

THE IMPACT OF THE COVID-19 LOCKDOWN ON CHILDREN'S DAILY ROUTINES IN TÜRKİYE

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Abstract: Recent studies have pointed out that children were among those affected by the changes that COVID-19 restrictions brought to daily life. This study aims to explore how children's routines of sleep, diet, exercise, and technology use changed during the lockdown of COVID-19, which in Türkiye was enacted between March 16th and June 1st of 2020. An online questionnaire was answered by 323 parents of children aged 4 to 12. Regression analysis was used to examine the ways in which demographics, resources, and activities correlated with parents' perceptions of activities. The findings indicated that the amount of change in children's daily routines was predicted more strongly by how their parents felt about their activities than by the other factors examined. Our findings will contribute to an understanding of the ways in which the COVID-19 restrictions affected children's routines, and assist parents, teachers, and policymakers in their efforts to provide support for children.

Keywords: COVID-19, parents, resources, activities, children's routines

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In December 2019, the discovery of COVID-19 was announced, and the World Health Organization declared a global pandemic on March 11, 2020 (Cucinotta & Vanelli, 2020). Although there have been many pandemics in humanity's past, the aggressively spreading nature of COVID-19 caused many countries to take immediate action. In addition to serious health consequences, including hospitalizations and deaths, approximately half of the world's population — around 3.9 billion people — were subject to stay-at-home orders or lockdown measures imposed by their governments during the early stages of the COVID-19 pandemic (Sandford, 2020). For many adults, the pandemic brought negative changes in their pattern of living (Andrew et al., 2020), including being less active, overeating, and having trouble sleeping (Cellini et al., 2020; Dunton et al., 2020; Herbec et al., 2021). In a study of screen time during the pandemic, correlations were found between adults' changing patterns and children's habits (Trott et al., 2022). Navas-Martin et al. (2021) found that, for adults, changing habits and the development of routines were tied to whether they had children or not: people with children were less likely to stick to the same habits and more likely to establish new ones than were those without children. In Clarke et al.'s (2021) study, parents noticed a reduction in children's physical activity, an increase in screen time, and an increased consumption of snacks; they worried that these unhealthy habits would be difficult to reverse.

This study aimed to examine whether certain demographics (parent's age, parent's education, partner's education, income, child's age and gender), certain resources (available space/resources and technology, parent's availability), and the activities parents and children engaged in at home and how they felt about them could explain the parents' perceptions of changes in children's daily routines (CDR). Understanding whether CDR were linked to particular demographic characteristics and availability of certain resources is important for ensuring proper services to those who need them.

Routines During COVID-19 Lockdowns

Physical activity and exercise

Many studies reported that children's physical activity — such as walking, biking, playing outside, and doing sports — decreased during lockdown (e.g., Moore et al., 2020; Pietrobelli et al., 2020; Pombo et al., 2023). According to a Canadian study, children and teens exhibited lower levels of physical activity, spent less time outside the house, had higher levels of sedentary behavior (including leisure screen time), and slept more during the pandemic (Moore et al., 2020). Perez et al.'s (2021) research in the United States highlighted the role of income: the children of lower-income families had less access to outdoor space and fewer opportunities for physical activity. Maertl et al. (2021) pointed to the fact that, during COVID-19 in Germany, both adults with lower levels of education and parents with young children spent less time on physical activities compared to other adults. In a study carried out in two European cities (Thessaloniki, Greece and Stockholm, Sweden), children experienced an increase in physical activity in the

suburbs, but a decline in urban regions; these results highlight the significance of available open spaces for children's physical activities (Filos et al., 2021). Ostermeier et al. (2022) found that parents used outdoor spaces as a key strategy to support or maintain their children's physical activity during the pandemic.

Dietary habits

There are numerous reports of ways in which the dietary habits of both parents and children were affected during lockdown. In an international online survey, Ammar et al. (2020) found that overindulgence in ill-advised food choices, snacking, and eating extra meals were among the reported deviations from pre-lockdown routines. Among the adults surveyed in Wang et al. (2020), 23% reported that their diet was healthier during lockdown than before, and 30% said that they consumed more vegetables, fruits, and dairy products; the rest, however, reported that their eating habits had become less healthy. In a Canadian study by Zajacova et al. (2020), adults reported a 14% increase in their consumption of alcohol in the early days of the pandemic, and a 25% increase in junk food. Adults in Latin America were found to resort to eating more processed, unhealthy food during the stay-at-home orders (Ruíz-Roso et al., 2020). Children's food consumption was also affected. Canadian families with young children reported that family members tended to eat more unhealthy snacks in confinement periods, but they spent more time cooking for themselves as well (Carroll et al., 2020). A study conducted with Italian children aged between 6 and 14 showed that children's eating patterns dramatically altered during the lockdowns: they began eating less food overall and more junk food (Segre et al., 2021).

Sleeping patterns

There were considerable changes in the sleeping patterns of both adults and children during the lockdowns. Children had trouble falling asleep and wanted to sleep in their parents' beds (Ghanamah & Eghbaria-Ghanamah, 2021; Segre et al., 2021). Italian young children's sleep quality declined and parents reported more difficult nighttime routines, especially in the early phases of the lockdown period, after which children's sleep patterns stabilized, but with poorer sleep quality and a decrease in duration compared to the beginning of the study (Dellagiulia et al., 2020). Lecuelle et al. (2020) demonstrated that French children took fewer and shorter naps as a result of the lockdown and had more difficulty falling asleep and staying asleep. A cross-cultural meta-analysis of 15 articles found that sleep disturbances affected 21.3% of children in the confinement period (Panda et al., 2021). In a study involving 382 Arab Israeli parents of children aged 5 to 11, recruited through social media, the majority of the children were reported to have displayed "increased irritability, constant mood swings and nervousness about limits and messages, and 41.4% showed sleep difficulties" (Ghanamah & Eghbaria-Ghanamah, 2021, para. 1). Fasano et al. (2021) aimed to understand how COVID-19 confinement altered the lifestyles of families in Argentina, and found that more than half of the 814 families in their sample reported that the children had sleep issues.

Screen time and technology use

A meta-analysis showed that the amount of time spent on screens increased during lockdown for children of all ages (Trott et al., 2022). Such an increase in screen time was also observed with younger children in Dutch households, especially during school closures in the early periods of COVID-19 confinement (ten Velde et al., 2021). Although older children seemed to have more screen time (Andrew et al., 2020; Sevilla et al., 2020), research shows that technology is used for different purposes at different ages, independently of the duration and extension of use (Picca et al., 2021; Toombs et al., 2022; Trott et al., 2022). For instance, in a Canadian study, Mitra et al. (2020) found that social media use and non-screen-based sedentary activities increased more for children than for youth. However, in another Canadian study, Moore et al. (2020) found that the increase in children and youth was almost equal. A study exploring German teenagers' changing habits during the lockdown period demonstrated that these young people increased their screen time usage, mainly for recreational purposes (Schmidt et al., 2020). During the COVID-19 quarantine, American adolescents increased their screen time, with boys spending more time playing video games and girls spending more time on social media and texting (Nagata et al., 2022).

COVID-19 Lockdown in Türkiye

In Türkiye, rigid restrictions were implemented at the very early stages of the pandemic, mainly between March 16th and June 1st of 2020, that resulted in drastic changes in the lives of children and families. After the first case was seen on March 11th, the Ministry of Education (MoNE) closed down the schools immediately. On the 6th of April, MoNE started online distance education using the network of education informatics (*Eğitim Bilişim Ağı*). Children from early childhood to high school followed the scheduled lessons, which were broadcast all day. Playgrounds and national parks were closed during the lockdown. For 50 consecutive days, people who were 20 years old and below and those who were 65 years old and above had to stay at home; the rest of the population were barred from leaving their residences during the weekend only. Gill and Robyn (2020) developed a child lockdown index by summing the weeks that schools were closed, weeks that playgrounds were closed, and weeks of child lockdown; of 25 countries, Türkiye had the fourth highest score. The negative effects of the lockdown in Türkiye were identified in Gloster et al.'s (2020) study that collected data from 9,565 adults in 78 countries. The results showed that Turkish participants indicated higher levels of stress and negative effects than the average during lockdowns.

Present Study

The current study aimed to understand whether CDR changed during the COVID-19 lockdown in Türkiye, based on parents' reports. The predictive value for changes in CDR of demographics, resources, at-home activities, and how parents felt about those activities was investigated. Demographic variables included child's age, gender, parent's age, education, partner's education, and household income. The number of people living in the home, the number of rooms, and

residency type were used to assess the availability of space/resources. To assess the availability of technology, internet quality and the number of electronic devices in the home were used. Parents were asked whether their working status had changed during the COVID-19 lockdown, and how they felt then about their activities and level of well-being. They were also asked what activities their children had engaged in during the lockdown, and how they felt about those activities. The research questions were:

1. What changes did parents observe in their children's daily routines (i.e., sleeping, eating, exercising, and using technology)?
2. What are the relationships between the demographic and predictor variables (e.g., children's and parents' activities)?
3. What are the predictors of change in children's daily routines during the COVID-19 lockdown?

Method

Participants

An online questionnaire was filled out by 323 parents residing in 39 cities in Türkiye. Most of the participants were female (90.0%), most were married (93.0%), most were between the ages of 31 and 45 (83.6%), and most lived in metropolitan cities (79.3%). The majority of participants (77.7%) and their partners (77.8%) had a college or higher degree. The mean age of the children was 6.61 years ($SD = 2.59$). The parents reported that 52.3% of their children were girls, and 47.7% were boys, with 48.3% of the households having one child, 43.7% two, 6.0% three, and 2.0% four children. Parents were also asked to state their monthly household income: 10.2% percent of the parents did not do so; 11.2% of them reported earning less than 3,000 Turkish lira (TL); 40.6% reported earning 3,001 to 7,500 TL; and 38.0% reported earning a greater amount. For comparison, the Turkish Statistical Institute (2021) found that the mean monthly household income in Türkiye was 5,779 TL in 2020. Most of the parents (59.5%) reported that they were civil servants, and 18.6% identified themselves as unemployed or stay-at-home parents.

Procedure

The findings presented here are a part of a larger study, the COVID-19 Family Study (COVID-19 FamTur), whose details are presented in the Research section of the website cocukbogazici.com. The overall aim of the COVID-19 FamTur study was to examine how families were responding to the pandemic and lockdowns. Towards this aim, groups of researchers from Canada, England, and the United States were contacted by email to request their questionnaires. These were examined in detail, and the parts that were relevant to the Turkish context or experience were selected. The selected questions were translated from English to Turkish, and back translation from Turkish to English was completed. The Social Sciences Ethics Committee of the researchers' home institution, Boğaziçi University, approved the study. The LimeSurvey platform, which was provided by the researchers' institution, was used to put the survey online. The study was

announced on the ÇocukBoğaziçi website, which was made available during the pandemic for families, and on social media platforms. Parents of children aged between 4 and 12 were asked to respond to questions about the youngest of their children. Included in the analysis for this study were demographics, availability of resources, parents' reports of children's activities, parents' perceptions of their own and their children's activities, and parents' reports of CDR. Although 947 people responded to the survey, only fully completed questionnaires ($N = 323$) were included in the data set.

Measurements

Demographics

Parents were asked to give their youngest child's gender and date of birth. In addition, parents were asked to give their own gender, date of birth, education level and partner's education level (1 = *primary school*, 7 = *PhD*), and household income (1 = *less than 1,500 Turkish lira*, 9 = *higher than 12,001 Turkish lira*).

Availability of space/resources

Since the COVID-19 lockdown meant that family members were forced to stay home, it was important to determine the impact of this restriction on the availability of living space and resources. Parents were asked the number of people living in the home, the number of rooms, and their residency type (metropolitan, city, district, town, village).

Availability of technology

Some questions focused on families' use of electronics, the internet, and social media during the lockdown. Participants reported the number of computers (including laptops and tablets), smartphones, and media streaming services (e.g., Netflix, Amazon Prime, Storytel, Spotify) they had, with answers ranging from 0 (*not present*) to 5 (*5 or more*). The parents were asked to rate the quality of their residential internet connection, with answers ranging from 0 (*not available*) and 1 (*very poor*) to 5 (*very good*). A variable representing the availability of technology was calculated by adding the number of computers, smartphones, and media streaming services reported, and the ratings on the quality of the home internet connection. The lowest score that a participant could get was 0 and the highest score 20. Higher scores meant higher availability of technology.

Availability of parents

To determine whether the availability of parents at home changed during lockdown, parents were asked, "Has your working status changed after the COVID-19 outbreak?" Possible responses were: 1 (*No, I'm commuting to work*); 2 (*Yes, my employment has ended*); 3 (*No, I work from home [with no reduction in working hours or wage]*); 4 (*Yes, my working hours have been reduced*); 5 (*Yes, I had to take unpaid leave*); 6 (*Yes, I have left my job due to childcare commitment*); Other, in which participants could write down their current status in relation to the COVID-19 lockdown.

The variable was created by recoding: 0 (Housewives, not working prior to COVID-19); 1 (Yes, my employment has ended, I had to take unpaid leave; I have left my job due to childcare commitment); 2 (Yes, my working hours have been reduced); 3 (No, I work from home); 4 (No, I'm commuting to work). Higher numbers show less potential availability of parents at home.

Parents' evaluation of their activities and well-being

The parents were asked to evaluate their activities and well-being during the lockdown. They rated eight items — movement/exercise, work, sleep, psychological health, nutrition, free time (i.e., not spent in childcare, work, or chores), household income, and physical health — on a scale ranging from 1 (*very poor*) to 5 (*excellent*). Their total scores were calculated by taking the sum of the eight items. The lowest score that a participant could get was 8 and the highest was 40, with higher scores indicating parents' more positive evaluations of their activities and well-being during the lockdown. The scale was found to have good internal consistency (Cronbach's $\alpha = .81$).

Children's activities

The parents answered the question, "How frequently has your child spent time engaged in the following activities over the past week?" Because of the lockdown, there were no questions about outdoor activities. Instead, 11 activities that children could do at home were listed: play with a parent/adult; screen time, including games and TV (other than for home learning); unstructured/free play alone; socializing with family; unstructured/free play with a sibling; self-directed home learning; adult-directed home learning; physical activity/exercise; socializing with friends online/remotely; socializing with family online/remotely; and household activities/chores (e.g., baking, tidying). Responses ranged from 1 (*not at all*) to 5 (*very often*), with "not applicable" scoring as 9. Responses of "not applicable" were recoded as 0. The participants' total scores were calculated by summing the responses. The lowest possible score was 0 and the highest was 55. Participants with higher scores had indicated more engagement in their children's activities. The scale's Cronbach's α was .70.

Parent's evaluations of their children's activities and well-being

The parents were asked, "How would you rate the following areas of your child's life over the past week?" Each respondent rated seven items on a scale ranging from 1 (*very poor*) to 5 (*excellent*): (a) ability to study/do school work, (b) physical health, (c) diet, (d) leisure time (e.g. times when not engaged in school work or chores), (e) sleep, (f) exercise/physical activity, and (g) psychological health. The lowest possible score was 7 and the highest was 35. Higher scores meant that children's activities and well-being were evaluated positively by the parents. The scale was found to have good internal consistency (Cronbach's $\alpha = .80$).

Children's daily routines (CDR)

To investigate how their children reacted to the lockdown, the parents were asked to indicate the changes in CDR that they observed (i.e., sleep, diet, exercise, and technology). The question

was, “Would any of the below statements be applied to your child’s patterns in the past week?”. From the 20 statements offered, the respondents chose those that applied to their situation and experiences. Six statements covered the sleep routine: (a) no change, go to sleep and wake up at the same time; (b) no change, same amount of sleep; (c) changed, go to sleep late and wake up late; (d) sleep longer hours; (e) sleep less; (f) wake up in the middle of the night. In regard to eating/dietary habits, the responses were: (a) no change, a similar amount of food; (b) no change, similar times/frequencies; (c) changed, skip meals/eat at different times; (d) changed, add extra meals; (e) changed, eat a lot; (f) changed, eat less; and (g) changed, eat junk. Regarding whether children exercised, responses were: (a) no exercise; (b) daily exercise for 30 minutes to 2 hours; (c) once in a while; and (d) exercising with parents. Lastly, to understand if there were any changes in using technology, responses were: (a) no change, the same amount of time, same purposes; (b) changed, a lot more with different purposes; (c) changed, a lot less.

To create the CDR scores for each child, sums were taken of the seven no-change in routines scores and of the 12 change in routines scores. The CDR score was calculated by subtracting the change scores from the no-change scores. The 12 items representing change were: go to sleep late and wake up late; sleep longer; sleep less; wake up at night; skip meals/eat at different times; extra meals; eat a lot; eat less; eat junk; no exercise; a lot more screen time with different purposes; and a lot less screen time. The seven items representing no change were: go to sleep and wake up at the same time; the same amount of sleep; a similar amount of food; eat at similar times/frequencies; exercise daily for 30 minutes to 2 hours; exercise once in a while; the same amount of screen time with the same purposes. Exercising with parents was not included in either of the scores due to the lack of clarity regarding whether the children actually exercised. The final scores represent the amount of change in CDR observed by the parents.

Data Analysis

The first step was to calculate percentages, means, and standard deviations. Only completed questionnaires were included in the data set; there were thus no missing values. Second, we calculated the correlations among all variables. Lastly, a hierarchical linear regression analysis with the CDR as the criterion variable was conducted. Five blocks in the regression model were used. The control variables of children’s and parents’ demographics were entered in the first block (child gender, child age, parent’s age, education level, partner’s education level, household income). The variables pertaining to availability of space/resources (number of people at home, number of rooms, and residency) were entered in the second block. In the third block, the availability of technology variable (the total number of devices and internet quality) was added. The fourth block included the parent’s availability at home (related to changes of working status) and how they felt about their activities and well-being during the lockdown. The final block added the variables related to children’s activities and how parents felt about them. The assumptions related to multiple linear regression were checked and no violation was detected.

Results

Children's Daily Routines (CDR)

The four areas of daily routines that we examined were sleep, diet, exercise, and technology use, with the parents ($N = 323$) choosing the responses that applied to their current situation. Table 1 shows the overall frequencies and percentages of the parents' responses. With regard to sleeping patterns, 196 of the responses showed that the parents did not observe any change; about the same number ($n = 184$) indicated that there had been some changes. The most selected response in this category was, "Going to sleep late and waking up late" ($n = 134$). The parents' responses showed that most ($n = 254$) had observed no change in their children's eating habits, with 181 of the parents reporting a change. In that group, "Eating junk" ($n = 56$) and "Skipping meals/eating at different times" ($n = 52$) were the answers selected most often. Regarding exercise, the parents selected "No exercise" only 81 times, with most ($n = 291$) responses indicating that the children were getting some exercise. With regard to screen time, "No change" was selected 140 times, whereas 188 responses indicated change, with the most frequently selected response being "A lot more with different purposes".

Table 1. *CDR During COVID-19 Restrictions*

Routine	Total	Response	<i>n</i>	%
Sleeping patterns				
No change	196	Go to sleep and wake up as usual	120	37.2
		Same amount of sleep	76	23.5
Change	184	Go to sleep late and wake up late	134	41.5
		Sleep longer	13	4.0
		Sleep less	21	6.5
		Wake up at night	16	5.0
Eating habits				
No change	254	Similar amount	177	54.8
		Similar times/frequencies	77	23.8
Change	181	Skip meals/eat at different times	52	16.1
		Add meals	30	9.3
		Eat a lot	26	8.0
		Eat less	17	5.3
		Eat junk	56	17.3
Exercise				
No	81	No exercise	81	25.1
Daily	291	Daily for 30 minutes to 2 hours	41	16.4
		Once in a while	191	59.1
		With parents	59	18.3
Screen use				
No change	140	Same amount of time, same purposes	140	43.3
Change	188	A lot more with different purposes	157	48.6
		A lot less	31	9.6

Descriptive Values of Predictor Variables

Table 2 presents the descriptive statistics of the predictor variables. The parents in our sample had 169 girls (52.3%) and 154 boys (47.7%). The mean age of the children was 6.6 years; that of the parents was 38.0. The mean score for number of people in the home was 3.8, and the mean number of rooms was 4.1. The mean score for availability of technology was 10.2 ($SD = 3.22$). The mean score for parents' evaluations of their own activities was 25.6 ($SD = 5.86$); the mean score for parents' evaluations of their children's activities was 25.9 ($SD = 4.46$); the mean score for children's activities was 35.1 ($SD = 7.19$). Also, the mean score of the change in children's routines was $-.79$ ($SD = 2.66$).

Table 2. *Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>	Range
Child's age	6.6	2.59	3.42–13.08
Parent's age	38.0	5.65	19–55
Number of people	3.8	0.86	2–6
Number of rooms	4.1	1.18	2–8
Availability of technology	10.2	3.22	1–20
Parent's evaluation of their own activities	25.6	5.86	8–40
Child activities	35.1	7.19	4–54
Parent's evaluation of their children's activities	25.9	4.46	9–35
CDR	-0.8	2.66	$-6-6$

Bivariate Correlations

Table 3 shows bivariate correlations among the predictor demographic variables and the criterion variable. Among the predictor variables, children's gender, age, partner's education, and residency had significant intercorrelations with changes in children's routines. When it comes to the relationship of the predictor variables with CDR, girls and older children had more changes in routines ($r[264] = .10, p < .05$; $r[264] = .14, p < .01$). More educated partners were correlated with fewer changes in routines ($r[264] = -.13, p < .01$). Living in a village is negatively correlated with CDR ($r[264] = -.15, p < .01$), indicating fewer changes in routines. The parents' positive evaluations of their own activities, the children's activities, and the parents' positive evaluations of their children's activities were all negatively correlated with CDR ($r[264] = -.27, p < .001$; $r[264] = -.26, p < .001$; $r[264] = -.48, p < .001$, respectively). The parents who evaluated their children's activities positively tended to be those who reported that the lockdown had affected their children's routines to a lesser degree.

Table 3. *Bivariate Correlations*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. CDR																		
2. Child's gender	-.10*																	
3. Child's age	.14†	-.02																
4. Parent's age	.02	.05	.42‡															
5. Parent's education	-.05	.00	-.11*	.05														
6. Partner's education	-.13†	.02	-.15†	-.00	.55‡													
7. Household income	-.09	-.00	-.13*	.08	.26‡	.30‡												
8. Residency village	-.15†	.04	.08	-.04	-.09	-.05	-.05											
9. Residency town	-.00	.05	-.07	-.03	.05	.01	-.04	-.00										
10. Residency district	-.00	-.01	-.03	-.01	.17†	-.07	-.10*	-.05	-.02									
11. Residency city	.07	-.06	.05	.06	.05	.04	-.05	-.04	-.02	-.10*								
12. Number of people	-.02	.02	.02	-.01	-.16†	-.15†	-.02	.09	-.05	-.03	.06							
13. Number of rooms	-.08	.06	-.00	.10*	.13*	.16†	.24‡	-.02	-.06	-.03	.13*	.22‡						
14. Availability of technology	-.05	-.02	.03	.19‡	.46‡	.36‡	.36‡	.04	.05	-.17‡	.03	.06	.25‡					
15. Availability of parents	.09	-.08	-.03	-.01	.38‡	.21‡	.02	.00	.04	-.03	.03	-.10*	.02	.24‡				
16. Parent's evaluation of their own activities	-.27‡	.01	.15†	.16†	-.02	.03	.18‡	.14†	.02	-.00	-.03	.15†	.25‡	.23‡	.07			
17. Children's activities	-.26‡	.12*	-.10	-.06	.07	.05	.14†	.06	-.04	-.00	-.01	.12*	.21‡	.10*	.01	.25‡		
18. Parent's evaluation of children's activities	-.48‡	.03	.02	.06	-.01	.07	.22‡	.07	.00	.00	-.02	.08	.23‡	.15†	-.05	.50‡	.41‡	

* $p < .05$. † $p < .01$. ‡ $p < .001$.

Predictors of Changes in CDR During COVID-19 Lockdown

Table 4 shows the results of the hierarchical linear regression. A wide set of covariates were entered into the model in five blocks to control for their potential influences on changes in CDR due to the COVID-19 lockdown. The first block in which demographics were entered explained only 5% of the variance. Availability of space/resources (Block 2) and availability of technology (Block 3) explained 8% of the variance. In the fourth block, where we entered the availability of parents and parents' evaluations of their own activities, the variance explained increased to 16%. The last model of the regression on CDR (the final block) explained 30% of the variance ($R^2 = .30$, $F[14, 249] = 28.09$, $p < .001$).

Table 4. *Predictors of Changes in CDR*

	Block 1	Block 2	Block 3	Block 4	Block 5
Predictor	β	β	β	β	β
Child's gender	-.53	-.45	-.45	-.40	-.34
Child's age	.14*	.15*	.15*	.19**	.17**
Parent's age	-.01	-.02	-.02	-.00	-.01
Parent's education	.10	.07	.05	-.13	-.16
Partner's education	-.24	-.23	-.24	-.23	-.20
Household income	-.04	-.02	-.03	.02	.07
Residency village		-3.19**	-3.22**	-2.61*	-2.51**
Residency town		.15	.10	.73	.55
Residency district		-.13	-.12	-.11	-.06
Residency city		.61	.62	.43	.41
Number of people		-.03	-.03	.06	.04
Number of rooms		-.14	-.14	-.02	.08
Availability of technology			.01	.04	.04
Availability of parent				.31*	.28*
Parent's evaluation of their own activities				-.13***	-.04
Children's activities					-.02
Parent's evaluation of their children's activities					-.26***
R2	.05	.08	.08	.16	.30
ΔR^2	.03	.04	.04	.12	.27
ΔF	2.38*	1.84	0.07	13.63***	28.09***

Note. $n = 264$. Child gender is dummy coded (1 = girl, 0 = boy). Residency is dummy coded using metropolitan as the reference category.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Children's age consistently seemed to be a significant predictor in all blocks, with younger children exhibiting less change in routines than older children. Similarly, residency showed significant results in all 4 blocks. Compared to children living in metropolitan areas, those living in villages experienced significantly less change in their daily routines. Parental availability in

relation to parent's working status was significantly associated with CDR. Parents who reported higher parental availability were more likely to report more changes in their children's routines as seen in the last two blocks.

How the parents evaluated their children's activities during the lockdown emerged as a significant predictor ($\beta = -.26, p < .001$). Parents who evaluated children's activities as positive were more likely to also report fewer changes in their children's routines. How parents felt about their own activities was significantly associated with CDR (Block 4; $\beta = -.13, p < .001$). However, after entering children's activities and parent's evaluations of their children's activities, how parents felt about their own activities was no longer significantly associated with CDR (Block 5).

Although we predicted that children's activities, such as playing with a parent/adult, socializing with family, and doing household activities/chores (e.g. baking, tidying), would also be positively associated with fewer changes in CDR, this variable did not emerge as a significant predictor. Similarly, demographics other than children's age and availability of technology were not significant predictors of CDR.

Discussion

In their scoping review, Tsoukalis-Chaikalis et al. (2023) reported that both the mental and physical well-being of children were affected by school closures related to the COVID-19 pandemic. In line with these findings, our study focused specifically on parents' perceptions of how their children's daily routines — including sleep, diet, physical activity, and technology use — were affected during the lockdown in Türkiye. Although some of the parents reported that they observed their children skipping meals, adding meals, eating a lot or eating less, and eating junk, the least affected routine seemed to be dietary habits, for which a majority of parents reported no change. In terms of technology use, half the parents reported changes in their children's screen time; the rest reported no change. Almost half reported a change in their children's sleeping routine, with going to sleep late and waking up late being the primary change observed. These findings are in line with the literature. Fasano et al. (2021) also reported general changes in routines and sleep. Segre et al. (2021) found that children ate less food overall but more junk food, and they had difficulty sleeping during the lockdown. Ghanamah and Eghbaria-Ghanamah (2021) also reported changes in routines, such as sleeping longer hours, using more screens, and being less active. Encouraging enough sleep time for younger children and establishing regular daily routines for physical activity may be helpful for maintaining well-being, as suggested by Avila-Garcia et al. (2020).

Shortage of essential items such as food and money, and scarcity of space and technological tools, might have made it harder to maintain CDR. Kader et al. (2024) reported that families in South Africa encountered problems related to finances, remote work, and schooling during the pandemic. Also, failure to fulfil the needs of members of the family might affect psychological well-being (Gloster et al., 2020; Patrick et al., 2020). In our study, however, contrary to

expectations, income, availability of space/resources (except for participants living in villages), and availability of technology did not show any significance in the final model. One explanation for this could be that the children used devices and the internet during the lockdown in the same way that they had used them before COVID-19, which could be related to the fact that the collected data only includes highly educated families with moderate income. Thus, drawing a conclusive finding regarding the population in general is not valid.

Another unexpected finding concerned the availability of parents at home: having parents at home was associated with changes in CDR. Barron et al. (2021) found minimal differences in children's play when parents were at home during the pandemic. They stated that because parents had to perform multiple tasks, including working from home and providing homeschooling, little time was left for play. For parents who stayed home and were trying to fulfil multiple responsibilities, monitoring their children's routines may have become more challenging. It is important to note here that only one parent in each couple completed the survey; the finding may therefore have been affected by the fact that only one parent's availability was considered.

The parents who evaluated their own and their children's activities positively, and reported that their children were engaged in playing with a parent/adult, socializing with family, or doing household activities/chores, also reported few changes in CDR. Yet, these relations were diminished in the regression except how parents evaluated their children's activities. The most important finding is that, in the final model, parents' positive perceptions of their children's engagement in activities at home had the greatest predictive value: it was not the details of actual parenting practices, but how parents felt about those practices, that was more significant. Kader et al. (2024) found that families who used a number of coping strategies during the pandemic, including showing gratitude, sharing, and staying connected to their spirituality and sense of self, had improved family relationships. In a study by Chevalier et al. (2024), parents reported using problem-solving, seeking social support, and avoidance/escapism as coping strategies during remote schooling in the COVID-19 pandemic. Bates et al. (2021) found that psychological well-being and family resiliency were good predictors of having less COVID-19-related stress.

Limitations and Future Directions

Some limitations of the study are as follows. First, the families were approached through an online platform. Although this technique facilitated data collection, it also restricted who was able to participate. Methodologically, only families with access to the internet participated in the study, which may help account for the absence of participants from lower socioeconomic backgrounds. Second, the sample was not selected randomly, resulting in non-generalizability; the findings therefore need to be approached with caution. Third, the data was taken from parents' reports that in turn carry some bias, as the findings only reflect the parents' perceptions of the changes in their children's lives. Although the focus is on children's experiences related to the COVID-19 lockdown, children's participation was not possible due to time limitations, such as the fact that receiving permission from ethics committees to work directly with children takes longer. Lastly,

this study is cross-sectional, so it is not possible to draw conclusions regarding the directionality of the relationships we found.

Nevertheless, some suggestions drawn from the current study could help researchers in the child and family field when planning future studies. For instance, knowing more about families' experiences both before the COVID-19 pandemic and after would provide opportunities to observe any differences. Longitudinal studies with larger populations could link causes with effects. Cross-cultural studies would give an opportunity for researchers to compare practices and policies. As existing measurement tools may not suffice to adequately probe family dynamics under an evolving pandemic, new assessment strategies and tools are needed. Lastly, since the psychological state of individuals seems to play a larger role in times of crisis, examining psychological well-being and resilience could be considered a good direction for future COVID-19-related research.

Some suggestions for policy and practice can also be made based on the findings. Teachers, especially those in early childhood education and care, were aware of the challenges of the change in children's routines due to the lockdown, and put some effort into including healthy eating, sleeping, and exercise in their curriculum, and in their daily routines and practices (Lafave et al., 2021). Research examining home environments and parental practices could assist teachers to base their practice on the needs of families and to help parents gain access to services they need.

Conclusion

The findings showed that how parents feel about their children's activities during the COVID-19 lockdown had a predictive value on the amount of change in CDR. The link between physical and mental health, including psychological well-being and resilience, is well established. Children's development and well-being benefit from following daily routines with a stable schedule that fulfils their physical needs. Disruption of routines in times of stress may be expected to create a sense of uncertainty and instability. Children who have more structural or demographic disadvantages are likely to be more affected by events such as the COVID-19 pandemic and the accompanying lockdowns. Due to the lack of variety in the participants' profiles, this study did not reveal the relationships between demographic factors and changes in CDR; we therefore suggest further investigation of the effects of the COVID-19 lockdowns on people with low socioeconomic status. Such research can guide the formation of policies to bring effective services in times of crisis — war, natural disasters, pandemics — to those who depend on outside help to support children's learning, development, and well-being.

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