14,2  |
|  | Very Good | 7      | 1,9   |

**Table 2:** Pearson Correlation test results of Total Sleep Quality, Body Appreciation total score and subjective sleep assessment between age, height, weight and daily sleep duration of the participants

|  | Sleep Quality Total Score | Body Appreciation total score | How would you rate your sleep? (Last 1 month) | Daily Sleep Duration |
|--|---------------------------|-------------------------------|---|----------------------|
| <b>Sleep Quality Total Score</b>                     | r                         | -,017                         | ,012  | -,018                |
|  | p                         | ,752                          | ,818  | ,733                 |
|  | n                         | 360                           | 360   | 360                  |
| <b>Body Appreciation total score</b>                 | r                         | -,017                         | ,170**  | -,070                |
|  | p                         | ,752                          | ,001  | ,183                 |
|  | n                         | 360                           | 360   | 360                  |
| <b>How would you rate your sleep? (Last 1 month)</b> | r                         | -,018                         | ,170**  | -,119*               |
|  | p                         | ,733                          | ,001  | ,024                 |
|  | n                         | 360                           | 360   | 360                  |

*p*<0,05, \*\* *p*<0,001

Table 2 shows that there is no significant relationship between the participants' sleep quality total scores and other parameters, while the body appreciation total score shows a low level of significance in the positive direction with subjective sleep assessment and a low level of significance in the negative direction with weight. Participants' subjective sleep assessment and daily sleep duration show a low level of positive significance.

**Table 3:** Independent Samples T Test results of participants' Body Appreciation Perception Total Scores in terms of whether or not they exercise regularly and whether or not they play a licensed sport

|                            |     | N   | X     | Ss.  | t     | p    |
|----------------------------|-----|-----|-------|------|-------|------|
| Do you exercise regularly? | Yes | 42  | 39,71 | 7,64 | ,617  | ,537 |
|                            | No  | 318 | 38,88 | 8,30 |       |      |
| Licenced Sports Background | Yes | 56  | 38,32 | 8,27 | -,650 | ,516 |
|                            | No  | 304 | 39,10 | 8,22 |       |      |

When Table 3 is examined, it is seen that the participants' regular exercise and playing a licensed sport do not create a statistically significant difference with their total body appreciation scores .

**Table 4:** Mann Whitney U Test results of the Total Sleep Quality Scores of the participants in terms of whether or not they exercise regularly and whether or not they play a licensed sport

|                            |     | N   | S.O.   | S.T.     | Median Quarter | U       | p    |
|----------------------------|-----|-----|--------|----------|----------------|---------|------|
| Do you exercise regularly? | Yes | 42  | 191,18 | 8290,50  | 14,00          | 6229,50 | ,469 |
|                            | No  | 318 | 179,09 | 56950,50 |                |         |      |
| Licenced Sports Background | Yes | 56  | 186,69 | 10454,50 | 14,00          | 8165,50 | ,620 |
|                            | No  | 304 | 179,36 | 54525,50 |                |         |      |

p< ,05

When Table 3 is examined, it is seen that the participants' regular Exercise(14,43±1,51) and playing a licensed sport(144,43±1,51) did not make a statistically significant difference with the total score of sleep quality (p>0.05).

## DISCUSSION AND CONCLUSION

In the study, the gender variable of the participants was taken under control and all of them are a group of young women. The study was conducted on 360 people with missing data analysis. The scales used in line with the targeted objectives are Body Appreciation and Sleep Quality scales. The findings obtained as a result of the completion of the analysis of the data revealed the levels of effect of exercise and sleep parameters on body appreciation in young women.

Results showed that most of the participant group did not exercise, did not engage in any sports branch with a licence, and their participation in exercise and activities was low. It was observed that the participants' regular exercise and licensed sports did not create a statistically significant difference with the body appreciation total scores and sleep quality total score, while the positive increase in subjective sleep evaluation increased the body appreciation perceptions of the participants, it was negatively affected by weight gain. Subjective sleep assessment increased significantly in parallel with the increase in daily sleep duration, as expected. These results primarily show that young women can increase their body appreciation perceptions with the physical and physiological improvements they will achieve with exercise. In addition, the lack of recommended daily sleep duration (19, 23) in women can create psychologically negative outputs. For this reason, it is thought that the lack and excess of the recommended duration negatively affects the perception of body appreciation as it negatively affects the person's own psychological values.

Exercise and being a licensed athlete did not have a significant relationship with both sleep quality and body appreciation perception total scores (see Table 2-3), and this is thought to be due to the fact that most of the participants do not exercise regularly and are not licensed athletes. It is thought that this finding may differ in studies in which the number of the study group increases and young women who exercise are

included. In addition, the lack of a significant relationship between sleep quality defined by the scale and subjective sleep assessment suggests that the participants had insufficient awareness in measuring their sleep quality. In other studies, it has been reported that there is a difference in subjective assessment with the scale because women are affected by different factors compared to men in predicting the sleep quality of the general population (12, 28). By exercising, it is likely that sleep of poor quality will gradually become better quality (27, 29, 32, 33). For this reason, regular exercise is thought to increase the sleep quality of young women and positively affect body perception with this increase (9, 21).

As a result, it is known that sleep is a parameter that directly affects mood (30). This research, which is a specific field study, has shown that, although the quality of sleep felt in women is different from the measured and more scientifically accepted total sleep quality, the evaluation data showed that there was no relationship between the body perception of sleep and body appreciation in participants who exercised, while a positive relationship was found with the body appreciation perception of participants who reported sleep deficiency. This situation reveals that sleep is a more related concept in body appreciation perception than exercise.

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