

Evaluation of Sleep Habits in the Children of Health Workers during the COVID-19 Pandemic

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ABSTRACT

Aim: After COVID-19, social-emotional, psychosomatic, cognitive, and behavioral reactions have begun to be seen in people. Since the pandemic started, the long working hours of healthcare professionals, worsening working conditions, the increase in the expectations and concerns of the society, as well as the risk of getting sick, have caused them and their families to be the most affected segment of the population. This study aimed to evaluate the sleep habits in the children of health workers during the pandemic period and compare them with other children. When the literature was examined, no other study was found that examined the sleep habits of the children of healthcare workers. This increases the importance of our work.

Method: Sociodemographic data forms and Child Sleep Habits Questionnaire were filled face-to-face to 138 healthcare professionals working at Düzce University Medical Faculty Hospital. They were compared with the questionnaires of the parents of 138 children matched in terms of number and age.

Results: Disruption in sleep habits was detected in 97% of the children of healthcare workers and 62% in the control group. Bedtime resistance, delay in falling asleep, sleep duration, sleep anxiety, night awakening, parasomnias, sleep breathing disorders, and daytime sleepiness subscales were all found to be statistically significantly higher in healthcare worker children ($p < 0.01$).

Conclusions: The COVID-19 pandemic, together with the whole people, has negatively affected children and their sleep habits, and the sleep habits of the children of healthcare workers have been impacted significantly more than the control group.

Keywords: COVID-19 pandemic, Healthcare workers, Sleep habits

INTRODUCTION

Sleep, which is one of the basic needs of children, has a great importance for the development of children. Sleep habits; The total time spent in sleep during the day and sleep-related features, waking up, bedtime behaviors, sleep initiation, night sleep interruptions, sleep-related respiratory disorders, parasomnias, waking behaviors and daytime sleepiness are

Vol No: 08, Issue: 01

Received Date: November 24, 2022

Published Date: January 02, 2023

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Citation: Küçükdağ M, et al. (2023). Evaluation of Sleep Habits in the Children of Health Workers during the COVID-19 Pandemic. Mathews J Pediatr. 8(1):27.

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among the attitudes and behaviors related to sleep habits [1].

The Covid-19 pandemic has not only affected the physical health of all humanity but also negatively affected their mental health. Although the pandemic seems to have affected the middle-aged and elderly society more physically and emotionally, it has also negatively affected the emotional states of our children. Depression, anxiety, and sleep disorders caused by their effects have begun to be seen in children.

In a recent study, it was reported that the majority of healthcare workers caring for COVID-19 patients experience insomnia and psychological stress symptoms [2]. It is known that stress in parents affects children's mood, stress level, and sleep patterns.

Our study, it was aimed to evaluate the sleep habits of the children of health workers during the pandemic process and to compare the sleep habits of the children who applied to the polyclinic.

MATERIALS AND METHODS

In our study, children and adolescents whose parents were at least one healthcare worker constituted the case group; Children and adolescents who applied to outpatient clinics of Pediatrics of Düzce University Medical Faculty between 30 July and 30 August 2021 formed the control group.

Ethics committee approval of the study was obtained from Düzce University Clinical Research Ethics Committee. Verbal and written consent was obtained from the mothers participating in the study.

Measures

Sociodemographic Data Form: In the form, the child's age, gender, how many siblings they have, how many children in the family, parent's age, education level, occupation, and the type of family. Filled in by parents.

Children's Sleep Habits Questionnaire (CSHQ): CSHQ, one of the questionnaires whose psychometric properties were determined and whose validity and reliability were determined in preschool and school-age children, was designed to investigate children's sleep habits and sleep-related difficulties. Its Turkish adaptation and validity and

reliability study were done by Fiş et al. (2010) made by. The scale is filled in by the parent. Values above the cut-off point of 41 points in total are accepted as "clinically significant".

Statistical analyses

Data were entered into a database prepared with SPSS Version 22.0. Quantitative data which are normally distributed are summarized as means and standard deviations. Comparisons of nominal variables between groups were conducted with a chi-square test. Pearson Correlation Test and Spearman Correlation Test were used to evaluating the relationships between the parameters.

For all comparisons, p-values less than 0.05 were considered to be statistically significant.

RESULTS

138 (63 girls, 75 boys) health worker children and 138 (73 girls, 65 boys) control patients were included in our study. The mean age in the case group was 7.44 ± 3.8 ; it was found to be 8.86 ± 4.6 in the control group.

The Cronbach alpha value of the CSHQ was found to be 0.915 in our study.

- When the CSHQ values of the case group and the control group were compared in pairwise comparisons; the scores of the case group were found to be higher in all subscales ($p < 0.05$).

In the analysis of the CSHQ values:

- Bedtime resistance, sleep anxiety, and night waking scores show negative correlations with children's age.
- Daytime sleepiness scores show a positive correlation with maternal age.
- Bedtime resistance and sleep anxiety show a negative correlation with paternal age.
- As the number of children increases, the scores for bedtime resistance, sleep onset delay, waking up at night, and total sleep decrease,
- The problem of sleep onset delay is less in the extended family.
- Parasomnias and daytime sleepiness were found to be more common in boys ($p < 0.05$)

Table 1: Sociodemographic data of the study groups.

	Children of Healthcare Workers (n=138)	Control Group (n:138)
Age	7,44±3,8	8,9 ±4,6
Gender		
Female	63	73
Male	75	65
Mother's Age	36,04±5,6	35,86±6,3
Father's Age	38,67±6,3	40,06±6,9
Type of Family		
Nuclear	118	105
Extended	20	33
Number of Children (Mean)	1,83	2,41

Table 2: Means and standard deviations of the Children's Sleep Habits Questionnaire (CSHQ) total and sub-scores of Children of Healthcare Workers and the control group

Mean (Standard Deviation:SD)	Children of Healthcare Workers(n=138)	SD	Control Mean (n=138)	SD	P Value
Bedtime Resistance	12,7	3,414	8,8	2,261	,000
Sleep Onset Delay	2,41	,701	1,3	,543	,000
Sleep Duration	5,4	1,718	4,1	1,151	,000
Sleep Anxiety	8,3	2,343	6,2	1,960	,025
Night Awakenings	6,6	1,452	4,2	1,238	,012
Parasomnias	5,1	1,831	3,6	1,201	,000
Sleep breathing problems	4,5	1,363	3,6	1,201	,001
Daytime Sleepiness	12,8	3,794	10	2,553	,000
Total Score	61,3	11,954	44	5,982	,000

DISCUSSION

There was no statistically significant difference between the two groups in terms of children's age, gender, age of mothers, age of fathers, number of children in the family, and family type. This situation increases the reliability of our study by highlighting the parameters to be investigated.

The average sleep time of the children of healthcare workers participating in the study was 9.52 ± 1.47 , and the average

of the children who applied to the polyclinic was 9.6 ± 1.43 . No statistically significant difference was found. In a study conducted in our country, the sleep duration of school-age children was found to be 8.86 ± 1.10 [3]. Children need about 9-10 hours of sleep a night. Most of the children participating in the study can reach the 9-10 hours of sleep they need.

In our study, parasomnias and daytime sleepiness were more common in boys. According to a study, it was determined that girls showed more sleep disorders than boys, and some

studies found that boys showed more sleep disorders [4]. Parasomnia is a common benign sleep disorder in early childhood. It is benign because the condition doesn't cause excessive daytime sleepiness or insomnia. Frequent waking, talking during sleep, walking, bruxism, and night terrors are examples of these sleep problems.

In our study, it was determined that as the age of the child increased, the scores of bedtime resistance, sleep anxiety, waking up at night and total sleep habits decreased. In other words, it was observed that there was less disruption in sleep habits in older children and adolescents. When the literature was reviewed, in a study comparing the sleep habits of children and adolescents, it was reported that not wanting to go to bed and sleep anxiety were common in school-age children, in line with our study, and it was reported that parents should usually remind them of bedtime.

Increasing awareness, increasing knowledge about disease prevention, and methods of coping with the disease during the pandemic period; It can ensure that older children and adolescents are less affected by this process and their sleep habits are less disrupted.

When the relationship between the number of children in the family and sleep habits is examined, it is seen that as the number of children increases, the sleep resistance, the sleep onset delay, and the total sleep habit score decrease. It has been observed that children with more siblings have fewer sleep problems. This may be because it is easier for a child with a sibling to develop pre-sleep routines and older children may set an example for their siblings in this regard.

When the relationship between family type and sleep habits was examined, it was found that children in extended families had less difficulty in diving than those in nuclear families. In a study in India, sleep-related disorders were seen at a higher rate in the nuclear family [5]. The reason for this is that sleep habits in extended families can also be passed on to children through modeling and the number of people who can be considered as models increases.

While children with a score above 41 points in CSHQ constituted 62% of the control group; 97% of the children of healthcare workers. Reasons such as the late bedtime of children who do not go to school due to the pandemic and the deteriorated sleep quality due to increased anxiety cause sleep habits in all children to deteriorate. It is not surprising that the children of health workers who experience this process more closely will be affected more.

In our study, in terms of sleep habits; a statistically significant increase in scores in all subscales of CSHQ in the

children of the healthcare workers group compared to the control group indicates that, as we expected, sleep habits are more disrupted in this group, which has experienced the pandemic closely. When the literature is examined, there is a limited number of studies examining the effects of the covid pandemic on the mental health and sleep habits of children and adolescents. This situation increases the importance of our study included in the literature.

One of the important issues in studies investigating the increasing sleep problems during the pandemic period is that the increasing use of technological devices disrupts sleep habits. The increase in the time spent at home during the pandemic process, the efforts to continue the lessons in the digital environment and the increase in the contact time with technological devices bring along sleep disorders.

During the pandemic, the increased anxiety levels of health workers due to long working hours, the need to stay in other places for a long time to protect their families, and the fear of infecting their families cause their children to be affected as well. For this reason, regular meetings with the children of health workers will ensure that the negative symptoms that may occur are noticed at an early stage. In addition, improvement studies in order to protect the mental health of employees in health policies and making working conditions more suitable will reduce the negative effects of this process.

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