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Children with Special Educational Needs and Parental Burnout During the Pandemic Lockdown Period

COVİD-19 Pandemisinde Özel Gereksinimli Çocuklar ve Ebeveyn Tükenmişliği

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ABSTRACT

Objective: This study aimed to investigate whether children with special needs and their parents had problems with special education needs during the lockdown, and to examine the relationship between the special education process and the parent-child relationship, the level of burnout of parents.

Material and Methods: Our study included 283 parents with children registered to a special education and rehabilitation centers in Kocaeli province of Türkiye between March 2021- June 2021. Sociodemographic data form, Maslach Burnout Inventory and Parent-Child Relationship Scale were given to parents.

Results: Burnout of the parents with children with autism spectrum disorder is at a higher level. The development of the children with parents who had high burnout scores regressed. The progress in the development of children whose mothers were employed, whose parents did not work from home, whose family's monthly income was 4501 TL and above, and who received special education for 0-24 months until the restriction period of the pandemic was reported as better by the parents. Parents with children aged 11-below have more positive relationship with their children.

Conclusion: Our study demonstrated that the closure of special education may play a role in increased burnout and negatively affected children and parents. Monitoring the development process of children and the mood of parents during pandemics or other situations that lead to the closure of special education centres will be important to identify the problem areas and prepare support programmes.

Key Words: Burn-out, Child, Special education, People with disabilities, Parent-child relationship

ÖZ

Amaç: COVİD-19 enfeksiyonu yaşamın her alanını etkilemiştir. Bununla birlikte toplumun bazı kesimleri pandemi ve sonuçlarından daha fazla etkilenmiştir. Özel Gereksinimli Çocuklara (ÖGÇ) sahip aileler de şüphesiz pandemiden daha fazla etkilenen gruplar içerisinde yer almıştır. Çalışmamızda; ÖGÇ'lerin ve ebeveynlerinin pandemide özel eğitim merkezlerinin kapanma döneminde özel eğitim gereksinimleri ile ilgili sorun yaşayıp yaşamadıklarını saptamak, özel eğitime ara verilme sürecinin ebeveyn-çocuk ilişkisi, ebeveynlerin tükenmişlik düzeyi ve ÖGÇ'nin gelişim süreci ile ilişkisini incelemek amaçlanmıştır.

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Gereç ve Yöntemler: Çalışmamıza Mart 2021-Haziran 2021 tarihleri arasında Kocaeli ilinde özel eğitim ve rehabilitasyon merkezlerine kayıtlı, 0-18 yaş arası çocuğu olan ebeveynler alınmıştır. Ebeveynlere; sosyodemografik veri formu, Maslach Tükenmişlik Ölçeği ve Ebeveyn Çocuk İlişkisi Ölçeği verilmiştir.

Bulgular: Çalışma sonucunda; çocukların özel eğitim aldığı tanı ve ebeveyn tükenmişliği arasında ilişki olduğu, tükenmişliğin OSB tanılı çocuğu olan ailelerde daha yüksek olduğu gözlenmiştir. Tükenmişlik puanı yüksek olan ailelerin çocuklarının gelişimde pandemi döneminde gerileme olması dikkat çekmiştir. Annesi çalışan, ebeveyni evden çalışmayan, ailenin aylık geliri 4501 TL ve üstü olan, özel eğitime gitmiş olduğu toplam süre 0-24 ay arası olan grupta çocukların gelişiminde ilerlemenin daha fazla olduğu saptanmıştır. 11 yaş ve altı çocuğu olan ebeveynlerin çocuklarıyla anlamlı oranda daha fazla olumlu ilişkisinin olduğu gözlenmiştir.

Sonuç: COVİD-19 pandemisinde özel eğitim merkezlerinin kapanması, sosyal desteğin azalması, çocukları ile sürekli bir arada olmaları gibi nedenler ile ebeveynlere binen yükün artması ÖGÇ olan ailelerin tükenmişlik düzeyini artmasında rol oynamış olabilir. Pandemi döneminde ÖGÇ'lerin gelişim sürecini ve ailelerin ruhsal durumunu takip etmek, sorun alanlarını tespit etmek ve uygun destek programlarının hazırlanmasında önemli olacaktır.

Anahtar Sözcükler: Tükenmişlik, Çocuk, Özel gereksinim, Özel eğitim, Ebeveyn-çocuk ilişkisi

INTRODUCTION

COVID-19 infection was first detected in December 2019 in Wuhan and declared a pandemic on 11 March 2020. While the children with typical development and their parents were significantly affected by the pandemic and lockdown, children with special needs (CSN) and their families experienced a more problematic process. CSN are defined as children who show different developmental properties than their peers with typical development in one or multiple physical or mental development areas due to any reason (1). In Türkiye, CSN receive special education in schools under the Ministry of Education and Special Education and Rehabilitation Centers. In addition to these education applications, the home education needs of the children are met by their parents. With the "Regulation on Special Education Services" issued by the Ministry of National Education, special education activities to be carried out within the ministry started to be carried out in line with the relevant regulation. According to the revised and re-published Special Education Services Regulation, "special education" is defined as education carried out in an environment suitable for the disabilities and characteristics of these children with specially trained personnel and developed education programs for the education of children in need of special education (2). The regulations provided by the Ministry of Family, Labor and Social Services and the Ministry of Health to assess the CSN state that the children with intellectual disability, hearing disability, visual disability, motor skill disability, language and speech disorders, specific learning disability (SLD) and autism spectrum disorder (ASD) have support requirement (3).

The spread of the COVID-19 infection around the world, have led the countries to take various precautions in social, economic, health and education fields. Türkiye implemented various precautions like restricted entrance and exit to various cities and declared a curfew. In addition to these precautions, education activities were suspended and schools started distance education as of 16 March 2020. During the pandemic-related lockdown period, the special education centers in Türkiye were closed, therefore, CSN were deprived of education support. Later, the Ministry of Education declared to provide distance education via a mobile application for CSN. The families of the CSN experienced intense stress regarding the developmental process of their children and searched for certain solutions to support the intellectual and motor development of their children. This education support was challenging for CSN and their families who might experience problems with using the distance education applications and the parents experienced various problems such as a sense of failure in terms of necessary motivation and preparation process for all the children around the world to actively participate in the education process (4,5). The United Nations Report identified three major problems for the education of CSN during the pandemic. The report stated that the families experienced problems accessing the materials during the pandemic, the importance of family education was insufficient and there were learning gaps (6).

Roskam et al. (7) defined parental burnout as a severe state of exhaustion experienced by a person in the parental role. Factors that may pose a risk for parental burnout include; having an ill child, neuroticism and lack of emotion and stress management skills, low self-esteem and high need for control, parents not receiving sufficient emotional support from their spouses or social environment, lack of competence in child rearing, mother's involvement in work life, conflict between the roles of parent and working woman, being a parent at a young age, having a child of a younger age, low socio-economic status, low status level and a high number of children living in the same household (7-12).

A CSN in the family leads to psychological stress among the entire family (13). The parents might experience problems due to personal care needs, nutrition, health, social disharmony and dependence on their children (14). The families experienced more stress due to families becoming educators when the schools were closed during the pandemic, changing parenthood roles in the house and parents continuously staying at home (15,16). The literature shows that the parents with CSN have higher burnout levels than the parents without CSN before the pandemic and it is thought that this burnout level might be increased due to the pandemic and lockdown and the parent-child relationship might be affected (9,17,18). Based on this, our study aims to determine whether CSN and their parents had

problems with special education needs during the lockdown when special education practices were stopped during the pandemic, and to examine the relationship between the special education process and the parent-child relationship, the level of burnout of parents, and the development process of CSN. In addition, it was aimed to determine the sociodemographic characteristics that may negatively affect the developmental level of child with special needs and to intervene early. The results of the study will be useful in understanding the effects of the closure of special education centers due to epidemics or other reasons on the development processes of CSN and their families. In addition, it is thought that it will contribute to the literature on what can be done to support both the development of children and the psychological processes of families in case of similar situations.

MATERIALS and METHODS

The study forms were completed by parents with children aged 0-18 years enrolled in special education centers in Kocaeli between March and June 2021, when the restrictions were applied. A total of 283 parents' data were included in the study. The forms were sent to the special education center directors registered on the list provided by the Ministry of Education via Google surveys, consent was collected from the parents and the data was sent to an email address without identity information. Forms were collected without identity information. All parents were given an informed consent form, which explained the study in detail, and their consent to participate in the study was obtained. The forms of parents who accepted to participate in the study and completed the forms without any missing parts were included in this study. The parents are given a sociodemographic data form, Maslach Burnout Inventory and Parent-Child Relationship Scale. For this study, the approval was collected from the Republic of Türkiye Ministry of Education, Kocaeli Provincial Directorate of National Education and Kocaeli University Medical Faculty Clinic Studies Ethical Board on 05/02/2021 with GOKAEK-2021/3.15 decree. The study was planned as a cross-sectional study.

Instruments

Sociodemographic data form (SDF): The form created by the researchers asked questions about the child's age-gender, parents' age-education level, diagnosis for special education, how long the child is receiving special education, how long was the child away from special education, whether children's level of development has progressed during the pandemic according to the assessment of families, the applications parents follow instead of special education, whether there is online special education support and the pandemic period.

Maslach Burnout Inventory (MBI): The scale developed by Maslach and Jackson consists of three subscales and 22 items which are emotional exhaustion, personal accomplishment and depersonalization (19). The subscale scores are calculated separately for each subscale with "never; zero, always; six". High scores in the emotional exhaustion and depersonalization subscales and low scores in the personal accomplishment subscale are considered burnout. The scale was adapted to Turkish by Ergin (20).

Parent-Child Relationship Scale (PCRS): The scale developed by Hetherington and Clingempeel consists of 15 items and is scored based on a five-point likert-type scale (One=Never; five=Extreme) (21). This scale has two subscales which are the positive parent-child relationship and the negative parent-child relationship. The increased scores from the subscales mean the increased quality of the relationship. The Turkish adaptation of the scale was completed by Aytaç et al. (22).

Statistical Analysis

IBM SPSS 20.0 (IBM Corp., Armonk, NY, USA) package program was selected for the statistical analysis. Normal distribution was evaluated with the Kolmogorov-Smirnov test. The numerical variables with normal distribution were given as mean±standart deviation, numerical variables with non-normal distribution were given as median (25.-75. percentile) and categoric variables were given as frequency (percentage). The variance between the two groups was identified with Mann Whitney U test for numerical variables with non-normal distribution. The between-group variance when the number of groups was two or more were identified with the Kruskal Wallis test for numerical variables with non-normal distribution. The relationships between categoric variables were identified with Pearson Chi-Square and Fisher Exact tests. $p<0.050$ statistical significance was accepted to be sufficient for the two-way hypothesis test.

RESULT

A total of 283 forms were completed by the parents of the CSN with 110 (38.90%) female and 173 (61.1%) male were included in this study. The age mean of the group was found 8.38±3.69, the age mean of the mothers' was found 35.72±5.49 and the age mean of the fathers' was found 39.44±5.94. More than half of the mothers (52.30%) graduated from elementary school and the majority of the mothers (82%) didn't work. The majority of the fathers (44.90%) graduated from elementary school and 95.8% of the fathers worked. Among the children with special needs, 59 (20.80%) had ASD, 50 (17.7%) had a language-speech disorder, 40 (14.10%) had intellectual disabilities, 40 (14.10%) had SLD, 94 (33.20%) had other disorders to be registered to the special education center. Table I shows the sociodemographic data, pandemic and special education process characteristics of the group.

When the relationship between the sociodemographic characteristics of the participants and their scores on the

Table I: Sociodemographic, pandemic and special education process characteristics.

Groups	n (%)
Health status of parents	
Both alive	281 (99.3)
Mother or father dead	2(0.7)
Mother and father dead	0 (0)
Marriage status of parents	
They are together	236 (83.4)
They broke up/divorced	30 (10.6)
2nd marriage of mother and/or father	16 (5.6)
Mother's education	
None	12 (4.2)
Primary / Secondary School	148 (52.3)
High school	72 (25.4)
University	51 (18)
Father's education	
None	1 (0.4)
Primary / Secondary School	127 (44.9)
High school	100 (35.3)
University	55 (19.4)
Mother's job	
Not working	232 (82)
Working	51 (18)
Father's job	
Not working	12 (4.2)
Working	271 (95.8)
Consanguineous marriage	
No	237 (83.7)
Yes	46 (16.3)
Number of siblings	
0	50 (17.7)
1	123 (43.5)
2 or more	110 (38.8)
Total income	
2250 TL and below	44 (15.5)
2251 TL-4500 TL	163 (57.6)
4501 TL and above	76 (26.9)
Parents working from home during the pandemic	
No	223 (78.8)
Yes	60 (21.2)
Caregiver change in the pandemic	
No	262 (92.6)
Yes	21 (7.4)
Inability of parents to continue their work in the pandemic	
No	214 (75.6)
Yes	69 (24.4)
Frequency of talking about the pandemic at home	
Never/Rare	194 (68.6)
Often/Very often	89 (31.4)
Familiar person diagnosed with COVID-19	
No	77 (27.2)
Yes	206 (72.8)
Familiar person with hospitalization due to COVID-19	
No	194 (68.6)
Yes	89 (31.4)
Familiar person who died due to COVID-19	
No	215 (76)
Yes	68 (24)
Sibling with special education	
No	254 (89.8)
Yes	29 (10.2)
The time the child can not receive special education in the pandemic	
Less than 6 months	213 (75.3)
6 months and more	70 (24.7)
Other education applications instead of special education in the pandemic	
No	233 (82.3)
Yes	50 (17.7)
Online special education application	
No	252 (89)
Yes	31 (11)
How the child's development continued in the pandemic	
Regressed	84 (29.7)
Remained stable	131 (46.3)
Advanced	68 (24)

MBI was examined, it was found that the depersonalization dimension score was significantly higher in parents with children aged 11 years and younger. The relationship between Maslach burnout scale and participants' special education diagnoses was evaluated. A significant relationship was found between special education diagnosis and emotional exhaustion subscale and depersonalization subscale. However, there was no significant relationship between personal accomplishment and total scores. The difference in the emotional exhaustion subscale was due to the difference between language-speech disorder and autism spectrum disorder groups. Table II shows the sociodemographic characteristic comparison for MBI.

Looking at the relationship between the development of CSN and the scales during the pandemic period; it was found that parents with high scores in emotional burnout and depersonalization dimensions had more regression in the development of their children. Progress in the development of the child during the pandemic period was found to be higher in the group whose mother was employed, who did not have a parent working from home office, whose family's monthly income was 4501 TL and above, and whose duration of special education was 0-24 months. The regression was significantly higher in the group with a period of 6 months or more when the child did not receive special education. A significant difference was found between the groups with and without other practices instead of special education during the pandemic and the developmental status of CSN during the pandemic. Table III shows the comparison of different factors for a child's development during the pandemic.

Regarding the parent-child relationship, it was observed that parents with children aged 11 and under had significantly more

Table II: Sociodemographic comparison of MBI

Features	Maslach Burnout Inventory							
	Personal accomplishment		Emotional exhaustion		Depersonalization		Total score	
	Median (25-75 p)	p	Median (25-75 p)	p	Median (25-75 p)	p	Median (25-75 p)	p
Age								
11 and below	29.50 (22.00-34.00)	0.541*	14.00 (11.00-18.00)	0.455*	6.00 (5.00-9.00)	0.006*,‡	6.00 (5.00-9.00)	0.758*
Between 12-18	29.00 (22.50-36.00)		14.00 (10.00-17.00)		5.00 (5.00-6.50)		5.00 (5.00-6.50)	
Gender								
Female	19.50 (11.00-27.00)	0.365*	13.50 (10.00-18.00)	0.859*	6.00 (5.00-8.00)	0.886*	40.50 (33.00-50.25)	0.838*
Male	18.00 (10.00-27.00)		14.00 (11.00-18.00)		6.00 (5.00-8.00)		40.00 (34.00-50.00)	
Diagnosis of the child with special education								
Autism spectrum disorder	31.00 (28.00-34.00)	0.472†	16.00 (12.00-21.00)	>0.05†,‡	7.00 (5.00-11.00)	0.012†,‡	43.00 (35.00-51.00)	0.341†
Intellectual disability	29.00 (16.25-35.75)		13.00 (10.25-15.00)		5.00 (5.00-7.00)		40.50 (38.00-46.00)	
Language- speech disorder	25.00 (18.75-34.00)		13.00 (10.00-15.25)		5.00 (5.00-8.00)		42.00 (39.75-46.00)	
Specific learning disability	28.50 (24.00-34.75)		13.00 (10.25-16.00)		5.00 (5.00-7.00)		40.00 (36.00-45.00)	
Other	30.00 (23.00-35.00)		15.00 (11.00-19.25)		6.00 (5.00-9.00)		42.00 (37.00-45.00)	
Total income								
2250 TL and below	27.00 (14.25-34.75)	0.114†	12.00 (10.00-15.75)	0.012†,‡	5.00 (5.00-7.00)	0.217†	39.00 (34.25-46.75)	0.731†
2251 TL-4500 TL	30.00 (23.00-35.00)		13.00 (11.00-17.00)		6.00 (5.00-9.00)		39.00 (33.00-51.00)	
4501 TL and above	30.00 (24.00-34.00)		16.50 (12.00-20.75)		6.00 (5.00-8.00)		41.00 (35.25-48.75)	
Parents working from home during the pandemic								
No	30.00 (22.00-35.00)	0.283*	14.00 (11.00-18.00)	0.891*	6.00 (5.00-8.00)	0.893*	41.00 (34.00-51.00)	0.332*
Yes	28.50 (19.25-33.75)		13.00 (11.00-18.00)		6.00 (5.00-8.00)		39.00 (35.00-46.00)	
Sibling with special education								
No	29.00 (22.00-34.25)	0.412*	14.00 (11.00-18.00)	0.514*	6.00 (5.00-8.00)	0.348*	40.00 (33.00-50.00)	0.814*
Yes	32.00 (22.50-34.50)		14.00 (10.00-17.50)		5.00 (5.00-8.50)		42.00 (37.50-47.50)	
The time the child can not receive special education in the pandemic								
Less than 6 months	30.00 (23.00-35.00)	0.089*	13.00 (11.00-18.00)	0.322*	6.00 (5.00-8.00)	0.332*	41.00 (34.00-50.00)	0.372*
6 months and more	28.00 (19.75-33.00)		14.00 (11.00-20.00)		6.00 (5.00-9.00)		38.00 (34.00-47.00)	
Other education applications instead of special education in the pandemic								
No	29.00 (21.00-34.50)	0.279*	14.00 (11.00-18.00)	0.726*	6.00 (5.00-8.00)	0.540*	41.00 (34.00-49.50)	0.709*
Yes	31.00 (24.75-34.25)		13.50 (11.00-19.00)		6.00 (5.00-8.00)		38.50 (34.00-55.00)	
Online special education application								
No	29.00 (22.00-35.00)	0.178*	13.50 (11.00-18.00)	0.595*	6.00 (5.00-8.00)	0.782*	40.50 (34.00-50.00)	0.981*
Yes	29.00 (17.00-32.00)		15.00 (11.00-21.00)		6.00 (5.00-9.00)		40.00 (35.00-49.00)	
The development of the child in the period of the pandemic								
Regressed	28.50 (19.00-33.00)	0.179†	14.50 (10.00-19.00)	0.031†,‡	6.00 (5.00-10.00)	0.035†,‡	40.50 (34.25-50.00)	0.242†
Remained stable	31.00 (24.00-35.00)		14.00 (11.00-19.00)		5.00 (5.00-8.00)		42.00 (35.00-51.00)	
Advanced	29.50 (19.25-34.00)		13.00 (10.00-16.00)		5.00 (5.00-7.00)		38.00 (32.00-47.75)	

**Mann Whitney U, †Kruskal Wallis, ‡p<0.050*

positive relationships with their children. Table IV shows the PCRS and sociodemographic and special needs characteristics.

DISCUSSION

A study conducted in Italy during the lockdown due to the pandemic reported that parents with CSN were in the high-risk group for burnout (23). Another study revealed that the strongest predictor for parent burnout was having a child with special needs and children younger than 10 years old (24). A study that investigated the burnout of mothers with CSN during the pandemic found that the emotional exhaustion dimension scores of mothers with CSN between six-nine years old were higher than mothers with CSN between 10-18 years old (25). In another study looking at the level of burnout in parents of children with autism, it was observed that burnout levels of parents with children with autism increased as the age of their children decreased (26). Our study shows that mothers with pre-adolescent children experienced higher levels of burnout. This could suggest that parents of younger children may not

Table III: Comparison of the development of the CSN and sociodemographic characteristics during the pandemic

Features	The development of the child in the period of the pandemic			
	Regressed	Remained stable	Advanced	p
Mother's age*	35.58±5.45	36.44±5.20	34.5±5.93	0.078§
Father's age*	39.69±5.02	39.77±6.62	38.51±5.57	0.279§
Age†				
11 and below	62 (27.9)	98 (44.1)	62 (27.9)	0.013‡,‖
Between 12-18	22 (36.1)	33 (54.1)	6 (9.8)	
Mother's education†				
None	5 (41.7)	4 (33.3)	3 (25.0)	
Primary / Secondary School	43 (29.1)	71 (48.0)	34 (23.0)	0.337‡
High school	25 (34.7)	34 (47.2)	13 (18.1)	
University	11 (21.6)	22 (43.1)	18 (35.3)	
Father's education†	1 (1.2)	0 (0.0)	0 (0.0)	
None	40 (47.6)	60 (45.8)	27 (39.7)	0.171‖
Primary/Secondary School High school	32 (38.1)	47 (35.9)	21 (30.9)	
University	11 (13.1)	24 (18.3)	20 (29.4)	
Mother's job†				
Not working	70 (30.2)	113 (48.7)	49 (21.1)	0.044‡,‖
Working	14 (27.5)	18 (35.3)	19 (37.3)	
Father's job†				
Not working	2 (2.4)	5 (3.8)	5 (7.4)	0.303‖
Working	82 (97.6)	126 (96.2)	63 (92.6)	
Total income†				
2250 TL and below	15 (17.9)	22 (16.8)	7 (10.3)	0.045†,‖
2251 TL-4500 TL	54 (64.2)	75 (57.3)	34 (50.0)	
4501 TL and above	15 (17.9)	34 (26.0)	27 (39.7)	
Parents working from home during the pandemic†				
No	65 (77.4)	111 (84.7)	47 (69.1)	0.035‡,‖
Yes	19 (22.6)	20 (15.3)	21 (30.9)	
Sibling with special education†				
No	77 (91.7)	117 (89.3)	60 (88.2)	0.766‡
Yes	7 (8.3)	14 (10.7)	8 (11.8)	
Total length of time the child attended special education†				
0-24 months	22 (27.2)	51 (39.2)	42 (62.7)	0.000‡,‖
More than 24 months	59 (72.8)	79 (60.8)	25 (37.3)	
The time the child can not receive special education in the pandemic				
Less than 6 months	53 (63.1)	101 (77.1)	59 (86.8)	0.003†,‖
6 months and more	31 (36.9)	30 (22.9)	9 (13.2)	
Other education applications instead of special education in the pandemic†				
No	75 (89.3)	100 (76.3)	58 (85.3)	0.040‡,‖
Yes	9 (10.7)	31 (23.7)	10 (14.7)	
Online special education application†				
No	78 (92.9)	112 (85.5)	62 (91.2)	0.196‡
Yes	6 (7.1)	19 (14.5)	6 (8.8)	

*****Mean (±SD), †n(%), ‡Pearson Chi-Square, §Kruskal Wallis, ‖Fischer's Exact test, ‖p<0.050*

be able to adapt to the child's developmental problems and may feel less successful due to a lack of knowledge about the child's diagnosis, educational process and progress. Lockdown decreased social support and the necessity to sustain the child's education with the support of the other individuals in the family during the pandemic might cause the parents to emotionally struggle. Additionally, it was reported that the behavioral problems of the CSN might be increased since the special education centers that served CSN were closed due to the pandemic and the ongoing programs were interrupted (27).

The MBI Emotional Exhaustion dimension score was higher in parents with children with ASD than in parents with children with language-speech disorders. Similarly, in a study conducted in Türkiye, the MBI Emotional Exhaustion score was found to be higher in mothers with children diagnosed with ASD or cerebral palsy than in mothers with children with Down Syndrome or

Table IV: Comparison of sociodemographic characteristics and PCRS

Features	The Parent-Child Relationship Scale			
	Positive		Negative	
	Median (25-75 p)	p	Median (25-75 p)	p
Age				
11 and below	42.00 (39.00-45.00)	0.045*,§	40.00 (33.00-45.00)	0.187*
Between 12-18	13.00 (9.00-16.00)		11.00 (8.50-15.00)	
Gender				
Female	41.50 (39.00-45.00)	0.927*	12.00 (9.00-15.25)	0.211*
Male	41.00 (37.50-45.00)		13.00 (10.00-16.00)	
Diagnosis of the child with special education				
Autism spectrum disorder	41.00 (39.00-44.00)		12.00 (9.00-15.00)	
Intellectual disability	40.50 (38.00-46.00)		12.00 (7.25-15.00)	
Language-speech disorder	42.00 (39.75-46.00)	0.533†	14.00 (10.75-17.00)	0.430†
Specific learning disability	40.00 (36.00-45.00)		11.00 (9.00-16.00)	
Other	42.00 (37.00-45.00)		13.00 (9.00-16.00)	
Total income				
2250 TL and below	41.00 (39.00-45.00)		12.00 (7.00-17.00)	
2251 TL-4500 TL	42.00 (38.00-45.00)	0.841†	13.00 (9.00-16.00)	0.695†
4501 TL and above	41.00 (38.00-45.00)		12.00 (10.00-15.00)	
Parents working from home during the pandemic				
No	1.00 (0.00-1.00)	0.860*	1.00 (0.00-1.00)	0.413*
Yes	1.00 (0.00-1.00)		1.00 (0.00-1.00)	
Sibling with special education				
No	41.00 (38.00-45.00)	0.992*	12.50 (9.00-16.00)	0.948*
Yes	41.00 (39.00-45.50)		12.00 (9.00-16.00)	
The time the child can not receive special education in the pandemic				
Less than 6 months	42.00 (39.00-45.00)	0.082*	13.00 (9.00-16.00)	0.592*
6 months and more	40.00 (36.75-44.00)		12.00 (9.00-15.25)	
Other education applications instead of special education in the pandemic				
No	41.00 (38.50-45.00)	0.415*	13.00 (9.00-16.00)	0.482*
Yes	42.00 (37.00-46.25)		12.00 (9.00-15.00)	
Online special education application				
No	41.00 (39.00-45.00)	0.428*	13.00 (9.00-16.00)	0.773*
Yes	41.00 (36.00-44.00)		11.00 (9.00-16.00)	
The development of the child in the period of the pandemic				
Regressed	41.00 (37.00-44.00)		13.00 (9.00-17.00)	
Remained stable	41.00 (38.00-45.00)	0.540†	13.00 (9.00-16.00)	0.603†
Advanced	43.00 (40.00-45.75)		12.00 (9.00-14.75)	

Mann Whitney U, †Kruskal Wallis, §p<0.05

other special needs (25). Children with ASD have difficulty adapting to new environments/situations, especially during the pandemic (28). In addition, with the pause in special education programmes, parents became teachers at home, and the fact that parents did not know enough about the situation of children with ASD and did not receive preparatory training did not allow home education to be implemented well enough. The stressful processes experienced by families in the care of children with ASD, the difficulty of parents in adapting to the sudden changes during the virus pandemic, and the increase in inappropriate behaviours due to lack of physical activity due to restrictions may have led to increased burnout. At the same time, high levels of imprinting attitudes and problematic interaction with parents, problems with online communication between the teacher and parent to monitor the development of the children during home education caused online education to be non-optimal (28-33). In a study conducted in Türkiye, it was reported that the frequency of emotional and behavioural problems in the ASD group was higher than in the group with SLD, intellectual disability and speed-language disorder group (34). The sensitivity of children with ASD to changes in routines, the increase in anger outbursts and behavioral problems due to these changes, the problems related to education and the concerns of families about the development of their children, the difficulties experienced in accessing health services, and the lack of social support may have increased the burnout level of parents. The increase in burnout may also have led parents to adopt more intolerant and harsh approaches to their

children. It has also been reported in the literature that stressed parents are more likely to respond to their children's anxious behaviours or demands in aggressive or abusive ways, and that the pandemic has been very challenging for parents and has significantly increased their stress levels (35,36).

In a study examining the burnout levels of parents of CSN aged 6-18 years during the pandemic period, it was found that there was a significant difference between the MBI Personal Achievement dimension score and monthly economic income, and this difference was due to the difference between the highest income level and the lowest income level (25). In another study conducted with mothers with children diagnosed with ASD in Türkiye, no significant difference was found between income level and Emotional Exhaustion or Personal Achievement scores (37). In our study group, it was observed that the emotional exhaustion dimension score increased as the total income of the family increased. These differences in the results may have resulted from differences in study designs such as the economic distribution of the study groups, age groups, and whether the study was conducted during the lockdown period of the pandemic. In our study, 76% of the parents stated that their children's development regressed or remained stable during the pandemic-related lockdown period. It was found that parents with high scores in the MBI Emotional Exhaustion and Depersonalization dimensions had more regression in the development of their children. A study conducted in Kenya reported that during the pandemic restriction period, 53.33% of CSN found distance education insufficient, 90% thought that their education was significantly affected, and the number of students in special education schools decreased by 60% after the lockdown period (38). The level of burnout in parents may have increased as a result of the increased burden on parents with the closure of special education schools. Parents who experience more burnout may also not be able to deal with their children sufficiently. Parents with high levels of mental distress may be more limited and distant in their communication with their children and more insensitive to their children's needs, and this may increase the likelihood of their children developing maladaptive behaviours (23).

Considering the parent-child relationship, it was observed that parents with children aged 11 years and younger had significantly more positive relationships with their children. The fact that the development of pre-adolescent CSN observed in our study progressed more during the pandemic period may also be due to this relationship. Additionally, the restricted social life of the CSN who need individualization and autonomy during the adolescence period and spending more time at home with their parents might have negatively affected the parent-child relationship.

When the literature was reviewed, few studies on parental burnout during the pandemic period were found. The strengths of our study are that it was conducted during the restriction period of the pandemic, all parents of children between the ages of 0-18 were included, and all special needs diagnoses were examined in our study, while a single diagnosis was evaluated in similar studies in the literature. When we look at the limitations of our study; evaluating the developmental levels of CSN based on the observations of the family, the forms are filled out only by the parents, absence of a scale with Turkish validity and reliability that assesses the burnout of parents with children aged 0-18 years. In addition, the absence of a healthy control group in our study prevented us from seeing the differences between the groups with and without children with special needs. Since the study was a cross-sectional study and there was no clear information about pre-pandemic burnout and the relationship of parents with children with special needs, the effects of the pandemic were not evaluated clearly. Completing the forms online is among the limitations in terms of result reliability.

At the beginning of the study, it was thought that the closure of special education services could have a negative impact on the development of children with severe social interaction difficulties, such as ASD, and lead to outcomes that are difficult to reverse. At the same time, it was predicted that with the discontinuation of special educational support, the stress and anxiety levels of families might increase, they might have to make more efforts to overcome this deficiency, and this situation might increase the level of burnout of parents. The results of the study support our hypotheses. It was thought that parents with children in the younger age group would have more relationship problems due to the discontinuation of special educational support, and it was found that families with children in adolescence were more affected by this situation. This situation weakened the view that special educational support is more beneficial for young children and drew attention to the fact that its effect in adolescence should not be ignored.

As a result, parents were forced to work from home, educate their children at home and do the household chores during the lockdown. At the same time, meetings with family and friends were restricted and most social activity centres were temporarily closed due to social distancing (39). In addition, various businesses reduced or closed their services, leading to situations such as financial challenges and unemployment, which have the potential to increase parental burnout (24). The lockdown measures have led to a significant increase in the amount of time parents and children spend together, and staying at home for more than 2 months has led to a reduction in individual spaces at home. Families with school-age children were forced to allocate some of their time together to education, and this led to parents taking on the role of teachers for their children.

These special living conditions may have contributed to increased parental burnout due to increased housework, inability to use external environmental sources due to the risk of infection contagion, and reduced use of internal sources (40). Investigating how the restrictions and absence of special

education affected the mental health of the families and the development of CSN is important for understanding how the schools and society can support these individuals in similar periods when special education is discontinued.

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