İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Dergisi
ISSN: 2147-7892, Cilt 12, Sayı 2 (2024) 521-537
doi: 10.33715/inonusaglik.1446637

Journal of Inonu University Health Services Vocational School
ISSN: 2147-7892, Volume 12, Issue 2 (2024) 521-537
doi: 10.33715/inonusaglik.1446637

*Original Article / Araştırma Makalesi*

# THE RELATIONSHIP BETWEEN PARENTING PRACTICES AND SLEEP HABITS OF SCHOOL AGE CHILDREN IN THE COVID-19 PROCESS

## Covid-19 Sürecinde Ebeveynlik Uygulamalarının Okul Çağı Çocukların Uyku Alışkanlıkları ile İlişkisi

*Elif Simay KOÇ*[1] *Türkan KADİROĞLU*[2]
[1]*Kilis 7 Aralık University, Vocational School of Health Services, Kilis*
[2]*Atatürk University, Faculty of Nursing, Erzurum*

***Geliş Tarihi / Received:*** *03.03.2024* ***Kabul Tarihi / Accepted:*** *29.04.2024*

## ABSTRACT

This study was conducted to examine the relationship between parenting practices and sleep habits in school-age children. A cross-sectional, descriptive study was conducted between June - August 2021, with parents who have children 6–12 years old. The research group consisted of 352 parents. The study data was collected using a Personal Information Form, the Parenting Practices Scale, and the Children's Sleep Habits Scale. The average age of the parents was 35.95±5.99, and 71.9% were female. The average age of the children was 8.61±2.07, and 51.4% were girls. Parents scored a total of 164.98±16.03 points from the Parenting Practices Scale and 44.64±7.55 points from the Children's Sleep Habits Scale. A statistically significant, and negative correlation existed between the scores for the Parenting Practices and the Children's Sleep Habits (r:-0.409; p<0.01). As negative parenting practices increased, children's sleep problems increased. Nurses should educate parents regarding positive and negative parenting practices and their effects on children's sleep habits.

**Keywords:** COVID-19, Parenting practices, School-age children, Sleeping habits.

## ÖZ

Bu çalışma, okul çağındaki çocuklarda ebeveynlik uygulamaları ile uyku alışkanlıkları arasındaki ilişkiyi incelemek amacıyla yapıldı. Haziran - Ağustos 2021 tarihleri arasında 6-12 yaş arası çocuğu olan ebeveynlerle kesitsel, tanımlayıcı bir çalışma gerçekleştirildi. Araştırma grubu 352 ebeveynden oluşmuştur. Araştırma verileri Kişisel Bilgi Formu, Ebeveynlik Uygulamaları Ölçeği ve Çocuk Uyku Alışkanlıkları Ölçeği kullanılarak toplanmıştır. Ebeveynlerin yaş ortalaması 35.95±5.99 olup %71.9'u kadındır. Çocukların yaş ortalaması 8.61±2.07 olup, %51.4'ü kızdır. Ebeveynler, Ebeveynlik Uygulamaları Ölçeği 'den toplam 164.98±16.03 puan, Çocuk Uyku Alışkanlıkları Ölçeği'den ise 44.64±7.55 puan aldı. Ebeveynlik Uygulamaları ile Çocukların Uyku Alışkanlıkları puanları arasında istatistiksel olarak anlamlı ve negatif bir ilişki vardı (r:-0.409; p<0.01). Olumsuz ebeveynlik uygulamaları arttıkça çocukların uyku sorunları da arttı. Hemşireler ebeveynleri olumlu ve olumsuz ebeveynlik uygulamalarının çocukların uyku alışkanlıklarına etkileri konusunda eğitmelidir.

**Anahtar kelimeler:** COVID-19, Ebeveynlik uygulamaları, Okul çağı çocukları, Uyku alışkanlıkları.

*Elif Simay KOÇ✉, kocelifsimay@gmail.com*
*Kilis 7 Aralık University, Vocational School of Health Services, Kilis*



*Bu makaleye atıf yapmak için (How to cite this article):* Koç, E. S. & Kadiroğlu, T. (2024). *The relationship between parenting practices and sleep habits of school age children in the Covid-19 process*. İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Dergisi, 12(2), 521-537. doi: 10.33715/inonusaglik.1446637

## INTRODUCTION

Sleep is defined as the reversible, temporary, partial and periodic loss of communication with the environment with stimuli of varying intensity (Özbudak & Arhan, 2020). Sleep, a basic need, occurs through the interaction of anatomical and neurochemical regions within the central nervous system and increases the ability of living things to grow, develop and learn, allowing individuals to rest during the day and contributing to the mental and physical health of the individual (Gökçay & Arda, 2013). As in every age period, sleep is a basic need that is reversible and can affect daily life processes both physically and emotionally in school-age childhood (Algın, Akdağ & Erdinç, 2016; Öztürk, Sezer & Tezel, 2018). Insufficient sleep can cause physical, emotional, behavioral, school performance and even family problems for the child (Li et al., 2013). It is well-documented that school-age children frequently encounter issues such as difficulty falling asleep, resistance to bedtime, nightmares, a desire to sleep with their parents, frequent nighttime awakenings, insufficient sleep duration, difficulty waking up in the morning, and daytime sleepiness (Ekici, 2017).

One of the most important points in sleep health is the sleep habits of children. Children's sleep habits are affected by various physiological and psychosocial factors. Among these factors, there are factors such as the socioeconomic status of the family, education level, physical conditions (noise, lighting, electronic equipment), bed and room sharing, day and night sleeping hours, and day and night waking periods (Ferber, 2015). Parents have an important role in the sleep health of their children (Fisher, Van Jaarsveld, Liewellyn & Wardle, 2012). Parents prefer different approaches to establish children's sleep patterns and teach them sleep habits (Ferber, 2015).

The purposes of parenting are not only to help children survive and to appropriately discipline them, but also to contribute to the development of children inside and outside the family (Öztürk Can & Aksel, 2017). Parenting practices are one of the most important factors in meeting children's developmental needs such as nutrition, shelter and sleep. It also affects all developmental domains of school-age children, including their cognitive, physical, social and emotional development (Kahraman, Yilmaz Irmak, & Basokcu, 2017).

It is suggested that quarantine measures implemented during the COVID-19 pandemic have led to children experiencing sleep problems, longer sleep durations, altered sleeping patterns, and a decline in sleep quality (Moore et al., 2020; Dellagiulia et al., 2020; Üstündağ, 2021). Despite this, there is a scarcity of literature focusing on parenting practices and children's sleep habits (Chary, McQuillan, Bates & Deater-Deckard, 2020; Coto, Garcia, Hart &

Graziano, 2018). This study aims to explore the correlation between parenting practices and sleep patterns among school-age children.

## MATERIAL AND METHOD

### Objective and Type

This study is a cross-sectional, descriptive type.

### Population and Sample

The population of study was comprised of parents with school-age children (6–12 years old) living in a city located in the Eastern Anatolia Region of Turkey between 9 June 2021, and 9 August 2021. The study sample was identified using the snowball sampling method. Online data collection was used because of the difficulties posed by the COVID-19 pandemic, which affected and the education and training processes in Turkey. The parents who met the research criteria and voluntarily participated in the study were included during the dates for the data collection.

Generally, the number 100 is accepted as the minimum sample size in social science studies (Aziz, 2014). In this study, according to the post-hoc analysis result, the population representation power of the sample of 352 people was found to be % 100 for type 1 error level (α) of 5%. This study was completed with 352 parents who met the research criteria and voluntarily participated in the study between the data collection dates. Inclusion criteria: Parents were included in the study if they; (1) live in Erzurum, (2) use social media, (3) have children in the 6–12 age group (for parents with multiple children, the youngest child was evaluated), (4) declared that they do not have any psychiatric disorders, (5) voluntarily agreed to participate in the study.

### Data Collection

The data was collected by creating surveys with Google Forms and sending them to parents via online platforms (Facebook, Whatsapp, and Instagram). The introduction of the questionnaire explained the purpose and scope of the research. After the participants read and approved this information, they were able to access the survey questions. Access to the data collection link was only available during the data collection process and once. Completing the data tools took approximately 20–25 minutes for each participant. Access to the data collection link was left open during the data collection process, and later access to the data collection link was blocked.

The Personal Information Form, Parenting Practices Scale (PPS), and Children's Sleep Habits Scale (CSHS) were used to collect research data.

**Personal Information Form**

The Personal Information Form prepared by researchers, requested the parents' age, gender, education status, family income, and family structure. In addition, the form included questions to identify the gender and age of the children (Kahraman et al., 2017; Prime, Wade & Browne, 2020).

**Parenting Practices Scale**

Kahraman et al. developed the PPS in 2017 to evaluate the positive and negative practices of parents who have school-age children. The scale is a four-point Likert type and consists of 52 items, six of which are sub-dimensions (Positive problem-solving, negative problem-solving, functional family, extreme intrusive, inconsistency, interaction). Parents are asked to provide answers as 1 = never, 2 = sometimes, 3 = often, 4 = always. Half of the scale items are reverse-coded. The scale results in a minimum of 52 points and a maximum of 208 points. In the evaluation of PPS, high scores from the sub-dimensions indicate that the relevant sub-dimension is higher. The Cronbach alpha coefficients of the sub-dimensions of the scale were 0.640–0.790 (Kahraman et al., 2017). In this study, Cronbach's alpha value was 0.790.

**Children's Sleep Habits Scale**

Owens et al. developed the CSHS in 2000 to determine children's sleep habits and sleep-related problems (Owens, Spirito & McGuinn, 2000). Perdahlı Fiş et al. assessed its Turkish validity in 2010. CSHS consists of eight sub-dimensions (Bedtime resistance, difficulty falling asleep, sleep duration, sleep anxiety, night waking, parasomnia, respiratory-related sleep problems, daytime sleepiness) and a total of 33 items. Parents respond by evaluating the previous week to identify problems related to the sleep habits of their children. In grading the scale, parents are asked to respond as 1 = rarely (0–1 time a week), 2 = sometimes (2–4 times a week), and 3 = usually (5–7 times a week). Six of the scale items are reverse-coded. The scale results in a minimum of 33 points and a maximum of 99 points. The total test score is the sum of the scores from the individual items. Those who have a total score of 41 or more with CSHS have clinical sleep problems. While the validity coefficient of the Turkish form is 0.780, the test-retest reliability coefficient is 0.810 (Perdahlı Fiş et al., 2010). In this study, Cronbach's alpha value was 0.736.

## Analysis of Data

Statistical analysis of the data was conducted using SPSS (Statistical Package for the Social Sciences) version 22.0 package program. The normal distribution of the variables was evaluated using the Kolmonogorov-Smirnov, and Shapiro-Wilk tests. The number, percentage, mean, and standard deviation values were calculated from the descriptive statistics in the research. To evaluate the PPS and CSHS of the demographic characteristics, the Mann-Whitney U test was used to compare two groups, and the Kruskall-Wallis H test was used to compare more than two groups. For significant F values, Tamhane's T2 test, which is a post-hoc test, was used to identify in which groups the difference was related to homogeneity of variance achieved in pairwise comparisons. The Spearman correlation test and Linear Regression were applied between the variables. All analyses were tested at the 95% confidence level.

## Limitations

This research study has some limitations. Since the research was conducted during the pandemic, using the online data collection method and using the snowball sampling method are among the limitations of the research.

## Ethics

Approval from the Ethics Committee (Number: 2021-2/11, Date: 8/6/2021) and the Ministry of Health Scientific Research Platform (Date: 08/5/2021) were obtained for the research. Since individual rights must be protected in research, the requirements of voluntary participation and informed consent were met.

## RESULTS

The average age of the parents participating in the study is 35.95 (±5.99), and 71.9% are female. Of the parents, 57.1% are Bachelor’s degree graduates, 61.9% are equal to their income equalled expenditure, and 89.8% have a nuclear family structure. The average age of the children is 8.61 (±2.07), and 51.4% are girls (Table 1)

**Table 1.** Distribution of Children and Parents by Descriptive Characteristics (N=352)

| **Descriptive Characteristics** | **n** | **%** |
|---|---|---|
| **Children** | | |
| **Age ( $\overline{X}$ ± SD)** | 8.61±2.07 | |
| **Gender** | | |
| Female | 181 | 51.4 |
| Male | 171 | 48.6 |
| **Parents** | | |
| **Age ( $\overline{X}$ ± SD)** | 35.95±5.99 | |
| **Gender** | | |
| Female | 253 | 71.9 |
| Male | 99 | 28.1 |
| **Education status** | | |
| Primary school | 55 | 15.6 |
| High school | 61 | 17.3 |
| Bachelor's degree | 201 | 57.1 |
| Postgraduate | 35 | 9.9 |
| **Perception of income** | | |
| Income less than expenses | 57 | 16.2 |
| Income equals expense | 218 | 61.9 |
| Income more than expenses | 77 | 21.9 |
| **Family type** | | |
| Nuclear family | 316 | 89.8 |
| Extended family | 25 | 7.1 |
| Broken family | 11 | 3.1 |

Parents scored 37.76 (±5.65) in the positive problem-solving sub-dimension of PPS, 15.26 (±3.48) in the negative problem-solving, 29.50 (±4.02) in the functional family, 21.11 (±3.78) in the excessive intrusive, 10.15 (±2.59) in the inconsistency, and 13.59 (±2.70) in the interaction. The parents scored 164.98 (±16.03) in total of PPS (Table 2).

**Table 2.** PPS and CSHS Score Averages (N=352)

| Scales | Median | Min | Max | $\overline{X} \pm SD$ |
|---|---|---|---|---|
| **PPS** | | | | |
| Positive problem-solving | 38.00 | 21.00 | 48.00 | 37.76±5.65 |
| Negative problem-solving | 30.00 | 9.00 | 30.00 | 15.26±3.48 |
| Functional family | 30.00 | 17.00 | 36.00 | 29.50±4.02 |
| Extreme intrusive | 39.50 | 13.00 | 40.00 | 21.11±3.78 |
| Inconsistency | 15.00 | 5.00 | 17.00 | 10.15±2.53 |
| Interaction | 14.00 | 5.00 | 20.00 | 13.59±2.70 |
| **Total Score** | 165.00 | 94.00 | 175.00 | 164.98±16.03 |
| **CSHS** | | | | |
| Bedtime resistance | 8.00 | 6.00 | 18.00 | 8.80±2.82 |
| Difficulty falling asleep | 1.00 | 1.00 | 3.00 | 1.25±0.55 |
| Sleep duration | 3.00 | 3.00 | 7.00 | 3.71±1.03 |
| Sleep anxiety | 6.00 | 4.00 | 12.00 | 6.11±2.12 |
| Night waking | 3.00 | 3.00 | 8.00 | 4.01±1.30 |
| Parasomnia | 8.00 | 7.00 | 21.00 | 8.66±2.11 |
| Respiratory-related sleep problems | 3.00 | 3.00 | 9.00 | 3.43±0.98 |
| Daytime sleepiness | 11.00 | 8.00 | 22.00 | 11.76±2.88 |
| **Total Score** | 44.00 | 33.00 | 72.00 | 44.64±7.55 |

PPS, Parenting Practices Scale; CSHS, Children's Sleep Habits Scale

Parents scored 8.80 (±2.82) in the bedtime resistance sub-dimension of CSHS, 1.25 (±0.55) in the difficulty falling asleep, 3.71 (±1.03) in the sleep duration, 6.11 (±2.120) in the sleep anxiety, 4.01 (±1.30) in the night waking, 8.66 (±2.11) in the parasomnia, 3.43 (±0.98) in the respiratory-related sleep problems, and 11.76 (±2.88) in the daytime sleepiness. The parents scored 44.64 (±7.55) in total of CSHS (Table 2).

Negative problem-solving practices are higher in parents who have a daughter ($p<0.05$). Positive problem-solving, functional family practices and interactive practices are higher in mothers ($p\leq0.001$). Negative problem-solving practices are higher in parents have a primary education, and less income than their expenses ($p<0.05$). Extreme intrusive practices are higher in parents, have a graduate education ($p<0.05$). Inconsistent practices are more common in parents who have primary education and who earn an income greater than their expenses ($p<0.05$). Interactive practices are higher among working who have a postgraduate education and who earn an income higher than their expenses ($p<0.05$) (Table 3).

**Table 3.** Participants' Score Distribution in the PPS

| Feature | Positive problem-solving $\overline{X}$ ± SD | Negative problem-solving $\overline{X}$ ± SD | Functional family $\overline{X}$ ± SD | Extreme intrusive $\overline{X}$ ± SD | Inconsistency $\overline{X}$ ± SD | Interaction $\overline{X}$ ± SD | Total Score $\overline{X}$ ± SD |
|---|---|---|---|---|---|---|---|
| **Children** | | | | | | | |
| **Gender** | | | | | | | |
| Female | 38.18±5.49 | 30.03±3.64 | 29.52±4.05 | 39.24±4.45 | 14.81±2.73 | 13.72±2.61 | 165.69±16.87 |
| Male | 37.33±5.80 | 29.40±3.29 | 29.47±3.99 | 39.29±3.64 | 14.87±2.32 | 13.45±2.78 | 164.22±15.09 |
| **Test$^{U}$** | 14209.500 | 13411.500 | 15452.500 | 14981.000 | 15455.000 | 15115.500 | 14796.000 |
| **p** | 0.184 | **0.030** | 0.981 | 0.603 | 0.983 | 0.704 | 0.476 |
| **Parents** | | | | | | | |
| **Gender** | | | | | | | |
| Female | 38.78±5.40 | 29.55±3.60 | 30.21±3.60 | 39.49±4.06 | 14.84±2.67 | 13.77±2.79 | 166.84±15.62 |
| Male | 35.18±5.48 | 30.18±3.13 | 27.66±4.44 | 38.68±4.04 | 14.84±2.17 | 13.13±2.39 | 160.21±16.15 |
| **Test$^{U}$** | 7721.500 | 11246.000 | 8025.000 | 11184.000 | 12280.000 | 10817.000 | 9520.000 |
| **p** | **0<001** | 0.135 | **0<001** | 0.118 | 0.775 | **0.045** | **0<001** |
| **Education Status** | | | | | | | |
| Primary school | 36.56±5.55 | 31.02±3.97* | 28.85±3.57 | 37.94±3.02* | 15.71±2.32 | 11.90±2.48 | 158.01±12.99 |
| High school | 38.50±5.70 | 29.49±3.34 | 30.21±4.20 | 39.04±3.57 | 15.16±2.12 | 13.60±2.72 | 166.26±14.65 |
| Bachelor's degree | 37.54±5.85 | 29.88±3.60 | 29.34±4.20 | 39.35±4.32 | 14.95±2.52 | 13.79±2.59 | 165.07±16.77 |
| Postgraduate | 39.65±3.91* | 28.63±2.45 | 30.17±3.00 | 41.25±4.08 | 13.54±2.74* | 15.05±2.42* | 173.14±14.16 |
| **Test$^{KW}$** | 7.483 | 15.956 | 6.383 | 23.580 | 17.812 | 30.520 | 19.949 |
| **p** | 0.058 | **0<001** | 0.094 | **0<001** | **0<001** | **0<001** | **0<001** |
| **Perception of Income** | | | | | | | |
| Income less than expenses | 36.85±5.66 | 30.63±3.10* | 28.75±3.57 | 38.66±3.99 | 15.20±2.23* | 12.10±2.43 | 160.33±15.71 |
| Income equals expense | 37.90±5.74 | 29.60±3.66 | 29.63±4.12 | 39.18±4.25 | 14.87±2.68 | 13.71±2.70 | 165.05±16.30 |
| Income more than expenses | 38.06±5.39 | 29.00±3.07 | 29.66±4.00 | 39.69±3.51 | 14.24±2.28 | 14.35±2.46* | 168.19±14.78 |
| **Test$^{KW}$** | 1.797 | 8.958 | 3.294 | 4.195 | 6.339 | 26.338 | 7.975 |
| **p** | 0.407 | **0.011** | 0.193 | 0.123 | **0.042** | **0<001** | **0.019** |
| **Family Type** | | | | | | | |
| Nuclear family | 37.70±5.71 | 29.82±3.51 | 29.52±3.99 | 39.34±4.14 | 14.86±2.53 | 13.64±2.69 | 165.20±16.09 |
| Extended family | 37.84±4.23 | 28.32±3.06 | 29.32±3.96 | 38.56±3.62 | 14.28±2.66 | 12.68±2.39 | 161.40±13.88 |
| Broken family | 39.54±7.03 | 29.72±2.72 | 29.18±5.13 | 38.81±2.78 | 15.54±2.33 | 14.09±3.44 | 166.72±19.00 |
| **Test$^{KW}$** | 1.176 | 1.402 | 0.126 | 1.715 | 2.458 | 4.265 | 2.298 |
| **p** | 0.556 | 0.496 | 0.939 | 0.424 | 0.293 | 0.119 | 0.317 |

PPS, Parenting Practices Scale. / $^{U}$MannWhitney U Test, $^{KW}$Kruskal Wallis-H Test. / *Group that makes the difference

Children who are girls have a longer sleep duration (p<0.05). Respiratory sleep problems are higher in boys (p<0.05). Considering the mean scores of CSHS, the resistance to bedtime is higher in children of parents with primary education (p<0.05). Sleep anxiety is lower in fathers and parents who earn an income higher than their expenses (p<0.05) (Table 4).

**Table 4.** Participants' Score Distribution in the CSHS

| Feature | Bedtime resistance $\overline{X}$ ± SD | Difficulty falling asleep $\overline{X}$ ± SD | Sleep duration $\overline{X}$ ± SD | Sleep anxiety $\overline{X}$ ± SD | Night waking $\overline{X}$ ± SD | Parasomnia $\overline{X}$ ± SD | Respiratory-related sleep problems $\overline{X}$ ± SD | Daytime sleepiness $\overline{X}$ ± SD | Total Score $\overline{X}$ ± SD |
|---|---|---|---|---|---|---|---|---|---|
| **Children** | | | | | | | | | |
| **Gender** | | | | | | | | | |
| Female | 8.77±2.70 | 1.28±0.58 | 3.81±1.06 | 6.12±2.07 | 4.00±1.28 | 8.67±2.20 | 3.32±0.86 | 11.86±3.09 | 44.76±7.79 |
| Male | 8.84±2.95 | 1.21±0.51 | 3.60±0.99 | 6.10±2.17 | 4.02±1.33 | 8.65±2.01 | 3.54±1.09 | 11.66±2.65 | 44.52±7.31 |
| **Test$^{U}$** | 15475.000 | 14814.500 | 13697.000 | 15260.000 | 15469.000 | 15256.500 | 14036.500 | 15451.500 | 15318.500 |
| **p** | 1.000 | 0.311 | **0.035** | 0.817 | 0.994 | 0.810 | **0.037** | 0.980 | 0.869 |
| **Parents** | | | | | | | | | |
| **Gender** | | | | | | | | | |
| Female | 8.79±2.87 | 1.28±0.59 | 3.71±1.04 | 6.28±2.21 | 3.96±1.28 | 8.67±2.11 | 3.45±1.01 | 11.79±2.86 | 44.78±7.40 |
| Male | 8.84±2.70 | 1.17±0.42 | 3.71±1.03 | 5.67±1.79 | 4.12±1.35 | 8.65±2.12 | 3.38±0.91 | 11.70±2.97 | 44.29±7.39 |
| **Test$^{U}$** | 12019.000 | 11756.500 | 12408.000 | 10705.500 | 11731.500 | 12208.500 | 12331.500 | 12155.500 | 11706.500 |
| **p** | 0.551 | 0.191 | 0.879 | **0.030** | 0.314 | 0.701 | 0.757 | 0.666 | 0.341 |
| **Education Status** | | | | | | | | | |
| Primary school | 9.67±3.06* | 1.29±0.59 | 3.89±1.01 | 6.76±2.50 | 4.07±1.37 | 8.81±2.14 | 3.32±0.86 | 12.10±3.05 | 46.45±7.41 |
| High school | 8.06±2.68 | 1.34±0.65 | 3.88±1.18 | 5.81±1.94 | 4.08±1.28 | 8.80±2.03 | 3.54±1.13 | 11.62±2.61 | 44.40±7.34 |
| Bachelor's degree | 8.84±2.72 | 1.23±0.53 | 3.63±0.98 | 6.05±2.02 | 4.01±1.31 | 8.69±2.20 | 3.43±0.98 | 11.68±2.89 | 44.44±7.05 |
| Postgraduate | 8.54±3.10 | 1.11±0.32 | 3.62±1.05 | 5.97±2.17 | 3.74±1.22 | 8.05±1.51 | 3.40±0.91 | 11.94±3.11 | 43.37±8.22 |
| **Test$^{KW}$** | 13.248 | 3.390 | 5.849 | 4.922 | 2.121 | 3.677 | 1.692 | 1.006 | 7.159 |
| **p** | **0.004** | 0.335 | 0.119 | 0.178 | 0.548 | 0.299 | 0.639 | 0.800 | 0.067 |
| **Perception of Income and Expenditure** | | | | | | | | | |
| Income less than expenses | 9.21±3.05 | 1.35±0.64 | 3.82±1.10 | 6.64±2.36 | 3.82±1.22 | 8.78±1.86 | 3.61±1.08 | 11.84±2.75 | 45.75±7.13 |
| Income equals expense | 8.81±2.87 | 1.24±0.56 | 3.72±1.02 | 6.11±2.09 | 4.08±1.34 | 8.67±2.14 | 3.42±1.00 | 11.74±2.95 | 44.73±7.62 |
| Income more than expenses | 8.49±2.49 | 1.18±0.45 | 3.59±1.01 | 5.74±1.94* | 3.93±1.24 | 8.54±2.19 | 3.32±0.86 | 11.76±2.84 | 43.58±7.60 |
| **Test$^{KW}$** | 1.562 | 2.779 | 3.001 | 5.676 | 2.102 | 2.035 | 5.616 | 0.286 | 4.832 |
| **p** | 0.458 | 0.249 | 0.223 | **0.059** | 0.350 | 0.362 | 0.060 | 0.867 | 0.089 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Family Type** | | | | | | | | | |
| Nuclear family | 8.74±2.79 | 1.23±0.54 | 3.68±1.01 | 6.06±2.10 | 4.04±1.31 | 8.63±2.11 | 3.44±0.99 | 11.65±2.84 | 44.40±7.50 |
| Extended family | 9.64±3.02 | 1.44±0.71 | 4.04±1.05 | 6.64±2.37 | 3.84±1.37 | 8.76±1.96 | 3.36±0.90 | 12.60±3.32 | 46.76±8.59 |
| Broken family | 8.90±3.26 | 1.27±0.46 | 4.00±1.54 | 6.54±1.96 | 3.45±0.82 | 9.36±2.29 | 3.27±0.90 | 13.09±2.80 | 46.72±5.51 |
| **Test$^{KW}$** | 2.622 | 3.494 | 4.276 | 2.760 | 2.936 | 2.006 | 1.329 | 5.310 | 3.891 |
| **p** | 0.270 | 0.174 | 0.118 | 0.252 | 0.230 | 0.367 | 0.515 | 0.070 | 0.143 |

CSHS, Children's Sleep Habits Scale.
$^{U}$MannWhitney U Test, $^{KW}$Kruskal Wallis-H Test.
*Group that makes the difference

There is a moderate negative correlation between the PPS negative problem-solving sub-dimension and the total scores of the CSHS (r: -0.437, p<0.001). A statistically significant, moderate, and negative correlation exists between the PPS and the total scores of the CSHS (r: -0.409, p<0.001) (Table 5).

**Table 5.** Correlation Analysis between PPS and CSHS Score (N=352)

| | | **Bedtime resistance** | **Difficulty falling asleep** | **Sleep duration** | **Sleep anxiety** | **Night waking** | **Parasomnia** | **Respiratory-related sleep problems** | **Daytime sleepiness** | **CSHS Total Score** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Positive problem-solving** | r | -0.144** | -0.084 | -0.189** | -0.040 | 0.018 | -0.164** | -0.127* | -0.124* | -0.197** |
| | p | 0.007 | 0.115 | <0.001 | 0.457 | 0.733 | 0.002 | 0.017 | 0.020 | <0.001 |
| **Negative problem-solving** | r | -0.316** | -0.090 | -0.225** | -0.283** | -0.266** | -0.337** | -0.183** | -0.245** | -0.437** |
| | p | <0.001 | 0.093 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 |
| **Functional family** | r | -0.196** | -0.115* | -0.186** | -0.101 | -0.005 | -0.137* | -0.030 | -0.149** | -0.205** |
| | p | <0.001 | 0.031 | <0.001 | 0.059 | 0.933 | 0.010 | 0.579 | 0.005 | <0.001 |
| **Extreme intrusive** | r | -0.363** | -0.076 | -0.207** | -0.254** | -0.244** | -0.291** | -0.138* | -0.165** | -0.380** |
| | p | <0.001 | 0.153 | <0.001 | <0.001 | <0.001 | <0.001 | 0.009 | 0.002 | <0.001 |
| **Inconsistency** | r | -0.314** | -0.058 | -0.157** | -0.272** | -0.262** | -0.260** | -0.110* | -0.146** | -0.349** |
| | p | <0.001 | 0.279 | 0.003 | <0.001 | <0.001 | <0.001 | 0.039 | 0.006 | <0.001 |
| **Interaction** | r | -0.174** | -0.172** | -0.148** | -0.126* | 0.029 | -0.119* | -0.040 | -0.093 | -0.210** |
| | p | <0.001 | <0.001 | 0.006 | 0.018 | 0.590 | 0.025 | 0.453 | 0.081 | <0.001 |
| **PSS Total Score** | r | -0.334* | -0.123** | -0.274 | -0.229* | -0.169** | -0.314 | -0.166 | -0.212 | -0.409** |
| | p | <0.001 | 0.021 | <0.001 | <0.001 | <0.001 | <0.001 | 0.002 | <0.001 | <0.001 |

PPS, Parenting Practices Scale; CSHS, Children's Sleep Habits Scale.
Spearman Correlation. *p<0.01; **p<0.05

In the regression analysis, a statistically significant model was obtained between PSS and CSHS (F=73.274; p<0.001). A one-unit increase in the PSS total score causes a -0.196 unit decrease in the CSHS total score (Table 6).

**Table 6.** Regression Analysis between CSHS and PPS Score

| Independent Variable | Beta | St Error | St Beta | t | P |
|---|---|---|---|---|---|
| **Fixed Coefficient** | 54.387 | 2.673 | | 20.344 | <0.001 |
| **Positive problem-solving** | -0.258 | 0.070 | -0.193 | -3.684 | <0.001 |
| r: 0.193 $R^2$:0.037 F:13.570 p<0.001 | | | | | |
| **Fixed Coefficient** | 72.147 | 3.132 | | 23.034 | <0.001 |
| **Negative problem-solving** | -0.925 | 0.105 | -0.427 | -8.839 | <0.001 |
| r: 0.427 $R^2$:0.183 F:78.137 p<0.001 | | | | | |
| **Fixed Coefficient** | 57.484 | 2.908 | | 19.769 | <0.001 |
| **Functional family** | -0.435 | 0.098 | -0.232 | -4.455 | <0.001 |
| r: 0.232 $R^2$:0.054 F:19.850 p<0.001 | | | | | |
| **Fixed Coefficient** | 75.315 | 3.550 | | 21.215 | <0.001 |
| **Extreme intrusive** | -0.781 | 0.090 | -0.421 | -8.685 | <0.001 |
| r: 0.421 $R^2$:0.177 F:75.422 p<0.001 | | | | | |
| **Fixed Coefficient** | 61.045 | 2.222 | | 27.473 | <0.001 |
| **Inconsistency** | -1.105 | 0.148 | -0.372 | -7.486 | <0.001 |
| r: 0.372 $R^2$:0.138 F:56.047 p<0.001 | | | | | |
| **Fixed Coefficient** | 51.221 | 2.040 | | 25.109 | <0.001 |
| **Interaction** | -0.484 | 0.147 | -0.173 | -3.285 | <0.001 |
| r: 0.173 $R^2$:0.030 F:10.793 p<0.001 | | | | | |
| **Fixed Coefficient** | 76.984 | 3.795 | | 20.284 | **<0.001** |
| **PPS Total Score** | -0.196 | 0.023 | -0.416 | -8.560 | **<0.001** |
| r: 0.416 $R^2$:0.173 F:73.274 p<0.001 | | | | | |
| CSHS, Children's Sleep Habits Scale; PPS, Parenting Practices Scale. Linear Regression. | | | | | |

## DISCUSSION

The COVID-19 pandemic, which can be considered a natural disaster, has significantly affected many areas of life, including the family structure and relationships (Uzun, Karaca & Metin, 2021). Parents have faced many problems, including educating children at home online, fighting the risk of disease transmission, worrying about the health of their families, managing their lives with decreased social support outside the home, and changing their work roles and routines (Prime et al., 2020). COVID-19 has greatly burdened parents to provide care and safety for their children, and it has changed family routines (Uzun et al., 2021). Parents who participated in the study received 164.98 (±16.03) points from the PPS. The lowest score that can be obtained from the PPS is 52 and the highest score is 208, so the negative practices of the parents are at a moderate level. During the COVID-19 pandemic, parents experienced intense negative emotions (Tanoue et al., 2020) and could tend to display negative behaviours towards their children.

In the current study, negative problem-solving practices are higher in parents with daughters. In another study, parents responded differently, summoned the children differently, used different socialization strategies, bought different toys, and played differently depending on their child's gender (Morawska, 2020). In contrast, other studies report that the child's gender makes little or no difference on the parenting practices (Janssen, Eichelsheim, Deković & Bruinsma 2017; Negraia, Yavorsky & Dukhovnov, 2021). The high rate of negative parenting practices toward girls in the current study may be due to sociocultural factors.

Positive parenting practices have an important place in children's development. In the study, positive practices of mothers, such as problem-solving, family functionality, and interaction are higher than fathers. Another study indicated that mothers have more positive parenting practices than fathers (Aydoğdu & Dilekmen, 2016). This difference between mothers and fathers may relate to the gender roles in society for parenting and the primary ownership by mothers for child care responsibilities.

Parents with a high level of education assume more responsibility in matters related to their children, are more interested in their children, and display more consistent behaviours in discipline issues (Doyukan, 2012). In this study, it was found that positive parenting practices increased as parental education level increased, while negative parenting practices increased as education level decreased. Other studies also, it was found that higher levels of maternal education increased mothers' positive problem solving practices (Öztürk Can & Aksel, 2017; Uzun et al., 2021). These findings in the literature support the findings of the study.

Socioeconomic status may affect parenting practices (Le, Sakaluk, Day & Impett, 2019). In the research, negative problem- solving and inconsistent practices are more common in parents who earn an income that is less than their expenses. One study indicated that parents with a lower socioeconomic status did not communicate adequately with their children (Kalil & Ryan, 2020; Le et al., 2019). Therefore, families with low socioeconomic status may pose a risk factor for negative parenting practices. The socioeconomic status may affect also children's sleep habits (Miadich, Doane, Davis & Lemery-Chalfant, 2019). In the study, sleep anxiety was high in parents with low socioeconomic status. Similarly, ın other study have indicated that socioeconomic status affects sleep health and sleep quality and that low socioeconomic status is a risk factor for sleep problems (Perdahlı Fiş et al., 2010).

Children with a CSHS score of 41 and above experience clinically significant sleep problems (Perdahlı Fiş et al., 2010). In the current study, participants earned 44.64 (±7.55) points from CSHS. Other studies have shown that the pandemic increased the frequency of sleep disorders in children, changed daily sleep habits, and adversely affected sleep quality and sleep processes (Dellaigiulia et al., 2020; Moore et al., 2020; Becker & Gregory, 2020; Bruni et al., 2022). In addition, factors such as decreased physical activity in children, remote education, health anxiety, and uncertainty about the future may have affected children's sleep habits (Becker & Gregory, 2020).

In this study, it was found that the girls had more sleep time, and the boys had more respiratory sleep problems. According to the results of a research, the average daily sleep duration of children aged 6-12 was determined as 9.65 hours for boys and 9.67 hours for girls (TOÇBİ, 2011). In another study, it was determined that sleep problems were more common in boys (Kahraman & Ceylan, 2018). In other studies conducted to determine sleep problems in school-age children, no relationship was found between the gender of children and sleep duration and respiratory problems (Amintehran et al., 2013; İnci et al., 2020). In the literature, findings regarding the effect of gender on children's sleep habits are inconsistent.

In a study examining children's sleep habits and the factors affecting them, it was found that children with low parental education level had more sleep problems than children with high parent education level (İnci et al., 2020). In this study, bedtime resistance habits were found to be high in the children of mothers who graduated from primary school and secondary school. In a study, it was stated that the increase in the education level of the mother had a positive relationship with the increase in sleep quality (Sadeh, Raviv & Gruber, 2000). In another study, it was stated that there is a positive relationship between the education level of the parents and

the quality of children's sleep (Jalilolghadr et al., 2018). All these findings suggest that the high educational status of the parents may reduce the children's sleep resistance.

In this study, sleep anxiety was found to be lower in parents whose income is more than their expenses. In a study evaluating children's sleep according to socioeconomic status, it was stated that low socioeconomic level may negatively affect children's sleep habits (Miadich et al., 2019). The research finding is consistent with the literature.

According to the researchs, quarantine practices during the pandemic have adversely affected sleep quality, caused sleep problems in children, increased sleep duration, and changed sleep habits (Uzun et al., 2021; Wang et al., 2020). Furthermore, staying indoors for an extended time period has increased sedentary activity and sleep problems (Wang et al., 2020). It is stated that children who can establish positive relationships with their parents and live in supportive family environments have higher sleep quality and children's sleep health is positively affected (Chary et al., 2020). In the study, a moderate, negative relationship was found between CSHS and PPS. A one-unit increase in the CSHS score resulted in a 0.196-unit decrease in the PPS score. In other words, as positive parenting practices increase, children's sleep problems decrease. In other studies, negative parenting practices also reduced children's sleep quality (Chary et al., 2020; Coto et al., 2018). In conclusion, negative parenting practices are a significant factor in increasing children's sleep-related problems.

## CONCLUSION

The study determined that parents have negative practices and children have experienced sleep problems during the COVID-19 pandemic. The gender of the child and the parents' gender, education, and socioeconomic level affect both the parenting practices and the sleeping habits of the children. Furthermore, a moderate and negative relationship exists between parenting practices and children's sleep habits. Based on these conclusions, it is recommended that nurses develop and implement training programs regarding positive and negative parenting practices for parents to increase their awareness of their impact on children's sleep health.

### Acknowledgements

We thank the parents who agreed to participate in this study.

### Note

This article was produced from the master's thesis titled " The Relationship Between Parenting Practices and Sleep Habits of School Age Children in the COVID-19 Process ". This

research was presented as a summary oral presentation in Turkish at the 4th International Mediterranean and 3rd International 8th National Pediatric Nursing Congress.

**REFERENCES**

Algın, D., Akdağ, G. & Erdinç, O. (2016). Qualıty sleep and sleep dısorders. *Osmangazi Journal of Medicine*, 238 (Special Issue 1), 29-34. http://dx.doi.org/10.20515/otd.40263

Amintehran, E., Ghalehbaghi, B., Asghari, A., Jalilolghadr, S., Ahmadvand, A. & Foroughi, F. (2013). High prevalence of sleep problems in school and preschool aged children in Tehran: Apopulation based study. *Iran J Pediatr*, 23, 45-52.

Aydoğdu, F. & Dilekmen M. (2016). The evaluation of parents' attitudes in terms of different variables. *Bayburt Eğitim Fakültesi Dergisi,* 11(2), 570-585.

Aziz, A. (2014). Sosyal Bilimlerde Araştırma Yöntemleri ve Teknikleri. 9th ed. Ankara: *Nobel Yayınevi*, 2014.

Becker, S. P. & Gregory, A.M. (2020). Editorial perspective: perils and promise for child and adolescent sleep and associated psychopathology during the COVID-19 pandemic. *Journal of Child Psychology and Psychiatr*, 61(7), 757-759. https://doi.org/10.1111/jcpp.13278

Bruni, O., Malorgio, E., Doria, M., Finotti, E., Spruyt, K., Melegari, M. G., Villa, M. P. & Ferri, R. (2022). Changes in sleep patterns and disturbances in children and adolescents in Italy during the Covid-19 outbreak. *Journal of Clinical Sleep Medicine*, 2021, 17: 1759-1765. https://doi.org/10.1016/j.sleep.2021.02.003

Chary, M., McQuillan, M. E., Bates, J. E. & Deater-Deckard, K. (2020). Maternal executive function and sleep interact in the prediction of negative parenting. *Behavioral Sleep Medicine*, 18(2), 203–216. https://doi.org/10.1080/15402002.2018.1549042

Coto, J., Garcia, A., Hart, K. C. & Graziano, P. A. (2018). Associations between disruptive behavior problems, parenting factors, and sleep problems among young children. *Journal of Developmental & Behavioral Pediatrics*, 39(8), 610–620. https://doi.org/10.1097/DBP.0000000000000595

Dellagiulia, A., Lionetti, F., Fasolo, M., Verderame, C., Sperati, A. & Alessandri, G. (2020). Early impact of COVID-19 lockdown on children's sleep: A 4-week longitudinal study. *Journal of Clinical Sleep Medicine*, 16(9), 1639–1640. https://doi.org/10.5664/jcsm.8648

Doyukan, M. (2016). 12.Sınıf öğrencilerinde algılanan anne-baba tutumları ile benlik saygısı arasındaki ilişkinin incelenmesi. *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2, 1-21.

Ekici, S. (2017). İlköğretim birinci kademe öğrencilerin uyku alışkanlıkları ile ebeveynlerin eve gelme saati ve anne babaların çocuk yetiştirme tutumu arasındaki ilişkisi. Sosyal Bilimler Entitüsü, Klinik Psikoloji Anabilim Dalı. Yüksek Lisans Tezi, Üsküdar Üniversitesi, İstanbul.

Ferber, R. (2015). Solve your chid's sleep problems. Newyork: Pearson.

Fisher, A., Van Jaarsveld, C. H., Liewellyn, C. H. & Wardle, J. (2012). Genetic and environmental influences on infant sleep. *Pediatrics*, 29, 1091-1097. https://doi.org/10.1542/peds.2011-1571

Gökçay, B. & Arda, B. (2013). Sleep and sleep medicine in the light of history of medicine. *Lokman Hekim Journal*, 3(1), 70-78.

İnci, F. H., Kostu, N., Cinar, I. O., Aslan, G. K. & Kartal, A. (2020). Sleeping habits of primary school children and affecting factors. *JTSM*, 7(2), 91-96. https://doi.org/10.4274/jtsm.galenos.2020.19483

Jalilolghadr, S., Pakpour-Hajiagha, A., Heidaralifard, M. & Pakzad, R. (2018). Evaluation of sleep habits and sleep patterns among 7-12-year-old students in Qazvin, Iran; A school-based cross-sectional study. *J Compr Ped*, 1, 1-7. https://doi.org/10.5812/compreped.67189

Janssen, H. J., Eichelsheim, V.I., Deković, M. & Bruinsma, G. J. (2017). Sex differences in longitudinal pathways from parenting to delinquency. *European Journal on Criminal Policy and Research*, 23(4), 503-521. https://doi.org/10.1007/s10610-017-9350-5

Kahraman, H., Yilmaz Irmak, T. & Basokcu, T.O. (2017). Parenting practices scale: Its validity and reliability for parents of school-aged children. *Educatıonal Scıences: Theory & Practıce*, 17, 745-769. https://doi.org/10.12738/estp.2017.3.0312

Kahraman, Ö.G. & Ceylan, Ş. (2018). Determining the sleeping habits of toddlers aged 0-3. *Journal of History Culture and Art Research*, 7(3), 607-620. https://doi.org/10.7596/taksad.v7i3.1635

Kalil, A. & Ryan, R. (2020). Parenting practices and socioeconomic gaps in childhood outcomes. *The Future of Children*, 30(2020), 29–54. https://www.jstor.org/stable/27074974

Le, B. M., Sakaluk, J. K., Day, L. C. & Impett, E. A. (2019). How gender, age, and socioeconomic status predict parenting goal pursuit. *JSPR*, 36(10), 3313–3338. https://doi.org/10.1177/026540751881837

Li, S., Arguelles, L., Jiang, F., Chen, W., Jin, X., Yan, C., Tian, Y., Hong, X., Qian, C., Zhang, J., Wang, X. & Shen, X. (2013). Sleep, school performance, and a schoolbased intervention among school-aged children: A sleep series study in China. *PLOS ONE*, 8, 1-12. https://doi.org/10.1371/journal.pone.0067928

Miadich, S. A., Doane, L. D., Davis, M. C. & Lemery-Chalfant, K. (2019). Early parental positive personality and stress: Longitudinal associations with children's sleep. *Br J Health Psychol*, 24(3), 629-650. https://doi.org/10.1111/bjhp.12372

Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J. & Tremblay, M.S. (2020). Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: A national survey. *Int J Behav Phys Act*,17, 2-11. https://doi.org/10.1186/s12966-020-00987-8

Morawska, A. (2020). The effects of gendered parenting on child development outcomes: A systematic review. *Clinical Child and Family Psychology Review*, 23(4), 553–576. https://doi.org/10.1007/s10567-020-00321-5

Negraia, D. V., Yavorsky, J. E. & Dukhovnov, D. (2021). Mothers' and fathers' well-being: does the gender composition of children matter? *Journal of Marriage and Family*, 83(3), 820-844. https://doi.org/10.1111/jomf.12739

Owens, J. A., Spirito, A. & McGuinn, M. (2000). The children's sleep habits questionnaire (CSHQ): Psychometric properties of a survey instrument for schoolaged children. *Sleep*, 15, 1043-1051.

Özbudak, P. &Arhan, E. (2020). Sleep physiology and ontogenesis. Çocuklarda uyku sağlığı ve bozuklukları Ankara: *Türkiye Klinikleri.*

Öztürk Can, H. & Aksel, E. (2017). Parental acceptance/rejectıon of the relatıonshıp between parental control applıcatıons and related factors. *Humanities Sciences,* 12, 35-50. https://doi.org/10.12739/NWSA.2017.12.1.4C0215

Öztürk, A., Sezer, T. A. & Tezel, A. (2018). Evaluation of sleep and television viewing habits of primary school students. J Turkish Sleep Med., 5(3):73–80.

Perdahlı Fiş, N.P., Arman, A., Ay, P., Topuzoğlu, A., Güler, A.S., Gökçe İmren, S. & Berkem, M. (2010). The validity and the reliability of Turkish Version of Children's Sleep Habits Questionnaire. *Anadolu Psikiyatri Dergisi*, 11(2), 151-160.

Prime, H., Wade, M. & Browne, D.T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, 75(5), 631–643. https://doi.org/10.1037/amp0000660

Sadeh, A., Raviv, A. & Gruber, R. (2000). Sleep patterns and sleep disruptions in school-age children. *Dev Psychol*, 36, 291-301. https://doi.org/10.1037/0012-1649.36.3.291

T.C. Sağlık Bakanlığı Türkiye'de okul çağı çocuklarında (6-10 yaş grubu) büyümenin izlenmesi (TOÇBİ) projesi araştırma raporu. Sağlık Bakanlığı Yayın No: 834, Kuban Matbaacılık, Ankara, 2011.

Tanoue, Y., Nomura, S., Yoneoka, D., Kawashima, T., Eguchi, A., Shi, S. & Miyata, H. (2020). Mental health of family, friends, and co-workers of COVID-19 patients in Japan. *Psychiatry Research*, 291, 113067, 1-3. https://doi.org/10.1016/j.psychres.2020.113067

Uzun, H., Karaca, N.H. & Metin, Ş. (2021). Assesment of parent-child relationship in Covid-19 pandemic. *Children and Youth Services Review*, 120, 105748. https://doi.org/10.1016/j.childyouth.2020.105748

Üstündağ, A. (2021). Investıgatıon of the effect of COVID-19 quarantıne on chıldren's daıly lıfe and habıts. *Ankara Bachelor's degree Journal of Socıal Scıences.* 12(2), 14-22. https://doi.org/10.33537/sobild.2021.12.2.2

Wang, G., Zhang, Y., Zhao, J., Zhang, J. & Jiang, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet*, 395(10228), 945–947. https://doi.org/10.1016/S0140-6736(20)30547-X