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Relationship of Sleep Disturbances in Children with Depression / Anxiety Symptoms in Children and Their Parents During the Covid-19 Pandemic

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ABSTRACT

Objective: Sleep disturbances are reported as common in children during the COVID-19 outbreak. This study was designed to investigate relationship between sleep problems of children and depression/anxiety symptoms in both children and their parents.

Methods: A total of 372 parents completed a web-based survey on sociodemographic and clinical data. The psychiatric status was assessed using Depression Anxiety and Stress Scale-21 (DASS-21), Health Anxiety Inventory (HAI), Revised Child Anxiety and Depression Scale–Parent Version (RCADS-P), and Sleep Disturbance Scale for Children.

Results: It was found that significant sleep disturbances were higher in school-aged children (P = .015). HAI and RCADS-P scores were higher in children with sleep disturbances in all developmental periods. DASS-21 subscale scores were higher in preschoolers and school-aged children with significant sleep disturbances.

Conclusion: Depression and anxiety symptoms in children and parents are associated with sleep problems in children. In addition, school-aged children can be thought to be more at risk for depression/anxiety symptoms and sleep problems. Psychiatric evaluation of children and their parents is recommended when sleep problems occur in children during the COVID-19 outbreak.

Keywords: Anxiety, children, depression, sleep, stress

INTRODUCTION

The COVID-19 outbreak and quarantine are thought to have psychological effects on individuals. Moreover, it was reported that individuals' mental health problems and support needs increased during the COVID-19 pandemic period.[1,2] Infected persons, healthcare professionals, and children can be considered as a psychosocially at-risk group,[3,4] and it was reported that the COVID-19 outbreak is a stressful event for children and adolescents.[5] This period is a risky period for children in terms of psychosocial aspects because children and adolescents are more sensitive to environmental factors, their defense mechanisms are immature, and they are more likely to be affected by negative factors within the family in this period. Many factors such as age, educational status, pre-existing mental problems, and whether to be quarantined because of infection are related to the emergence of mental symptoms in the child. In a study conducted by Zhao et al.[6], it was reported that depression and anxiety symptoms were common in children during the COVID-19

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pandemic. Psychosocial support of children and adolescents is considered a necessity for both pre-existing psychological difficulties and mental problems that occur during this period. In order to be prepared for the management of this unexpected process, it is important to examine and recognize the mental health problems seen in this period.[7]

Sleep problems in children are increased during the COVID-19 pandemic because of limitation of physical activity, closure of schools, decreased social activities, and increased screen exposure.[8–14] During the pandemic period, the sleep quality of children is considered important because sleep problems affect physical and mental health, especially the adverse effects on immunity.[15] Studies were conducted during the COVID-19 outbreak that investigate sleep problems and related psychiatric conditions in children. It has been reported that anxiety and depression symptoms are risk factors for sleep disturbances in adolescents during the pandemic period, and social support is protective.[16] In addition, children with a history of psychopathology are found as susceptible to sleep problems during the pandemic period.[17] It is known that mental symptoms such as stress level in children are associated with parental factors such as stress and anxiety levels of the parents.[18] While there are studies examining sleep problems in children in terms of child-related factors, it appears that there are few studies regarding the relationship between parental psychopathological symptoms.[19,20] However, in the literature review, it was seen that there were many studies on the quarantine period examining the impact of the COVID-19 epidemic on mental health.[21,22] However, the data regarding the periods when the pandemic continues but restrictions decreased are insufficient. Moreover, there is no study that investigates sleep disturbances in children in relation with psychiatric symptoms of children and their parents during that period of the COVID-19 pandemic.

The aim of the current study was to investigate sleep problems of children and adolescents and their relationship with depression/anxiety symptoms in both children and their parents in a period when the COVID-19 pandemic continues but restrictions decrease compared with the beginning of the pandemic. Parents will also be assessed in terms of their health status, stress level, health anxiety, and being health care worker. Because the impact of the outbreak on children may differ between developmental periods, it is planned to compare preschoolers, school-aged children, and adolescents in terms of investigated parameters.

METHODS

Study Design

Research data were collected via Google Forms and between August 8, 2020, and December 7, 2021, a period when restrictions imposed by the COVID-19 outbreak were reduced in Turkey. The Informed Consent Form was sent to the parents electronically through professional messaging groups, and their approval was ensured, and the parents who voluntarily agreed to participate in the study were included in the study. Parents of 102 children between the ages of 3 and 18 years who had previously applied to child psychiatry and parents of 269 children who did not apply to child psychiatry participated in the study. Participants were divided into 3 groups in terms of their children's age. Children aged between 3 and 6 years were determined as preschooler; children aged between 6 and 12 years were determined as school-aged; and children aged older than 12 years were determined as adolescent group. Participation in the study was provided from the provinces of Istanbul, Sanliurfa, Konya, Adana, Samsun, Kahramanmaraş, Uşak, and Karabük. Sociodemographic Data Form (SDF), Depression Anxiety and Stress Scale-21 (DASS-21), Health Anxiety Inventory (HAI), Revised Child Anxiety and Depression Scale–Parent Version (RCADS-P-CV), and Sleep Disturbance Scale for Children (SDSC), which are questionnaires to be filled out by parents, were included in the online survey. The Declaration of Helsinki was used as the standard of medical ethics in the study design. The Istanbul Medipol University Ethics Committee reviewed and approved all study materials (August 7, 2020, 10840098-772.02.E.34194). Parents with children aged 3-18 years and who consented to participate in the study were included in the study.

MAIN POINTS

- Parental psychiatric symptoms are associated with sleep problems in children.
- School-aged children are more at risk in terms of sleep disorders during the COVID-19 pandemic.
- Sleep disturbances are still problematic, even as restrictions are eased during the pandemic.

The SDF included information on parental COVID-19 history; history of COVID-19 in relatives; concerns about the pandemic for themselves, their children, and their relatives; and the impact of pandemic on business life. There were also questions about children such as age, gender, and psychiatric history.

DASS-21[23] is widely used to assess depression, anxiety, and stress. DASS-21 was adapted to Turkish in normal and clinical samples by Sarıçam.[24] It is a self-report scale consisting of a total of 21 questions with depression, anxiety, and stress subscales. Each subscale consists of 7 questions with a 4-point Likert system ranging from 0 ("never") to 3 ("always"). Total scores are calculated by adding the scores of each subscale (e.g., depression, anxiety, and stress) and multiplying by 2. In the clinical sample, Cronbach's alpha internal consistency coefficient was found to be $\alpha = 0.87$ for the depression subscale, $\alpha = 0.85$ for the anxiety subscale, and $\alpha = 0.81$ for the stress subscale.[24]

HAI is a self-report scale with 18 items and was developed by Salkovskis et al.[25] The first 14 items with 4 options question the mental state of the patient in the past 6 months. In 4 items, participants are asked to think about how their mental state would be if they had a serious illness. In the scale scoring, each item scores between 0 and 3, and high total scores indicate high health anxiety.[26] The validity and reliability of the test for the Turkish community was evaluated by Aydemir et al.[26] Cronbach's alpha internal consistency coefficient of the scale was found to be 0.918. Test-retest correlation coefficient was calculated as $r = 0.572$.[26]

SDSC was developed by Bruni et al.[27] to evaluate sleep disturbances in past 6 months. SDSC is a 5-point Likert-type scale and consists of 26 items and 6 subgroups. The total score of the scale is calculated by adding up all the subscale scores. High scores indicate more acute sleep disturbances. A score of 39 is recommended as a cut-off value and is considered a limit for sleep disturbances in children[27]. Turkish validity and reliability were evaluated by Ağadayı et al.,[28] and Cronbach's alpha value was found to be 0.79. In this study, SDSC score above the cut-off value is expressed as "significant sleep problems."

RCADS-P assesses parent report of children's depression and anxiety symptoms, and it was renovated in 2000 by Chorpita et al.[29] The

Turkish validity study was carried out by Gormez et al.[30] There are 5 sub-dimensions. Inter-scale reliability was 95, and coefficients for the RCADS-P subscales were between 0.75 and 0.86.[30]

Statistical Analysis

Statistical Package for Social Sciences version 21 (IBM SPSS Corp., Armonk, NY, USA) package program was used for data analysis. In the evaluation of descriptive data, number, percentage, mean ± standard deviation, median, and interquartile range (IQR 25-75) were used. Chi-square test was used for comparison of categorical data, and Shapiro-Wilk test was used to assess the distribution of continuous data. Mann-Whitney U test was used for non-normally distributed data as a consequence of the normality test. Statistical significance limit was accepted as $P \leq .05$.

RESULTS

Sociodemographic Variables

Of the participants, 73.0% were female (n = 271), and the mean age was 38.26 ± 6.38 years. SDSC scores above the cut-off value were detected in 74.4% (n = 276) of the children. No relationship was found between significant sleep disturbance and gender (parent and child), education status, presence of healthcare professionals in the family, COVID-19 diagnosis history, psychiatric referral history, and income status ($P > .05$ for each). Significant sleep disturbances were higher in children with psychiatric disorder history, children with high screen time, and children who had higher increase in screen time ($P = .003$; $P = .001$; $P = .001$, respectively). Sociodemographic characteristics of the study group according to the presence of significant sleep disturbance are presented in Table 1.

Comparison by Developmental Periods

Of the participants, 45.0% were school-aged children (n = 167), and significant sleep disturbances were higher in that group ($P = .015$). Comparison of significant sleep disturbances presence between developmental periods is presented in Table 2.

When scale scores were compared between developmental periods, significant differences were obtained in RCADS-P-social phobia, RCADS-P-panic disorder, RCADS-P-major depression, RCADS-P-separation anxiety, RCADS-P-generalized anxiety, and RCADS-P-total scores. RCADS-P-social phobia, RCADS-P-panic

Table 1. Distribution of demographic variables in the study group by presence of significant sleep disturbances

		SDSC group				
		SDSC –		SDSC +		
		n	%	n	%	*P*
Gender	Female	71	74.7	200	72.5	.667
	Male	24	25.3	76	27.5	
Education Level	Primary and Middle School	13	13.7	28	10.1	.343
	High School and Higher	82	86.3	248	89.9	
Occupation	Other	62	65.3	208	75.4	.056
	Health Care Worker	33	34.7	68	24.6	
Marital Status	Separated	5	5.3	11	4.0	.597
	Together	90	94.7	265	96.0	
Family Income	<1500TL	3	3.2	5	1.8	.467
	1500-2500TL	6	6.3	14	5.1	
	2500-4500TL	17	17.9	69	25.0	
	>4500TL	69	72.6	188	68.1	
COVID-19 Diagnosis	Yes	10	10.5	49	17.8	.097
	No	85	89.5	227	82.2	
Psychiatric Referral History	Yes	81	85.3	229	83.0	.603
	No	14	14.7	47	17.0	
Child's Gender	Girl	49	51.6	132	47.8	.528
	Boy	46	48.4	144	52.2	
Psychiatric Referral History in Child	Yes	15	15.8	87	31.5	.003
	No	80	84.2	189	68.5	
Screen Time	Never	5	5.3	1	0.4	.001
	1 hour>	16	16.8	24	8.7	
	1-3 hour	48	50.5	138	50.0	
	4-5 hour	17	17.9	56	20.3	
	6-7 hour	4	4.2	31	11.2	
	8 hour<	5	5.3	26	9.4	
Increase in Screen Time	Not Increased	23	24.5	32	11.7	
.001						
	1 hour>	21	22.3	35	12.8	
	1-3 hour	30	31.9	128	46.7	
	4-6 hour	12	12.8	37	13.5	
	6 hour<	8	8.5	42	15.3	

SDSC, Sleep Disturbance Scale for Children; SDSC –, SDCS score below the cut-off value; SDSC +, SDCS score above the cut-off value; TL, Turkish Liras

disorder, RCADS-P-major depression, RCADS-P-separation anxiety, RCADS-P-generalized anxiety, and RCADS-P-total scores were lower in preschoolers. Scale scores by developmental periods are represented in Table 3.

DASS subscale scores were higher in preschoolers and school-aged children with significant sleep disturbances. Whereas DASS-anxiety scores were higher in adolescents with significant sleep disturbances, DASS-depression and DASS-anxiety scores did not differ significantly. HAI scores were higher in children with sleep disturbances in all developmental periods. DASS and HAI scores by presence of significant sleep disturbances and the developmental periods are represented in Table 4.

RCADS-P total and subscale scores were higher in children with sleep disturbances in all developmental periods. RCADS-P total and subscale scores by presence of significant sleep disturbances and the developmental periods are represented in Table 5.

Table 2. Comparison of significant sleep disturbances presence between developmental periods

		SDSC group		
		SDSC –	SDSC +	*P*
Preschool	N	31	75	.015
	%	29.2	70.8	
School Age	N	31	136	
	%	18.6	81.4	
Adolescents	N	33	65	
	%	33.7	66.3	

SDSC, Sleep Disturbance Scale for Children; SDSC –, SDCS score below the cut-off value; SDSC +, SDCS score above the cut-off value

Table 3. Comparison of DASS, SEA, and RCADS-P scores among developmental periods

	Preschoola			School Ageb			Adolescentc			
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	*P*
DASS-anxiety	1.0	0.0	3.0	1.0	0.0	4.0	2.0	0.0	5.0	.370
DASS-depression	2.0	0.0	6.0	4.0	1.0	8.0	3.5	1.0	7.0	.138
DASS-stress	4.0	1.0	8.0	5.0	1.0	9.0	5.0	2.0	8.0	.246
DASS-total	7.0	2.0	17.0	12.0	3.0	20.0	10.5	4.0	19.0	.189
HAI	30.0	27.0	34.0	32.0	27.0	36.0	32.5	28.0	38.0	.127
RCADS-P-social fobia2	5.0	2.0	8.0	8.0	5.0	11.0	8.0	4.0	11.0	<.001
RCADS-P-panic disorder3	0.0	0.0	2.0	1.0	1.0	3.0	1.5	1.0	4.0	<.001
RCADS-P-major depression4	3.0	1.0	6.0	5.0	2.0	7.0	6.0	2.0	10.0	<.001
RCADS-P-separation anxiety5	7.0	4.0	9.0	6.0	3.0	8.0	3.0	1.0	6.0	<.001
RCADS-P-generalized anxiety6	2.0	1.0	5.0	4.0	3.0	6.0	4.0	2.0	6.0	<.001
RCADS-P-ocd	2.0	1.0	4.0	3.0	1.0	4.0	2.0	1.0	4.0	.084
RCADS-P-total7	21.5	13.0	29.0	28.0	19.0	37.0	26.0	15.0	43.0	<.001

1: a-b:0.514, a-c:0.019, b-c:0.283; 2: a-b:<0.001, a-c: <0.001, b-c:1.000; 3: a-b:<0.001, a-c: <0.001, b-c:0.779; 4: a-b:0.009, a-c: <0.001, b-c:0.339; 5: a-b:<0.001, a-c: <0.001, b-c:1.000; 6: a-b:<0.001, a-c: <0.001, b-c:1.000; 7: a-b:0.037, a-c: <0.001, b-c:0.862
DASS, Depression Anxiety and Stress Scale-21; HAI, Health Anxiety Inventory; RCADS-P, Revised Child Anxiety and Depression Scale–Parent Version; ocd, obsessive compulsive disorder

Table 4. Comparison of DASS and HAI scores by significant sleep disturbances presence and developmental periods

	Preschool						School Age						Adolescent					
	SDSC group						SDSC group						SDSC group					
	SDSC –			SDSC +			SDSC –			SDSC +			SDSC –			SDSC +		
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
DASS-anxiety	2.0	0.0	4.0	0.0	0.0	1.0	2.0	1.0	4.0	1.0	0.0	2.0	3.0	0.0	5.0	1.0	0.0	2.0
			.004						.004						.004			
DASS-depression	3.0	1.0	7.0	1.0	0.0	3.0	4.0	1.0	9.0	0.0	0.0	6.0	4.0	1.0	8.0	2.0	1.0	4.0
			.009						<.001						.129			
DASS-stress	5.0	1.0	8.0	1.0	0.0	5.0	6.0	1.5	10.0	0.0	0.0	5.0	6.0	3.0	8.0	4.0	1.0	7.0
			.001						<.001						.127			
DASS-total	11.0	4.0	19.0	3.0	0.0	9.0	13.0	5.0	22.0	1.0	1.0	14.0	13.0	4.0	22.0	6.0	3.0	15.0
			.001						<.001						.046			
HAI	32.0	28.0	35.0	27.0	23.0	31.0	32.0	28.5	36.5	28.0	27.0	32.0	33.0	29.0	39.0	30.0	24.0	36.0
			<.001						.006						.007			

SDSC, Sleep Disturbance Scale for Children; SDSC–, SDCS score below the cut-off value, SDSC +, SDCS score above the cut-off value; DASS, Depression Anxiety and Stress Scale-21; HAI, Health Anxiety Inventory

Table 5. Comparison of RCADS-P scores by significant sleep disturbances presence and developmental periods

	Preschool						School Age						Adolescent					
	SDSC group						SDSC group						SDSC group					
	SDSC –			SDSC +			SDSC –			SDSC +			SDSC –			SDSC +		
	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75	Median	Percentile 25	Percentile 75
RCADS-P-social phobia	5.0	3.0	9.0	2.0	1.0	6.0	9.0	6.0	12.0	6.0	4.0	7.0	9.0	6.0	11.0	3.0	3.0	8.0
			<.001						<.001						<.001			
RCADS-P-panic disorder	1.0	0.0	2.0	0.0	0.0	1.0	1.0	1.0	3.0	0.0	0.0	2.0	3.0	1.0	6.0	1.0	0.0	1.0
			.009						<.001						<.001			
RCADS-P-major depression	4.0	2.0	8.0	0.0	0.0	2.0	5.0	3.0	7.5	1.0	1.0	4.0	7.0	4.0	11.0	2.0	1.0	5.0
			<.001						<.001						<.001			
RCADS-P-separation anxiety	7.0	5.0	10.0	4.0	2.0	7.0	6.5	4.0	9.0	3.0	2.0	5.0	4.0	2.0	7.0	1.0	1.0	3.0
			<.001						<.001						<.001			
RCADS-P-generalized anxiety	3.0	2.0	6.0	1.0	1.0	2.0	5.0	3.0	6.5	4.0	1.0	5.0	6.0	3.0	8.0	2.0	2.0	4.0
			<.001						.004						<.001			
RCADS-P-ocd	2.0	1.0	5.0	1.0	0.0	3.0	3.0	2.0	4.0	1.0	0.0	20	4.0	2.0	5.0	2.0	1.0	2.0
			.002						<.001						<.001			
RCADS-P-total	23.0	17.0	35.0	11.0	8.0	21.0	31.0	23.0	39.0	17.0	10.0	23.0	32.0	20.0	49.0	15.0	7.0	20.0
			<.001						<.001						<.001			

SDSC, Sleep Disturbance Scale for Children; SDSC –, SDCS score below the cut-off value; SDSC +, SDCS score above the cut-off value; RCADS-P, Revised Child Anxiety and Depression Scale–Parent Version; ocd, obsessive compulsive disorder

DISCUSSION

In this study, sleep problems and related factors were investigated in children during the period when restrictions due to the pandemic were reduced. In our sample, children with significant sleep problems have more depression/anxiety symptoms. Parents with children who have significant sleep problems also have more depression/anxiety/stress symptoms and anxiety about health. In addition, school-aged children were found to be more at risk in terms of sleep disturbances and depression/anxiety symptoms.

In our sample, parents reported that sleep problems in children were quite common. Level of sleep problems before the pandemic was not known in this sample. However, when reports prior to the pandemic[31–34] and studies conducted during the pandemic are considered,[8–12] sleep disturbances draw attention as a problem related with the COVID-19 pandemic.

Sleep Problems and Psychiatric Symptoms in Children

Throughout the pandemic period, sleep quality is important for both immunity[15] and mental health,[17] and it was reported that the COVID-19 outbreak had an adverse effect on sleep problems in late adolescence.[16] During the COVID-19 pandemic, children's sleep disturbances have been previously associated with psychiatric symptoms in children.[16,17] Consistent with the literature, in our study, it was found that sleep disturbances in children are associated with their depression/anxiety symptoms. While sleep problems may be a component of depressive and anxiety disorders,[35–37] sleep problems themselves may cause symptoms of depression/anxiety.[36,38] With these findings, it can be suggested that during the pandemic, sleep changes should not be considered completely normal because of reasons such as changes in daily routines. It should be kept in mind that sleep problems may be related to internalization problems in the child.

Sleep Problems and Psychiatric Symptoms in Parents

When the literature was reviewed regarding relation of sleep disturbances in children and parental psychological difficulties during the COVID-19 outbreak, only 1 study was found. However, that study was focused especially on sleep habit changes in children and their mothers, and the association between children's sleep and parental symptoms was not reported.[20] In our study, depression/anxiety and stress symptoms and also anxiety about health are found more commonly in parents with children who have sleep disturbances. Moreover, it is found that health anxiety, which is sensitivity to physical complaints and anxiety about having an illness, was more pronounced in the parents of children with sleep disturbance. It is known that environmental factors independent of hereditary effects also play a role in the transmission of mental problems from parent to child.[39] It was previously reported that better parental stress management was associated with fewer mental symptoms in children during the pandemic period.[18] In our study, it was shown that parental psychopathology is also important for the mental symptoms of children during the pandemic period. These findings suggest that parents with sleep disturbances in their children may have more psychiatric symptoms and that psychiatric evaluation of these parents may be necessary.

Children with psychiatric history are vulnerable to stressors such as the COVID-19 pandemic. It has been reported that psychiatric symptoms are more common in children with psychiatric history.[17,40,41] At the same time, it was suggested that studies on long-term impact of crisis are needed.[40] Consistent with the literature, in our sample, children with psychiatric history experience more sleep problems during the COVID-19 pandemic period. These findings suggest that children and adolescents who have had psychiatric complaints and who were admitted to the psychiatric outpatient clinic at any time in their life are more at risk in terms of sleep problems even 1 year after the onset of the pandemic and in the period when restrictions on the pandemic are decreasing. In addition, it has been shown that although the COVID-19 pandemic is a public health crisis, some populations are more prone to have psychiatric problems. It can be suggested that children with a psychiatric history and also their parents need more psychosocial support during the pandemic.

Comparison Among Different Developmental Stages

When a comparison was made among developmental periods, significant sleep problems were higher in school-age period. In addition, depression and anxiety symptoms were most prominent in school-age period. It is known that physiological changes occur in sleep because of brain maturation during adolescence.[42] Moreover, it is known that higher depression and anxiety disorder prevalences were reported in adolescence.[43,44] Contrary to the findings from before the COVID-19 outbreak, it was found that school-aged children in our sample have more sleep problems and depression/anxiety symptoms in that period. It may be thought that it is more challenging for school-aged children to adapt to the differences caused by the pandemic. This may also be related to increase in screen time after the outbreak, which was found to be higher in school-age period. It was also previously reported that screen time increased during the pandemic compared with the prepandemic period[45,46] and was related to sleep habits and quality.[47] However, evaluation regarding screen time is limited in our study. Increase in the screen time may occur because of various reasons such as restriction of face-to-face training on schools or decrease in social activities. However, participants were asked about screen time without making any distinction regarding the purpose of use. Therefore, the relationship between screen time and sleep should be considered holistically in the context of lifestyle changes due to the pandemic, and it is difficult to draw generalizable inferences from our findings. In addition to screen time, there may be some other factors such as decrease in parental control over the child, changes in daily routines, and disturbances in children's self-control that play a role in increase of sleep problems in school-aged children.

One of the strengths of this current study is that sleep disturbance in children is examined along with parental symptoms, an area that is less researched. In addition, most studies in the literature were conducted during the quarantine period. Whereas, in this study, we showed that in a period when the pandemic was continuing but restrictions were decreased, sleep disturbances in children and depression/anxiety symptoms in children and their parents were still present. Finally, it was possible to conduct a comparison between different developmental periods by using same standard measurement instrument. There are also several limitations to our study. First, our sample size was small, and caution must be exercised in generalization of our findings to the broader population of children. Second, this was a cross-sectional study, which limits our ability to infer causality. Third, this study depended on web-based self-report of parents instead of a structured clinical interview that could provide a better picture of the psychological distress in our sample. Finally, we did not gather information about timing and content of screen engagement, which may be important for sleep habits and quality.

In conclusion, sleep problems were obtained quite often during the COVID-19 outbreak, and sleep problems in children and adolescents are associated with both children's and their parent's psychiatric symptoms. School-aged children can be suggested as more at risk in this regard. Psychiatric evaluation of children and their parents is recommended when sleep problems occur in children during the COVID-19 outbreak.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Istanbul Medipol University (August 7, 2020, No: 10840098-772.02.E.34194).

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