Arrival Date: 08.07.2021 | Published Date: 25.11.2021 | 2021, Vol: 6, Issue: 15 | pp: 01-09 | Doi Number: http://dx.doi.org/10.46648/gnj.254

The Effects of the Coronavirus (COVID-19) Pandemic on Children With Speech and Language Disorders and Their Families

Koronavirüs (COVİD-19) Salgınının Dil ve Konuşma Bozukluğu Olan Çocuklara ve Ailelerine Etkileri

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ABSTRACT

Objective: The aim is to determine the effects of the covid-19 pandemic on the functions and psychosocial conditions of children with speech and language disorders and their families.

Material-Metod: Within the scope of the study, a questionnaire form created by the researchers through "Google Forms" was applied online to 70 families with speech and language disorders and 30 families with healthy children, feedback was obtained from the families of 100 children. In the questionnaire form applied to the families; before and during the covid-19 pandemic, there are questions about families' quality time with their children, daily life activities, emotional and anxiety situations. Study data were collected between June-July 2020.

Results: Spending quality time with their families before the pandemic was significantly higher in the group with speech and language disorders compared to the families of the healthy group (p < 0.05). During the pandemic, an increase in the use of television, tablets and computers was observed in the majority of children in both groups. In addition, families in both groups were found to have moderate/high levels of fear of transmission of the covid-19 virus to one of their families.

Conclusion: It has been observed that the function and psycho-social impact of the Covid-19 pandemic on children with speech and language disorders and their families is similar to healthy children and their families. In particular, it has been observed that all families experience intense fear of transmission of the disease during this epidemic process, also have high levels of anxiety about future.

Keywords: Children, covid-19, families, mental health, pandemic.

ÖZET

Amaç: Covid-19 salgınının dil ve konuşma bozukluğu olan çocukların ve ailelerinin işlevlerine ve psikososyal durumlarına yönelik etkilerinin belirlemesi amaçlanmaktadır.

Materyal-Metot: Çalışma kapsamında çocuğunda dil ve konuşma bozukluğu olan 70 aile ile sağlıklı çocuğa sahip olan 30 ailenin tamamına ''google form'' ile araştırmacılar tarafından oluşturulan anket formu çevirimiçi uygulanarak, toplam 100 çocuğun ailesinden geri dönüş sağlanmıştır. Ailelere uygulanan anket formunda; covid-19 salgını öncesinde ve sürecinde ailelerin çocukları ile birlikte kaliteli zaman geçirme durumları, günlük yaşam aktiviteleri, duygusal ve anksiyete durumlarına ilişkin sorular yer almaktadır. Çalışma verileri Haziran ile Temmuz 2020 tarihleri arasında toplanmıştır.

Bulgular: Dil ve konuşma bozukluğu olan grubun salgın öncesi aileleri ile birlikte kaliteli zaman geçirme durumu sağlıklı olan grubun ailesi ile karşılaştırıldığında anlamlı olarak daha yüksek elde edildi (p<0,05). Her iki grup yer alan çocukların salgın sürecinde çoğunluğunun televizyon, tablet ve bilgisayar kullanımlarında artış gözlendi. Bunlara ilave olarak her iki grupta bulunan ailelerin covid-19 virüsünün ailesinden birine bulaşmasından korkma düzeyleri ise orta/çok olarak tespit edildi.

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Sonuç: Covid-19 salgının dil ve konuşma bozukluğu olan çocuk ve ailesinin işlev ve psiko-sosyal etkisinin sağlıklı çocuğa sahip olan aileler ile benzer olduğu görülmüştür. Özellikle tüm ailelerin bu salgın sürecinde hastalığın bulaşmasından yoğun korku yaşadıkları ve ayrıca geleceğe dair kaygı düzeylerinin yüksek olduğu da görülmüştür.

Anahtar Kelimeler: çocuklar, covid-19, aileler, mental sağlık, pandemic.

1. INTRODUCTION

Coronaviruses constitute a large family of viruses that are encountered in the population as commonly as a cold and can range from a picture of self-limiting mild infection to much more severe infectious conditions (Turkish Ministry of Health, 2020). Cases of pneumonia of unknown etiology were first detected on December 31st, 2019, in the city of Wuhan in China (Sohrabi et al., 2017; Ozalp et al., 2020).

Due to the spread of the Covid-19 pandemic all over the world, some prohibitions and measures such as social isolation, quarantine, travel restrictions, and contact avoidance have been taken. These measures can affect people's social life, emotional state and mental health (Wang, 2020a). In addition, there may be changes in the daily routines of individuals. For example, it causes changes in routines and physical activities such as eating, sleeping, studying, watching television, and using mobile devices of both children and adults (Chen et al., 2020). For this reason, the coronavirus not only threatens the physical health of individuals; at the same time, it has an influence on mental health, which can become manifest in both the short and long term (Aşkın et al.,2020). Individuals were observed to perceive increasing levels of fear, anxiety and stress particularly during the initial outbreak and the periods during which the number of coronavirus cases showed an increase (Aşkın et al., 2020; Raikumar, 2020). Studies have shown that families of disabled individuals may have a more difficult time during the pandemic (Dhima et al., 2020). The number of living disabled people registered in the "National Disability Data System" in our country is 2.505.851 (GDDES, 2020). Accordingly, the percentage of individuals in Turkey having at least one disability and being 3 years of age or older is 6.9%, while the percentage of people living with speech problems is 0.7% (Population and Housing Survey, 2011). Due to the measures taken during the pandemic in our country, the educational needs of all disabled individuals, including children with speech and language disorder (SLD), could not be supported by special education centers between March and June of 2020. In these circumstances, the role of families of children with SLD hasn't only been to provide basic care, but also to take on responsibilities such as meeting their childrens' special education needs at home. During the pandemic, families are faced with many responsibilities such as the care and education of children, as well as the psychological and social ramifications of the pandemic. To date, pandemic studies have generally focused on how healthy individuals' affect psychological, social and physical lives have been impacted (Wang et al., 2020; Rajkumar, 2020).

The aim of our study is to determine the effects of the Covid-19 pandemic on the functions and psychosocial

conditions of children with speech and language disorders and their families.

2. MATERYALS AND METOTS

Study Design and Participants

Participants were enrolled to the study on a voluntary basis, after obtaining the necessary permissions from the Ethics Committee Coordinator for the study (84892257-604.01.02-E.16659). This study was conducted online from June 1 to July 30, 2020. G-Power 3.0 program was used to calculate the sample size within the scope of the study. Seventy families and their children with SLD and 30 families and their healthy children were included in the study. Google documents was used as a platform to design the online surveys that were automatically hosted via a unique URL. The questionnaire was created by an expert in neuroscience and a speech and language therapist. Participants were asked about (i) demographic information, (ii) information about education and SLD status of their children, (iii) information on the duration of TV, computer, tablet use, and quality time and routines of children during the pandemic, (iv) different emotions and thoughts caused by the Covid-19 outbreak, (iv) and anxiety status during the COVID-19 pandemic. Respondents had to answer a yes-no question to confirm willingness to participate voluntarily. their After confirmation of the question, the participant was directed to complete the self-report survey.

It is observed that, of the participants with a child with SLD, 88.57% (n=62) were the mother and 11.43% (n=8) were the father; and of the participants with a healthy child, 86.67% (n=26) were the mother and 13.33% were the father. The mean age of the children with SLD was $9,15\pm3.39$ while the mean age of their mothers/fathers was 34.93 ± 6.39 ; and the mean age of the healthy children was 7.30 ± 3.16 while the mean age of their mothers/fathers was 38.07 ± 4.71 .

Of the children with SLD, 30.00% (n=21) were determined to be female and 70.00% (n=49) to be male; while 43.43% (n=13) of the healthy children were female and 56.67% (n=17) were male. These children's levels of education were as follows; of the children with SLD, 1.43% (n=1) attended daycare, 11.43% (n=8) attended pre-school, 54.29% (n=38) attended elementary school, 21.43% (n=15) attended middle school, and 5.71% (n=4) attended high school; while of the healthy children, 10.00% (n=3) attended daycare, 6.67% (n=2) attended pre-school, 46.67% (n=14) attended elementary school. It was determined that, 8.20% (n=5) of the siblings of children with SLD also had health problems. It was found that 97.14% (n=68) of children with SLD received special education and that 2.86%



(n=2) did not receive special education. During the epidemic period, 75.71% (n=53) of children with SLD and 66.6% (n=20) of healthy children were found to utilize distance education programs.

Measures

-Quality time and daily life activities

Quality time is defined as time spent with the child activities doing activities that are enjoyable and supportive for development (Türkoğlu, 2013). In the questionnaire, families were asked about the type and duration of quality time with their children. Daily life activities are defined as routine activities needed for day-to-day living (Murphy et al.,2000). Participants were asked questions about their daily routines and activities related to food, sleep, physical activities, TV, tablet and computer use.

-Emotional and anxiety COVID-19 outbreak

Participants were asked to respond to questions about changes in their children's emotional state during the pandemic such as "happy and compliant", "angry", "furious", "restless and anxious". These questions were asked using a four-choice rank scale with "none", "low", "moderate" and "high". An important question regarding the pandemic is a question about how people's emotional states and anxiety have changed with the progression of the pandemic. To measure this, we asked participants, "How scared are you that your family will catch the Covid-19 disease?". We asked them to respond on a four-point ordinal scale: "none", "low", "moderate" and "high". We used four items of the Abbreviated Beck Anxiety Inventory such as "death", "feeling of choking", "nervous" and "losing control" in order to evaluate the anxiety states of the participants (Beck et al., 1988; Ulusoy et al., 1998). We also added anxiety states such as "fear of losing your loved one", "sadness", and "anxiety

about the future" to the questionnaire. These expressions were asked using a scale with "none", "low", "modarate" and "high".

Statistical Analysis

Statistical analysis was performed using IBM's SPSS 25.0 (SPSS Inc., Chicago, IL, USA) program package. In this study, frequency and percentage statistics were used to represent the responses to the questionnaire items. In the study where the independent variable was taken as the child's SLD, the Mann Whitney U test was used for comparison purposes when the dependent variable was at the classification level.

3. RESULTS

In our study, responses to the questionnaires completed by the parents of 100 healthy children and children with SLD were inspected. The evaluations based on these responses are presented below.

Quality Time ve Daily Life Activities

Before the pandemic, spending quality time with their families was significantly higher in the group with SLD compared with the families of the healthy group (Mann-Whitney-U test, Z= 2.313, p=0.021). The investigation of mean ranks belonging to the period before the pandemic that were significantly higher revealed that the associated mean rank of the group with SLD (54.78%) was significantly higher than that of families with healthy children (40.52%). The state of using mass media of children with SLD before and during the pandemic were not significantly different from those of healthy children (Mann-Whitney-U test, Z= 0.29, p=0.76) (Table 1).

Table 1. The state of spending quality time and using mass media before and during the pandemic

		Group				
_	Hea	lthy	Group w	vith SLD		
	n	%	n	%	Z	р
Mean Rank	30	40.52	70	54.78	2.31	0.02*
Mean Rank	30	46.05	70	52.41	1.07	0.28
Mean Rank	30	49.23	70	51.04	0.29	0.76
Mean Rank	30	50.28	70	50.59	0.05	0.96
	Mean Rank Mean Rank	n Mean Rank 30 Mean Rank 30 Mean Rank 30	Healthyn%Mean Rank3040.52Mean Rank3046.05Mean Rank3049.23	n % n Mean Rank 30 40.52 70 Mean Rank 30 46.05 70 Mean Rank 30 49.23 70	Healthy Group with SLD n % n % Mean Rank 30 40.52 70 54.78 Mean Rank 30 46.05 70 52.41 Mean Rank 30 49.23 70 51.04	Healthy Group with SLD Z n % n % Z Mean Rank 30 40.52 70 54.78 2.31 Mean Rank 30 46.05 70 52.41 1.07 Mean Rank 30 49.23 70 51.04 0.29

*Mann Whitney U Test

The comparison of the SLD group with the families in the healthy group in terms of the duration of sleep, having meals, the number of meals before and during the pandemic did not reveal any statistically significant differences (p>0.05) (Table 2).

			Grou	p	-				
		Healthy		Group with SLD				Z	р
		n	%	n	%		-		
Your Duration of Sleep Before the Pandemic	Mean Rank	30	50.47	70	50.51	0.00	0.99		
Your Duration of Sleep During the Pandemic	Mean Rank	30	44.83	70	52.93	1.32	0.18		
Your Number of Meals Before the Pandemic	Mean Rank	30	55.45	70	48.38	1.36	0.17		
Your Number of Meals During the Pandemic	Mean Rank	30	51.53	70	50.06	0.26	0.79		

Table 2. Sleeping and eating habits of the families before and during the pandemic.

*Mann-Whitney-U Test

The comparison of the families of the group with SLD with the families of the healthy group in terms of daily life activities, physical activity, and social conditions did not reveal any significant differences (p>0.05). During the pandemic period, the levels of difficulty in performing daily tasks were determined as none/low, the levels of sleep pattern disruption as low/moderate, the levels of change in eating habits as none/moderate, the levels of change in physical activity as moderate/high, the levels of improvement in intrafamilial communication as moderate/high, and the levels of increase in intrafamilial communication problems as none (Table

3).

Table 3. Evaluation of the families	daily routines	s. physical activity	v and social relat	ionships during the pandemic.

		Group					
During the pandemic		Healthy		Group	with SLD	Z	р
		n	%	n	%		
	None	8	26.67	27	38.57		0.81
Do you have difficulty in performing daily tasks?	Low	12	40.00	16	22.86	- 0.23	
	Moderate	8	26.67	19	27.14	0.25	
	High	2	6.67	8	11.43		
Was your sleep pattern disrupted?	None	7	23.33	14	20.00		
	Low	9	30.00	29	41.43	- 0.45	0.65
	Moderate	8	26.67	17	24.29		
	High	6	20.00	10	14.29		
Did your eating habits change?	None	7	23.33	24	34.29		
	Low	11	36.67	21	30.00	- 0.92	0.35
	Moderate	9	30.00	21	30.00	- 0.92	0.55
	High	3	10.00	4	5.71		
	None	0	0.00	8	11.43		0.21
Did your physical activity levels	Low	6	20.00	18	25.71	- 1.23	
change?	Moderate	12	40.00	18	25.71	1.23	
-	High	12	40.00	26	37.14		
	None	2	6.67	2	2.86		0.11
Did your familial communication	Low	6	20.00	8	11.43	1 5 9	
improve?	Moderate	12	40.00	27	38.57	- 1.58	
•	High	10	33.33	33	47.14	_	
	None	12	40.00	39	55.71		
	Low	11	36.67	10	14.29	-	0.47
Did your familial problems increase? -	Moderate	5	16.66	16	22.86	- 0.71	0.47
-	High	2	6.67	5	7.14	_	

*Mann-Whitney-U Test



Emotional and Anxiety Covid-19 Outbreak

The healthy group and the group with SLD were not significantly different in terms of the changes in the emotional state during the pandemic period (p>0.05). The inspection of column percentages revealed that the level of happiness was **moderate** for children with SLD and healthy

children, the levels of getting angry quickly at everything and difficulty keeping children at home were, respectively, **low and moderate**, the levels of irritability, anxiety and having tantrums were **none and low**, the levels of anxiety were **low and moderate**, and the levels of interaction with siblings were **high** for both groups (Table 4).

Table 4. Evaluation of en	notional states of a	all children during	the t	pandemic j	period.

				Group		_	
		Healthy		Group with SLD		Z	р
		n	%	n	%	—	
Is Your Child Honey and	None	3	10.00	11	15.71		
Is Your Child Happy and Adaptive During the	Low	5	16.67	12	17.14	- 0.68	0.49
Pandemic? —	Moderate	16	53.33	35	50.00	0.08	0.49
	High	6	20.00	12	17.14		
Does Your Child Get Angry	None	2	6.67	14	20.00		
	Low	12	40.00	17	24.29	- 0.24	0.80
Quickly at Everything During — the Pandemic? —	Moderate	10	33.33	23	32.86	0.24	0.80
	High	6	20.00	16	22.86		
Does Your Child Have Tantrums During the Pandemic?	None	9	30.00	28	40.00	- 0.02	0.98
	Low	14	46.67	19	27.14		
	Moderate	6	20.00	16	22.86		
	High	1	3.33	7	10.00		
	None	6	20.00	16	22.86	- - 0.86	0.38
Do You Have Difficulty —	Low	10	33.33	14	20.00		
Keeping Your Child at Home — During the Pandemic? —	Moderate	10	33.33	23	32.86		
	High	4	13.33	17	24.29		
	None	10	33.33	27	38.57		0.62
Did the Irritability and Anxiety — Levels of Your Child Increase —	Low	11	36.67	15	21.43	- 0.48	
During the Pandemic?	Moderate	7	23.33	15	21.43	0.48	0.02
	High	2	6.67	13	18.57		
	None	3	10.00	4	5.71		0.10
Does Your Child Interact More	Low	2	6.67	16	22.86	- 1.64	
with You and His/Her Siblings —	Moderate	8	26.67	24	34.29	1.04	0.10
During the Pandemic?	High	17	56.67	26	37.14		
Did Your Child's Level of —	None	12	40.00	22	31.43	_	
	Low	10	33.33	20	28.57	1 10	0.00
Anxiety Increase During the — Pandemic? —	Moderate	6	20.00	21	30.00	- 1.18	0.23
	High	2	6.67	7	10.00		

*Mann-Whitney-U Test

The comparison of the parameters associated with the emotional state during the pandemic between the group with SLD and the healthy group did not reveal any statistically significant differences (p>0.05). The evaluation of parameters that; the levels of fear about their families becoming infected with the covid-19 were **moderate and high;** the levels of increased irritability, experiencing a sense of losing relatives, quickly getting angry and furious at everything, experiencing weakness and fatigue were **low**; the levels of feeling suffocated, the sense of losing control, the feeling of loneliness were **none**; the levels of experiencing fear of death were, respectively, **none and low**; the levels of quickly getting upset over things were **low/moderate**; the levels of getting overemotional were **low/moderate**; and the levels of g anxiety about future were **moderate/high** (Table 5).

			Group			_	
		Hea	althy	Group with SLD		Ζ	р
		n	%	n	%		
Are you worried about your –	None	1	3.33	1	1.43	_	
family becoming infected with –	Low	3	10.00	12	17.14	- 1.09	0.27
the coronavirus?	Moderate	17	56.67	23	32.86	1.07	0.27
	High	9	30.00	34	48.57		
_	None	4	13.33	2	2.86	_	
Did your irritability increase? -	Low	10	33.33	24	34.29	- 1.26	0.20
	Moderate	9	30.00	22	31.43	1.20	0.20
	High	7	23.33	22	31.43		
_	None	16	53.33	32	45.71	_	
Do you experience a sense of	Low	9	30.00	20	28.57	- 0.83	0.40
loss of control?	Moderate	3	10.00	14	20.00	0.85	0.40
	High	2	6.67	4	5.71		
	None	10	33.33	29	41.43	_	
Do you experience fear of	Low	13	43.33	21	30.00	- 0.13	0.89
death?	Moderate	5	16.67	11	15.71	0.15	0.89
-	High	2	6.67	9	12.86		
	None	3	10.00	10	14.29		
Do you experience fear of	Low	12	40.00	24	34.29	0.65	0.51
losing your relatives?	Moderate	11	36.67	14	20.00	- 0.65	0.51
_	High	4	13.33	22	31.43	_	
	None	6	20.0	18	25.71		
Have you started getting angry quickly at everything?	Low	15	50.0	20	28.57	0.70	0.42
	Moderate	6	20.0	19	27.14	- 0.78	0.43
	High	3	10.0	13	18.57	_	
	None	18	60.00	30	42.86		
-	Low	8	26.67	19	27.14	_ 1.02	0.07
Do you feel suffocated? –	Moderate	2	6.67	10	14.29	- 1.83	0.06
-	High	2	6.67	11	15.71	_	
	None	8	26.67	17	24.29		
 Do you get upset quickly over	Low	12	40.00	18	25.71		
everything?	Moderate	9	30.00	18	25.71	- 1.65	0.09
_	High	1	3.33	17	24.29	_	
	None	7	23.33	17	24.29		
Have you become	Low	11	36.67	17	24.29		
overemotional?	Moderate	11	36.67	23	32.86	- 1.14	0.25
	High	1	3.33	13	18.57	_	
	None	2	6.67	10	14.29		
Do you feel anxious about the	Low	8	26.67	16	22.86		
future?	Moderate	11	36.67	20	28.57	- 0.17	0.86
	High	9	30.00	20	34.29	_	
	None	17	56.67	24	41.43		
Do you experience a sense of	Low	7	23.33	29	31.43	_	
loneliness?	Moderate	5	16.67	11	15.71	- 1.40	0.15
	High	1	3.33	8	11.43	_	
		4	13.33	18	25.71		
Do you fool wools and timed?	None					_	
Do you feel weak and tired?	Low	<u>12</u> 6	40.00 20.00	27 14	<u>38.57</u> 20.00	- 1.51	0.13
	Moderate						

Table 5. Emotional states of the families during the pandemic.

*Mann-Whitney-U Test



4. DISCUSSION

In our study, the effects of the covid-19 pandemic on the functions and psychosocial conditions of children with SLD and their families were determined.

It was found that spending quality time with their family was higher in the group with SLD compared with the families of the healthy group before the pandemic. The reason for this might be that both parents in the healthy group had intensive work. The majority of families in both groups stated that they did reading, playing and school/special education homework and activities with their children before the pandemic. A study by Türkoğlu et al. reported that the main obstacles for fathers to spend quality time with their children are workload, and physical and mental fatigue. However, a noteworthy finding is that during the pandemic, families in both groups spent equal amounts of time with their children and there was an increase in this time compared to before the pandemic. After the rapidly spreading covid-19 epidemic, many measures were taken. In the context of these measures, education and training were suspended for the first time on March 12th,2020 in our country and a distance education model was adopted (Soylu, 2020). Additionally, the fact that one of the family members stays at home during this period and allocates more time to their children is evident. The literature emphasizes that the duration and quality of the time that parents spend with their children is important, especially for the social, emotional, physical, and mental development of children (Yılmaz, 2007).

In our study, the duration of TV, computer and tablet use was found to be one hour for the majority of both groups, and to have increased to three hours or longer during the pandemic for both groups. It shows us that the use of mass media was low before the pandemic due to the regular daily life activities of children. According RTÜK data (2018), television viewing time in Turkey was reported to be 3 hours and 34 minutes. Educational programs are not frequently encountered in the streaming of television and entertainment content. However, during the pandemic period, educational programs were included in television programs (Sirer, 2020). In our study, both the change in living conditions and the fact that educational activities were carried out through television and the internet during the pandemic may in part explain why children's use of television, computers and tablets increased. The important point here is the conscious use of mass media. Studies report that children who watch television for purposes other than education may have a tendency to avoid studying, not establish reading habits, resort to violence and increasing aggression, be unable to express themselves correctly, distance themselves from reality, encounter difficulties in social relations, and have health problems caused by watching television for extended periods of time (Büyükbaykal, 2007). In order to reduce the use of mass media, apart from educational activities, families should provide their children with quality time and opportunities for building routine-based skills.

Routines are naturally occurring activities that are an important part of children's daily life (McWilliam, 2010). In our study, children in both group had a regular daily routine before the pandemic. In addition, During the epidemic process, the changes in the daily routines of both groups were similar. Based on this information, living conditions during the pandemic has resulted in individuals being isolated in closed areas and have led to changes in routines (Tunç et al.,2020).

Additionally, we found a disruption in sleep patterns and eating habits of all families during the pandemic (low/moderate), and changes in physical activity and strengthening of intra-family communication (medium/high). In one study, it was reported that the changes in the life routines of the group that did not work actively during the pandemic period were higher. It was also stated that the incidence of sleep disturbance, lifestyle changes, and anxiety following the pandemic was high (Demir, 2020). As a result of the quarantine, many families have reduced physical activities (Barazzni et al., 2020). Nowadays, spend limited time with family due to busy work schedules. Change in one of the family functions affects other functions as well. During the Covid-19 restriction process, families appear to be positively affected as intra-family communication and interaction have increased. Quality time spent together strengthens the love and affection within the family (Küçükşen, 2020). Results of our study are compatible with the literature.

It was observed that the children in both groups had being happy and compliant in general during the pandemic process. The feeling of being safe in times of disaster is something children need the most (Turkey Children and Adolescent Psychiatry Association, 2020). The fact that all children are with their family members during the quarantine process shows us that they feel safe. Final effect of the epidemic on children will depend on how long the epidemic lasts. The struggle to contain the virus will not only prolong the negative effects it creates, but also the possibility of permanent and long-term effects on children (Policy Note, 2020).

In our study, families fear that coronavirus can infect their family. When examining the literature, a study conducted during the first wave of the SARS epidemic (Nickell, 2004), shows that while two-thirds of the participants reported worrying about their own and their families' health, one-third experienced psychiatric morbidity. The results of this study are similar to the results of another study conducted in Taiwan (Chong et al., 2004). During this time, psychological disorders including anxiety and depression have been reported to increase (Duan-Zhu, 2020). In our study, it was observed that families had modarete and high levels of anxiety about future during the epidemic process. In a survey study conducted in China, 53.8% of the participants reported the psychological effects of the pandemic as moderate or severe, 16.5% showed depressive symptoms and 28.8% showed anxiety symptoms (Wang et al. b, 2020). The psychological fear experienced by individuals during this pandemic is reported to be more

intense than the SARS outbreak 17 years ago (Sh Ho et al., 2020). It is plausible that uncertaintly associated with the cause of the disease lies behind the anxiety of previous outbreaks and the current Covid-19 pandemic (Poole et al., 1999; Thomson et al., 2004).

There were some limitations of our study. The first is that we only examine the short-term results of the pandemic during the quarantine period. In future studies, it is necessary to evaluate in detail how the pandemi affects the parents and their children psychologically and socially in the long term. Another limitation is that the differential effect of the pandemic is not evaluated for the different SLD groups. This would be an important analysis in future studies with larger sample sizes.

5. CONCLUSION

In conclusion, it has been observed that the functional and psycho-social impact of the Covid-19 pandemic on children with SLD and their families is the same as the families with healthy children. It can be said that, whether positive or negative, the pandemic period has had an impact on children with SLD and their families. It is observed that these children are happy and adaptive due to feeling safe because of the presence of the parent at home during this period. In addition, it is understood that the closing of schools, the lockdown restrictions, the change in daily routines resulted in changes in the patterns of activities, and an increase in the duration of computer, TV, tablet use. Particularly, the ambiguity regarding the course of the disease induces modarete and high levels of anxiety in families about the future. It is thought that all children, but particularly children who require special education and their families, need to be provided with both educational and psychological support.

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