

Perceived Stress and Insomnia among University Students Living in Dormitories: A Correlational Study

Yurtlarda Yaşayan Üniversite Öğrencilerinde Algılanan Stres ve Uykusuzluk: İlişkisel Çalışma

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ABSTRACT

This study aimed to examine the effects of dormitory life on perceived stress and insomnia severity among university students residing in dormitories. A correlational research design was employed. The study population consisted of 504 students living in state dormitories who accessed the survey online and voluntarily participated. Data were collected using the Introductory Information Form, the Perceived Stress Scale, and the Insomnia Severity Index. The mean age of the participants was 21.21 ± 1.83 years (18–35). The mean total score of the Perceived Stress Scale was 15.99 ± 5.57 , while the mean score of the Insomnia Severity Index was 13.17 ± 5.74 . A very weak but statistically significant negative correlation was found between students' sleep duration and both the perceived stress sub-dimension ($p=0.001$, $r=-0.167$) and the total Perceived Stress Scale score ($p=0.003$, $r=-0.134$). Additionally, a weak negative correlation was observed between sleep duration and the Insomnia Severity Index score ($p=0.001$, $r=-0.254$). A very weak but significant negative correlation was found between sleep quality and the perceived stress sub-dimension ($p=0.001$, $r=-0.245$), the perceived coping sub-dimension ($p=0.001$, $r=-0.272$), total stress ($p=0.001$, $r=-0.293$), and the Insomnia Severity Index score ($p=0.001$, $r=-0.460$). Moreover, a weak positive correlation was identified between the Insomnia Severity Index and perceived stress ($p=0.0001$, $r=0.470$), a very weak but significant correlation between perceived coping ($p=0.002$, $r=0.135$), and a moderate positive correlation between the Insomnia Severity Index and total stress ($p=0.0001$, $r=0.523$). Environmental factors within the dormitory setting influenced the students' perceived stress, total stress, and Insomnia Severity Index scores. A moderate positive correlation was found between the Insomnia Severity Index and Perceived Stress Scale.

Keywords: Stress, Sleep, University students, Dormitory environment

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Öz

Bu çalışmanın amacı yurtlarda kalan üniversite öğrencilerinde yurt yaşamının algılanan stres ve uykusuzluk şiddetine etkisini incelemektir. Çalışma, ilişkisel desende tasarlanmıştır. Araştırmanın evrenini devlet yurtlarında yaşayan, ankete internet üzerinden erişen ve gönüllü olarak katılan 504 öğrenci oluşturmuştur. Araştırma verileri Tanıtıcı Bilgi Formu, Algılanan Stres Ölçeği ve Uykusuzluk Şiddet İndeksi ile toplanmıştır. Katılımcıların yaş ortalaması 21.21 ± 1.83 (18-35) idi. Algılanan Stres Ölçeği toplam puan ortalaması 15.99 ± 5.57 , Uykusuzluk Şiddet İndeksi ortalama puanı ise 13.17 ± 5.74 olarak belirlendi. Öğrencilerin uyku süresi ile hem algılanan stres alt boyutu ($p=0.001$, $r=-0.167$) hem de Algılanan Stres Ölçeği toplam puanı ($p=0.003$, $r=-0.134$) arasında çok zayıf fakat istatistiksel olarak anlamlı negatif yönde ilişki bulunmuştur. Ayrıca uyku süresi ile Uykusuzluk Şiddet İndeksi skoru arasında da negatif yönde zayıf korelasyon gözlemlendi ($p=0.001$, $r=-0.254$). Öğrencilerin uyku süresi ile algılanan stres alt boyutu ($p=0.001$, $r=-0.167$) ve Algılanan Stres Ölçeği ($p=0.003$, $r=-0.134$) puan ortalamaları arasında ters yönlü çok zayıf anlamlı ilişki ve Uykusuzluk Şiddet İndeksi puan ortalaması ($p=0.001$, $r=-0.254$) arasında ise negatif yönlü zayıf anlamlı ilişki tespit edilmiştir. Öğrencilerin uyku kalitesi ile algılanan stres alt boyutu ($p=0.001$, $r=-0.245$) arasında negatif çok zayıf anlamlı ilişki; algılanan baş etme alt boyutu ($p=0.001$, $r=-0.272$), Algılanan Stres Ölçeği ($p=0.001$, $r=-0.293$) ve Uykusuzluk Şiddet İndeksi ($p=0.001$, $r=-0.460$) puan ortalamaları arasında negatif yönde zayıf düzeyde anlamlı ilişki olduğu belirlenmiştir. Uykusuzluk Şiddet İndeksi ile algılanan stres ($p=0.0001$, $r=0.470$) arasında pozitif yönde zayıf; algılanan baş etme ($p=0.002$, $r=0.135$) arasında çok zayıf ve Algılanan Stres Ölçeği ($p=0.0001$, $r=0.523$) arasında orta şiddette anlamlı ilişki tespit edilmiştir. Öğrencilerin yurt ortamındaki çevresel faktörlerin algılanan stres, toplam stres ve Uykusuzluk Şiddet İndeksi puan ortalamasını etkilemektedir. Uykusuzluk Şiddet İndeksi ile Algılanan Toplam Stres puanı arasında pozitif yönde orta düzeyde bir ilişki tespit edilmiştir.

Anahtar Sözcükler: Stres, Uyku, Üniversite öğrencileri, Yurt Ortamı

INTRODUCTION

The World Health Organization (WHO) defines individuals aged 10 to 19 as adolescents. The United Nations (UN) classifies those aged 15 to 24 as youth. The WHO further categorizes the 10 to 24 age group as young, encompassing both adolescence and youth (WHO, 2023). During this period, individuals transition into university life, marking the initial step toward their professional careers. University years represent a critical phase in which individuals progress from adolescence to adulthood (Köksal & Topkaya, 2021).

University life can be an exciting period in which students encounter new expectations. However, this transition also introduces various challenges and stressors associated with university life (Arıcı et al., 2019). As students leave their families and familiar environments for an extended period and attempt to live independently, they are exposed to numerous risk factors that may impact their health (Oswalt & Riddock, 2007).

This phase is particularly critical for university students in terms of mental health and psychological well-being. Research indicates that most mental disorders emerge during adolescence (İbrahim et al., 2013; Auerbach et al., 2018), and this stage, which coincides with university years, presents significant risks. Studies have shown that during this period, students are vulnerable to various challenges, including alcohol and tobacco use, problematic internet use, sleep disturbances, academic difficulties, adaptation to a new environment, social integration issues, loneliness, financial constraints, academic pressure, and difficulties adjusting to dormitory life. These factors have been associated with an increased risk of mental health problems (Auerbach et al., 2018; Günay et al., 2018; Ramón-Arbués et al., 2020).

Housing is one of the primary challenges faced by university students. Many students live away from their families and reside in crowded environments such as public and private dormitories, hostels, apart-hotels, rental accommodations, or shared student housing, often constrained by limited financial resources (Filiz et al., 2007; Kiye et al., 2020). Every life transition requires an adaptation process, during which individuals may experience stress due to the conditions of their physical and social environment. Stress is an adaptive response triggered by actions, situations, or events that impose specific demands on individuals, influencing their ability to cope. The stress caused by increasing responsibilities and the need to adjust to new environmental conditions may negatively impact both the duration and quality of sleep (Shanahan et al., 2014; Huang & Zhao, 2020).

Sleep is one of the most critical factors for maintaining overall health. Understanding students' perceived stress levels and sleep conditions in dormitories is essential for developing targeted solutions. Therefore, this study aimed to assess students' stress levels and sleep characteristics in state dormitories. To achieve this, the study sought to answer the following research questions:

1. What were the perceived stress levels of the students?
2. What were the sleep characteristics of the students?
3. What factors influenced the students' perceived stress levels?
4. What factors affected the students' sleep characteristics?
5. Is there a relationship between the students' perceived stress levels and their sleep characteristics?

METHODS

Study Design and Population

The study was a correlational design. The study population consisted of students enrolled at a state university during the 2022–2023 academic year and residing in dormitories ($N = 5.703$). The sample size was determined through power analysis, using an effect size of 0.5, a 95% confidence interval, an alpha level of 0.05, $N = 5.703$, $p = 0.50$, and $d = 0.05$. The minimum required sample size was calculated as 360. The inclusion criteria for the study were residing in a state dormitory during the research period and volunteering to participate. The exclusion criterion was living in a private dormitory or a home environment. A total of 530 students volunteered and completed the survey. However, data from 26 participants were excluded due to incomplete or incorrect responses. The final study sample consisted of 504 students.

Data Collection Tools

Introductory Information Form: This form includes questions assessing students' demographic and family characteristics.

Perceived Stress Scale (PSS): The scale was developed by Cohen, Kamarck and Mermelste (1983). The Turkish validity and reliability study was conducted by Bilge et al. (2007). The scale employs a 5-point Likert rating system (0 = never, 4 = very often). Three items (items 4, 5, and 6) are reverse-scored, while five items (items 1, 2, 3, 7, and 8) are positively scored. The total score ranges from 0 to 32, with higher scores indicating higher perceived stress levels. In this study, the Cronbach's alpha internal consistency coefficient was found to be 0.76 for the overall scale, 0.81 for the perceived stress subscale, and 0.58 for the perceived coping subscale.

Insomnia Severity Index (ISI): The scale was developed by Bastien et al. (2001). The Turkish validity and reliability study was conducted by Boysan et al. (2010). This scale, developed to determine the degree of insomnia symptoms, can be used in standard population screening and clinical evaluation of insomnia. It is a five-point Likert-type scale consisting of a total of 7 items. Each item is scored between 0 and 4, and the total score varies between 0 and 28. Scores of 0-7 indicate clinically insignificant insomnia, 8-14 indicate subthreshold insomnia, 15-21 indicate moderate clinical insomnia and 22-28 indicate severe clinical insomnia. The Cronbach Alpha internal consistency coefficient of the scale was found to be 0.79 (Boysan et al., 2010). In this study, the Cronbach Alpha internal consistency coefficient was 0.83.

Data Collect

After obtaining the necessary approvals, the institution's administration was contacted, and information was provided regarding the purpose and significance of the study. Data were collected by the researchers in classrooms with the permission of the respective faculty members. After being informed about the study's purpose, volunteers were given the data collection tools. Written consent was obtained from the participants through the informed consent form on the first page of the

data set. The data collection process took approximately 15–20 minutes.

Ethical Considerations

To conduct the research, ethical approval was first obtained from the Zonguldak Bülent Ecevit University Human Research Ethics Committee (23.11.2021/104554-375). Institutional permission was granted by the Zonguldak Bülent Ecevit University Rectorate (E-46148110 304.03.-143638/07.03.2022). Students were informed about the purpose of the study, and verbal consent was obtained from those who volunteered to participate.

Data Evaluation

The data obtained from the research were evaluated with the SPSS Package program. Number, percentage, arithmetic mean, standard deviation, median, minimum and maximum values, skewness and kurtosis coefficients, Pearson correlation analysis and multiple regression analysis were used to evaluate the data. In the case of two groups, to compare quantitative data, an Independent samples t-test was used to compare parameters between groups. In the case of more than two groups when comparing quantitative data, a One-way ANOVA test was used when parametric assumptions were met in inter-group comparisons of parameters. LSD test was used to determine which group caused the difference. Kruskal Wallis Test was used to compare three or more groups that did not show normal distribution. Mann Whitney U test with Bonferroni correction was used to determine the group causing the difference. Pearson Correlation Analysis was used for comparisons between scales. The results were evaluated at a 95% confidence interval and a significance level of $p < 0.05$. Cronbach's alpha coefficient was calculated for the reliability of the scales. Skewness and kurtosis coefficients between -1 and +1 were accepted as normal distributions. Significance was evaluated as $p < 0.05$.

RESULTS

The students' average age was determined to be 21.21 ± 1.83 years (18–35). Of the participants, 67.1% ($n=338$) were female, and 32.9% ($n=166$) were male. Additionally, 31.7% ($n=160$) were first-year students, and 56.7% ($n=286$) reported that their income was equal to their expenses. It was also found that 80.4% ($n=405$) of the students did not have a chronic illness, 46.8% ($n=236$) were smokers, and 39.9% ($n=201$) consumed alcohol.

It was found that 78.8% ($n=397$) of the students shared a room with two to four people, 15.7% ($n=79$) shared a room with five or more people, and 5.6% ($n=28$) shared a room with only one other person. Additionally, 74.2% ($n=374$) of the students had a toilet and bathroom in their room. Moreover, 69.6% ($n=397$) reported that the hygiene conditions in the dormitory were inadequate, and 7.3% ($n=368$) expressed discomfort about staying in the dormitory.

An analysis of the students' sleep characteristics over the past month revealed that 71.0% ($n=358$) went to bed between 12:00 AM and 1:00 AM, 62.3% ($n=314$) took 15–30 minutes to fall asleep, and 42.3% ($n=213$) woke up between 8:00 AM

and 10:00 AM. Additionally, 58.3% (n=294) reported a daily sleep duration of 6–8 hours. Regarding sleep quality, 5.4% of students rated their sleep as very good, 47.4% as quite good, 35.1% as somewhat poor, and 12.1% as very poor. Furthermore, 88.1% (n=444) reported not using any medication to aid sleep.

The Perceived Stress Scale results indicated a mean score of 10.55 ± 4.38 for the perceived stress subscale, 5.44 ± 2.41 for the perceived coping subscale, and a total scale score of 15.99 ± 5.57 . The mean score for the Insomnia Severity Index was found to be 13.17 ± 5.74 . The distribution of students' insomnia levels was as follows: 15.7% (n=79) had clinically insignificant insomnia, 45.7% (n=231) were at the lower threshold of insomnia, 31.7% (n=157) had clinical insomnia (moderate to severe), and 7.9% (n=40) had severe clinical insomnia (Table 1).

A significant difference was found between students' gender and their perceived stress scores ($p=0.001$), total stress subscale scores ($p=0.010$), and Insomnia Severity Index scores ($p=0.030$). Female students had higher total Perceived Stress Scale and Insomnia Severity Index scores compared to male students.

Additionally, a significant difference was observed in students' perceived coping scores ($p=0.020$), total Perceived Stress Scale scores ($p=0.016$), and Insomnia Severity Index scores ($p=0.037$) based on their income level. Further analysis revealed no significant difference in Insomnia Severity Index scores across income levels. However, the difference in perceived coping and total Perceived Stress Scale scores was attributed to lower scores in students with incomes below their expenses compared to those with incomes equal to their expenses ($p<0.016$).

A significant difference was found between students with and without chronic diseases in terms of their average Insomnia Severity Index scores ($p=0.002$). Students with chronic diseases had higher Insomnia Severity Index scores compared to those without chronic diseases.

A significant difference was also observed between students' smoking ($p=0.001$) and alcohol consumption ($p=0.015$) status and their average Insomnia Severity Index scores, with stu-

dents who smoked and consumed alcohol reporting higher scores than those who did not (Table 2).

Additionally, a significant relationship was found between the number of roommates in the dormitory and students' perceived stress scores ($p=0.001$), total Perceived Stress Scale scores ($p=0.002$), and Insomnia Severity Index scores ($p=0.005$). Further analysis indicated that the differences in the perceived stress sub-dimension and total stress scores were primarily between students staying in two-person rooms and those staying in rooms with three, four, or five or more occupants ($p<0.016$). It was also found that Insomnia Severity Index scores increased as the number of roommates increased ($p<0.016$).

Moreover, a significant difference was found regarding the location of the toilet and bathroom in the dormitory room and students' perceived stress ($p=0.006$), total Perceived Stress Scale ($p=0.013$), and Insomnia Severity Index ($p=0.028$) scores. Students who had a toilet and bathroom in their room reported higher average scores compared to those who did not ($p<0.05$).

A significant relationship was also found between perceptions of inadequate hygiene in the dormitory and students' perceived stress ($p=0.018$) and Insomnia Severity Index ($p=0.028$) scores. Students who considered hygiene conditions inadequate had higher average scores than those who did not ($p<0.05$).

Furthermore, a significant difference was observed between discomfort with dormitory living and perceived stress ($p=0.001$), total Perceived Stress Scale ($p=0.001$), and Insomnia Severity Index ($p=0.001$) scores. Students who reported discomfort with staying in the dormitory had higher scores on these measures compared to those who did not experience such discomfort (Table 3).

According to the correlation analysis, there was generally a positive correlation between students' Perceived Stress Scale scores and bedtime, time taken to fall asleep, and time of waking up. A negative relationship was found between sleep duration, sleep quality, and the frequency of auxiliary medication use ($p<0.001$).

Table 1: Students Average Scores on the Perceived Stress Scale and Insomnia Severity Index

Perceived Stress Scale	Mean \pm SD	Median (Min-Max)
Perceived Stress	10.55 ± 4.38	11.0000 (0.00-20.00)
Perceived Coping	5.44 ± 2.41	6.0000 (0.00-12.00)
Total	15.99 ± 5.57	16.0000 (0.00-32.00)
Insomnia Severity Index	13.17 ± 5.74	13.5000 (0.00-28.00)
Insomnia Level	n	%
Clinically insignificant insomnia	79	15.7
Subthreshold insomnia	228	45.2
Moderate clinical insomnia	157	31.2
Severe clinical insomnia	40	7.9
Total	504	100.0

Table 2: Student's Sociodemographic Characteristics, Perceived Stress Scale and Insomnia Severity Index Average Scores

Variable	Perceived Stress Mean \pm SD	Perceived Coping Mean \pm SD	Stress Total Mean \pm SD	Insomnia Severity Index Mean \pm SD
Gender				
Female (n=338)	11.12 \pm 4.43	5.42 \pm 2.4	16.54 \pm 5.84	13.70 \pm 5.6
Male (n=166)	9.40 \pm 4.07	5.48 \pm 2.46	14.87 \pm 4.81	12.07 \pm 5.92
Test value (t/p)	4.205 0.001 ^a	-0.231 0.818 ^a	3.185 0.010 ^a	3.013 0.030 ^a
Class				
1 st grade (n=160)	10.56 \pm 4.63	5.53 \pm 2.58	16.10 \pm 6.06	13.48 \pm 5.87
2 st grade (n=115)	10.33 \pm 4.49	5.67 \pm 2.3	16.00 \pm 5.52	12.58 \pm 6.13
3 st grade (n=89)	11.04 \pm 3.86	5.33 \pm 2.14	16.38 \pm 5.14	13.19 \pm 5.65
4 st grade (n=140)	10.40 \pm 4.34	5.22 \pm 2.48	15.62 \pm 5.33	13.27 \pm 5.34
Test value (F/p)	0.527 0.664 ^b	0.892 0.445 ^b	0.372 0.773 ^b	0.578 0.629 ^b
Income status				
Income < Expense (n=286)	11.01 \pm 4.17	5.94 \pm 2.32	16.95 \pm 5.04	13.85 \pm 5.28
Income =Expense (n=48)	10.27 \pm 4.48	5.13 \pm 2.40	15.40 \pm 5.79	13.04 \pm 5.85
Income >Expense (n=170)	10.56 \pm 4.53	5.56 \pm 2.62	16.12 \pm 5.63	11.50 \pm 6.37
Test value (F/p)	1.501 0.224 ^b	6.138 0.002 ^b	4.153 0.016 ^b	3.322 0.037 ^b
Chronic disease				
None (n=405)	10.58 \pm 4.39	5.41 \pm 2.41	16.00 \pm 5.61	12.81 \pm 5.89
Yes (n=99)	10.43 \pm 4.37	5.55 \pm 2.44	15.98 \pm 5.45	14.62 \pm 4.87
Test value (t/p)	0.296 0.767 ^a	0.500 0.617 ^a	0.016 0.590 ^a	-2.830 0.002 ^a
Cigarette				
None (n=268)	10.54 \pm 4.46	5.32 \pm 2.35	15.87 \pm 5.52	12.17 \pm 5.85
Yes (n=236)	10.55 \pm 4.30	5.58 \pm 2.48	16.13 \pm 5.63	14.30 \pm 5.42
Test value (t/p)	-0.017 0.726 ^a	-1.205 0.229 ^a	-0.535 0.593 ^a	-4.226 0.001 ^a
Alcohol				
None (n=303)	10.59 \pm 4.38	5.54 \pm 2.36	16.13 \pm 5.57	12.11 \pm 5.91
Yes (n=201)	10.49 \pm 4.40	5.29 \pm 2.49	15.78 \pm 5.58	14.76 \pm 5.10
Test value (t/p)	0.246 0.806 ^a	1.156 0.248 ^a	0.695 0.488 ^a	-5.187 0.015 ^a

^a Independent samples t-test ^b One-way ANOVA test.

Similarly, a positive correlation was observed between students' Insomnia Severity Index scores and bedtime, time to fall asleep, and time to wake up. A negative relationship was also found between sleep duration, sleep quality, and the frequency of auxiliary medication use ($p < 0.001$) (Table 4).

According to the correlation analysis between the scales, a moderately significant relationship was found between the Insomnia Severity Index and the Perceived Stress Scale ($p = 0.0001$, $r = 0.523$). Regression analysis results indicated that

the model was statistically significant, as evidenced by the F value ($F = 142.578$; $p < 0.05$). The beta coefficient, t value, and significance level of the independent variable showed that the total Insomnia Severity Index had a statistically significant and positive effect on the total Perceived Stress Scale ($t = 18.202$, $p < 0.05$). A one-unit increase in the total Insomnia Severity Index resulted in a 0.456 increase in the total Perceived Stress Scale ($\beta = 0.456$). The model explained 22.0% of the variation in the total Perceived Stress Scale (adjusted $R^2 = 0.220$). No au-

Table 3: Evaluation of Students' Dormitory Features on Perceived Stress Scale and Insomnia Severity Index Score Averages

Variable	Perceived Stress Mean \pm SD	Perceived Coping Mean \pm SD	Stress Total Mean \pm SD	Insomnia Severity Index Mean \pm SD
Number of people in the room				
One or two (n=28)	8.66 \pm 3.78	5.11 \pm 2.05	14.68 \pm 4.65	11.40 \pm 5.21
Three or four (n=397)	10.97 \pm 4.40	5.47 \pm 2.39	16.42 \pm 5.67	13.42 \pm 5.78
Five or more (n=79)	9.11 \pm 3.75	5.88 \pm 2.32	15.30 \pm 5.06	14.71 \pm 5.88
Test value (KW/p)	17.198 0.001 ^c	0.865 0.649 ^c	12.661 0.002 ^c	10.48 0.005 ^c
Toilet in bathroom room				
Yes (n=374)	10.87 \pm 4.40	5.50 \pm 2.40	16.37 \pm 5.53	13.50 \pm 5.83
No (n=130)	9.64 \pm 4.23	5.30 \pm 2.50	14.95 \pm 5.59	12.21 \pm 5.40
Test value (t/p)	2.748 0.006 ^a	0.759 0.448 ^a	2.492 0.013 ^a	2.208 0.028 ^a
Hygiene conditions in the dormitory				
Yes (n=153)	9.84 \pm 4.47	5.68 \pm 2.55	15.52 \pm 5.47	12.37 \pm 5.32
No (n=351)	10.85 \pm 4.32	5.34 \pm 2.35	16.20 \pm 5.61	13.52 \pm 5.90
Test value (t/p)	-2.382 0.018 ^a	1.391 0.165 ^a	-1.278 0.202 ^a	-2.081 0.038 ^a
Don't be uncomfortable staying in the dormitory				
Yes (n=368)	11.02 \pm 4.48	5.47 \pm 2.39	16.49 \pm 5.62	13.88 \pm 5.72
No (n=136)	9.28 \pm 3.90	5.40 \pm 2.51	14.67 \pm 5.22	11.27 \pm 5.39
Test value (t/p)	4.039 0.001 ^a	0.278 0.781 ^a	3.284 0.001 ^a	4.615 0.001 ^a

^aIndependent samples t test ^cKruskal Wallis Test.

Table 4: Students Sleep Characteristics and Correlation Values of the Scales

Sleep Characteristics	Perceived stres Test Value (p / r)	Perceived coping Test Value (p / r)	Total stres Test Value (p / r)	Insomnia Severity Index Test Value (p / r)
Bedtime	0.001 / 0.189	0.114 / 0.071	0.001 / 0.177	0.001 / 0.202
Time to fall asleep	0.001 / 0.167	0.008 / 0.118	0.001 / 0.180	0.001 / 0.254
Wake up time	0.012 / 0.112	0.064 / 0.083	0.011 / 0.113	0.001 / 0.154
Sleep duration	0.001 / -0.167	0.947 / -0.003	0.003 / -0.134	0.001 / -0.254
Sleep quality	0.001 / -0.245	0.001 / -0.272	0.001 / -0.293	0.001 / -0.460
Frequency of auxiliary drug use	0.358 / -0.041	0.125 / 0.068	0.859 / -0.008	0.032 / 0.291

r=0.00-0.25 very weak, r=0.26-0.49 weak, r=0.50-0.69 medium, r=0.70-0.89 high, r=0.90-1.00 too high.

tocorrelation problem was detected in the established model, with the Durbin-Watson statistic falling between 1.5 and 2.5 (DW=1.791) (Table 5).

DISCUSSION

Entering dormitory life as part of their education is a significant transition for students, during which new expectations arise. This transition, however, often brings challenges that can increase stress levels. Students living in dormitories face numerous risk factors that impact their health, stemming from both physical and environmental conditions, as well as the experience of living independently away from their families (Oswalt & Riddock, 2007). The stress associated with increased responsibilities in adjusting to new environmental conditions can neg-

atively affect both the quantity and quality of sleep (Shanahan et al., 2014; Huang & Zhao, 2020). Sleep is a critical factor for maintaining overall health. Therefore, assessing students' perceived stress levels and sleep conditions in dormitories is crucial for developing effective solutions.

The students' total perceived stress, coping, and overall scale score averages were found to be at moderate levels. The results of this study are consistent with those of other studies in terms of perceived stress levels (Hancioğlu, 2017; İlhan Alp et al., 2020; Altaş et al., 2022). In the study group, the Insomnia Severity Index was at a moderate level, with the highest percentage falling within the subthreshold of insomnia, followed by moderate clinical insomnia, clinically insignificant insom-

Table 5: Results of Simple Linear Regression Analysis to Explain the Effect of Perceived Stress Scale and Insomnia Severity Index

Dependent Variable	Independent Variable	β	Standard error	Beta	t	p	F	Model (p)	Adj. R2	Durbin Watson
Perceived Stress Scale	Fixed value	9.991	0.549	-	18.202	0.000*	142.578	0.000*	0.220	1.791
	Insomnia Severity Index	0.456	0.038	0.470	11.941	0.000*				

nia, and severe clinical insomnia. In the study conducted by İlhan Alp and colleagues, the Insomnia Severity Index score (10.87 ± 5.35) was found to be above the lower threshold (İlhan Alp et al., 2020). In the study by Şahiner Önal and Hisar, insomnia problems were identified in 46.2% of university students (Şahiner Önal & Hisar, 2018). In another study involving university students living in dormitories, 41.1% of participants reported inadequate sleep quality based on the Pittsburgh Sleep Quality Index Score (Yavuz Sari et al., 2015). It is noteworthy that both perceived stress and insomnia severity were prevalent among this group of students, highlighting the need for intervention studies.

In this study, the scores for perceived stress, the Perceived Stress Scale, and the Insomnia Severity Index varied according to participants' gender, with females reporting higher scores than males. Similar findings have been observed in several studies, which have identified a significant relationship between these two variables (Day & Livingstone, 2003; Savcı & Aysan, 2014; Hancıoğlu, 2017). One possible explanation for this difference is that women may be more susceptible to various types of sleep problems, such as insomnia, restless legs syndrome, and poor sleep quality, compared to men (Zhang & Wing, 2006; Madrid-Valero et al., 2017). Although current sleep recommendations across different countries are classified by age, they do not specify differences in sleep duration between men and women. However, given that sleep duration is an independent determinant of increased morbidity and mortality, it has been suggested that gender should be taken into account when making recommendations for optimal sleep duration (Svensson et al., 2021; Jean-Louis et al., 2021).

The study found that students' perceived coping, Perceived Stress Scale scores, and Insomnia Severity Index scores varied according to their income levels. A study by Çelik et al. (2019) showed that students from lower economic backgrounds reported poorer sleep quality. Additionally, chronic diseases, smoking, and alcohol consumption were found to affect students' average Insomnia Severity Index scores. Consistent with our findings, numerous studies in the literature have highlighted the impact of chronic disease (Buboltz et al., 2011; Mayda et al., 2012; Şahiner Önal & Hisar, 2018), smoking (Vail-Smith et al., 2009; Kakinami et al., 2017; Bellatorre et al., 2017; İlhan Alp et al., 2020), and alcohol use (Vail-Smith et al., 2009; Çelik et al., 2019; İlhan Alp et al., 2020) on insomnia and poor sleep quality. Therefore, it is suggested that primary prevention strategies, which aim to address risk factors while considering individual differences through a multidisciplinary approach, would offer the most effective support.

The study demonstrated that environmental factors within the dormitory significantly influenced students' average scores on perceived stress, the Perceived Stress Scale, and the Insomnia Severity Index. Numerous studies indicate that emotional and physical stress negatively impacts sleep quality (Lund et al., 2010; Yavuz Sari et al., 2015; Hancıoğlu, 2017). Further research has shown that environmental noise and the number of individuals in a room (Brown et al., 2002; Yavuz Sari et al., 2015) also detrimentally affect sleep quality. Based on the study's findings, it is crucial to address the sources of stress that impact sleep in dormitory environments, regulate environmental factors, and provide psychological support for situations that may cause distress in students' lives. Therefore, improving the dormitory environment could positively influence students' life satisfaction, lower their stress levels, and mitigate the negative effects on sleep.

The study found that students' bedtimes, wake-up times, and time taken to fall asleep had a very weak positive correlation with their average Perceived Stress Scale scores and Insomnia Severity Index scores. In a related study, it was revealed that 45.8% of students experienced difficulty falling asleep. Among those, 77% cited noise as the primary issue, followed by light, room temperature, stress, and other factors (Yavuz Sari et al., 2015). Another study linked difficulty falling asleep with depressive symptoms (Eller et al., 2006). In this study, students' perceived stress and Insomnia Severity Index scores were found to negatively affect sleep duration and quality. Similarly, Yavuz Sari et al. (2015) found that individuals who had trouble falling asleep (67.7%) reported significantly poorer sleep quality than those without sleep issues (18.7%). These findings support the notion that stress and lifestyle changes adversely impact sleep quality.

A weak positive relationship was observed between the frequency of students' use of auxiliary medications and the severity of insomnia. In the study by Yavuz Sari et al. (2015), 14.8% of participants reported using medication, and sleep quality was found to be worse in the group using medication compared to the group that did not. The first measure to be taken for individuals complaining of insomnia should be the promotion of sleep hygiene, which involves eliminating habits that prevent or hinder the transition to sleep.

A moderate positive relationship was detected between the Insomnia Severity Index and the Perceived Stress Scale within the study group. Supporting our findings, Angelika et al. (2017) reported that 45% of those with sleep problems had elevated stress levels. Similarly, in a study conducted in South Korea,

stressful life events were identified as a factor associated with sleep problems (Ohayon & Hong, 2002). In the study by İlhan Alp et al. (2020), a statistically significant, positive, moderate relationship was found between perceived stress and insomnia severity. In line with these findings, this study also revealed that as students' stress levels increased, sleep problems became more prevalent.

Two potential explanations exist for the observed associations between insomnia severity and perceived stress. First, individuals with insomnia may not benefit from the restorative functions of sleep, leading to health issues, low energy, and impaired functioning that prevent them from performing optimally in daily life (Ohayon, 2005). Second, individuals who experience irritability and fatigue are likely to exhibit higher stress levels, which could result in deteriorating mood, emotions, and quality of life over time (Ribeiro et al., 2018). This relationship could be described as a vicious cycle in which stress exacerbates insomnia, and insomnia, in turn, worsens stress. Interventions aimed at reducing students' stress levels may help alleviate insomnia severity.

Limitations

This study had several limitations. First, the use of Likert-type questions required participants to choose an option rather than provide a clear, unambiguous answer. Additionally, the study focused solely on the current situation of students living in dormitories. However, the survey contained no personally identifiable information, and participants were assured of the confidentiality of their identities. Therefore, the findings are likely to be reliable.

CONCLUSION

The study determined that the dormitory environment affected the students average perceived stress scores, Perceived Stress Score and Insomnia Severity Index. The students Perceived Stress Score total and sub-dimension scores and Insomnia Severity Index scores are at moderate levels. Female gender, low income level, presence of chronic disease, and cigarette and alcohol use were determined as risk factors in terms of stress and insomnia in university students living in dormitories. At the same time, it had been determined that environmental factors in the dormitory environment, such as the number of people in the room, the hygienic conditions of the dormitory, and the presence of a toilet and bathroom in the room, are also influential in students experiencing stress and non-compliance problems. It was also determined that there was a moderate positive relationship between the Insomnia Severity Index and the total Perceived Stress Score. According to the study results, it was suggested to evaluate risk factors in prevention and intervention studies to reduce insomnia and stress symptoms in university students living in dormitories.

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