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An Investigation into the Levels of Coping with Depression and Stress Among Parents of Individuals with Disabilities

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Abstract

The aim of this study is to examine the levels of coping with depression and stress of the parents of individuals with disabilities. In the study, 212 parents of individuals with disabilities, attending special education and rehabilitation centres in İstanbul, participated. Mann-Whitney U, Kruskal-Wallis test and Spearman correlation analysis were used for data analysis. Depression levels of the parents differed significantly on behalf of female parents in terms of gender variable, and on behalf of parents of children with autism spectrum disorder in terms of child's disability type variable. The depression levels of the parents did not differ significantly in terms of the child's gender and economic level variable. It was determined that mothers predominantly used problem-focused coping and social support strategies when addressing stress, according to the gender variable in the parents' coping levels.Although no significant difference was found in the parents' levels of coping with stress in terms of the child's gender, disability type, and income level, it was found that parents with high education levels used problem-focused coping and social support strategies in the education level variable.

Key Words

Family
Depression
Coping with Stress
Child with disabilities

About Article

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Introduction

The birth of an individual with a disability affects the psychology of the parents negatively. Imagine a situation in which parents expect their children to be healthy. They face an unexpected situation when the child was not born healthy and their inability to explain this new situation to the people around them affects their psychology significantly. Their lack of information about the disability of the newborn child and the presence of additional health problems also augments their psychological problems (Cavkaytar & Özen, 2010). In addition to these, the problems encountered in the care of the disabled child, the problems faced during his education, additional financial needs, the changing roles of the parents due to the child's situation, marital problems, the inability to spare time for themselves, the decrease in social activities and the negative attitudes towards the individuals with disabilities in the society escalate the problems in the family (Küçüker, 2001). All these problems cause stress and tension in parents. Considering the literature, it is detected that the parents of children with disabilities have high stress levels (Warfield, 2005). This stress experienced by the parents negatively affects their quality of dealing with their children and their standard of living (Ohaeri, 2003). Parents need to cope with this stress in order to take good care of themselves and their children with disabilities in a qualified manner (Baltaş & Baltaş, 2008).

Coping with stress is defined as an individual's cognitive or behavioral solution seeking process in a situation perceived as a threat (Oğul, 2004). In other words, coping with stress can be defined as the perception and awareness of situations and events that adversely affect the health of the individual, and the acquisition of specific skills that will help him change his reactions in order to reduce or eliminate the effects of stress (Baltaş & Baltaş, 2008). The strategies that people use to cope with the stress they face are affected by various variables. These are the individual's beliefs, problem solving skills, social skills (Eyüboğlu, 2019), personality traits and so on (Kardum & Krapić, 2001). Studies show that there is a negative relationship between the stress levels of parents of children with disabilities and their skills to cope with stress. In other words, the increase in coping strategies of parents of children with disabilities causes a decrease in stress levels (Hastings, at al., 2005). If the individual is not successful in coping with stress, the accumulated and intensifying effects of the experienced stress cause fear, anxiety and depression (Dereli & Okur, 2008).

There are various models explaining the reactions of families due to these problems they experience when their children are individuals with disabilities (Akkök, 2005). The most well-known of these models is the stage model. The stage model categorically examines the time and mental development that parents go through in order to return to the psychological state before the emergence of stress. According to the stage model, the psychological stages that families go through are shock, rejection, depression, complex emotions, guilt, anger, bargaining, acceptance and adaptation (Ardıç, 2010). In the stage model, in the shock stage, the family does not believe that the child has a disability and experiences constant crying, helplessness and callousness. In the rejection stage, the family may act as if they are not aware of their child's disability. Therefore, they may ignore the child's problems by engaging in different activities (Cavkaytar & Özen, 2010). Or the family may not look for evidence that their child does not have a disability by interviewing various specialists (Akkök, 1982). In the depression stage, the family experiences psychological distress due to the child's disability and the parents become depressed. In the complex emotions stage, parents can both love and hate their children (Varol, 2005). In the guilt stage, families think that the reason for their children's disability is due to their past alcohol, smoking, drug use or not going to the doctor regularly. In the anger stage, the family may direct their anger towards the specialist who diagnosed their child and the teachers who provide education to the child. They may especially verbally abuse their teachers (Cavkaytar & Özen, 2010). In the bargaining stage, parents may bargain with teachers to improve their children (Varol, 2005). In the acceptance stage, parents accept the child's disability. In the adaptation stage, parents are not disturbed by their children's disability and live in harmony with this situation (Ardıç, 2012).

As far as the literature is considered, it is seen that the depression levels of parents of children with disabilities are high due to the stress they experience (Dereli & Okur, 2008; Kim, 2017; Mugno, et al., 2007; Natan, 2007; Olsson & Hwang, 2001; Özcanarslan, Karataş, & Aydın, 2014). Studies suggest that there is a reciprocal and cyclical relationship between depression and stress. While stressful events increase depression, it causes depression to be perceived as more stressful (Dereli & Okur, 2008).

Depression affects the behavior, cognition and emotions of the person and significantly reduces the quality of care (Tanaka, Ishikawa, Mochida, Kawano, & Kobayashi, 2015). Depression causes the individual to evaluate himself negatively, which causes the individual to feel tired and lose motivation, making it difficult to fulfill the routines in daily life. In addition, it can cause physical pain and even suicide (Beck, 1986). These symptoms and features of depression may vary from individual to individual and it may be mild, moderate and severe (Natan, 2007). Depressed parents of children with disabilities may experience feelings of burnout, fatigue, hopelessness about the future, crying spells, avoidance of social relationships, and withdrawal into their shells (Greenspan, Wieder, & Simons 2004). What is worse, the depression of one of the couple affects the other negatively (Dereli & Okur, 2008) and makes the care difficult provided for the child. Therefore, parents should be supported (Özcanarslan, Karataş, & Aydın, 2014) because it is suggested that the stress, hopelessness, depression and anxiety negatively affect the quality of life of parents (Yıldırım, Hacıhasanoğlu, & Karakurt, 2012). In addition to these, couples may be in question. When we look at the researches, it is seen that the divorce rate in the parents of individuals with disabilities is twice higher than the general population (Duru & Duyan, 2023).

When we consider the literature, various studies examining the levels of coping with stress of parents of children with disabilities can be found. To cite some of the relevant studies, while Aktürk (2012) conducted a study with the parents of children with intellectual disabilities (ID), physical disability and intellectual + physical disability, Demirtaş (2020), on the other hand, carried out a study with the mothers of children with intellectual and physical disability. Similarly, Albayrak (2015), Bilal and Dağ (2005), Conk and Yıldırım (2005), Çan Aslan (2010), Sarıkaya (2011), Şengül and Baykan (2013) conducted studies with the parents of children with ID, while Hastings et al. (2005), Kurşun (2018), Lin, Orsmond, Coster and Cohn (2011) conducted studies with the parents of children with Aautism spectrum disorder (ASD). Finally, Ishtiaq, Mumtaz and Saqulain (2020) carried out a study with the parents of children with ASD and hearing impairment, whereas Jenaabadi (2014) conducted a research with the parents of children with intellectual, visual and hearing disabilities.

Similarly, when considering the literature, various studies examining the depression levels of the parents of children with disabilities can be found. To illustrate, Küçüker (2001) conducted a study with mothers of children with developmental delay, while Natan (2007) carried out a research with the mothers of children with and without ID. Likewise, Falk, Norris and Quinn (2014), Ingersoll and Hambrick (2011), Magnuson and Constantino (2011) conducted studies with the parents of children with ASD, whereas Mbugua, Kuria and Ndetei (2011) carried out a study with the parents of the children with ID. Finally, Şengül and Baykan (2013) conducted a study with the mothers of the individuals with ID, while Dereli and Okur (2008), Özcanarslan, Karataş and Aydın (2014) carried out studies with the mothers of the individuals with physical and ID. Besides, Kim (2017) carried out a study examining the depression levels of parents of adult individuals with disabilities.

When we look at the literature, we come across a limited number of studies examining the depression levels of parents of children with disabilities and their ways of coping with stress. For example, Sengül and Baykan (2013) examined depression, anxiety and coping with stress attitudes of mothers of children with intellectual disabilities. This study differs from other studies in terms of examining the depression levels and coping with stress of parents of children with disabilities and is thought to contribute to the field. It is important to seek solutions to improve the physical, psychological and health of individuals who take care of children with disabilities, to protect their mental health and to ensure that they lead a healthy family life. For this reason, it is crucial to find solutions to eliminate such symptoms in order to ensure a healthy family life and it becomes very important to measure the level of coping with depression and stress, which threatens the health of individuals with disabilities to protect their health. Finally, families can cope with stress in different ways. Knowing the ways families cope with stress will contribute to the planning and execution of intervention and training services to be provided to families. Therefore, this study aims to determine whether there are significant differences in the depression levels and stress-coping strategies of parents of individuals with disabilities based on the parents' gender, the child's gender, the type of disability, the parents' economic self-perception, and their education level. Additionally, the study seeks to examine the relationship between parents' levels of depression and their coping strategies for stress.

Method

Study Design

Since this study aimed to examine the levels of depression and coping with stress of parents of individuals with disabilities, the relational survey model was used. There are two types of relational survey model: correlation type and comparison type: In correlation type research models, it is examined whether the variables change together and how the existing change is, while in the comparison type, groups are formed according to the independent variable between at least two variables and it is examined whether there is a difference between the groups according to the dependent variable (Karasar, 2012).

Study Group

The study participants include 212 parents of children with disabilities who attended the Special Education and Rehabilitation Center (SERC) in Istanbul during the 2021-2022 academic year. In this study, the sample size was determined using the G*Power 3.1.9.7 program, referencing a similar study by Şengül and Baykan (2012) prior to data collection. The analysis was conducted with a 95% confidence level and α=0.05. According to the power analysis, the program recommended a sample size of 174 participants. However, considering a 20% margin for random error, it was decided that a sample size of approximately 200 would be more appropriate. Therefore, 212 participants were included in the study. Based on this information, the sample size is considered acceptable for this study. Demographic information of the participants is presented in Table 1.

Table 1. Demographic information of the participants

Parents' gender	N	%	Children's gender	N	%
Male	62	29.2	Male	91	42.9
Female	131	61.8	Female	121	57.1
Parents' educational level			Economic status		
Primary school	22	10.4	Lower class	55	25.9
High school	80	37.7	Middle class	98	46.2
University	90	42.5	Upper class	59	27.8
Masters' degree/PhD	20	9.4			

As can be seen in the table, while 62 of the parents (29.2%) were male, 131 were female (61.8%), and while 22 of them were primary school graduates (10.4%), 80 of them were high school graduates (37.7%) and 90 of them were university graduates (42.5%). In addition, 20 (9.4%) of the parents are postgraduate/doctorate graduates. It is seen that while 55 of the parents perceive themselves belonging to the lower economic class (25.9%), 98 to the middle class (46.2%), and 59 to the upper economic class (27.8%). The composition of the gender of the children is comprised of 91 (42.9%) males and 121 (57.1%) females.

Data Collection Tools

Demographic Information Form

In the demographic information form, there are questions about the gender of the parents, the gender of the child, the type of the disability of their children, the level of their economic self-perception, and the level of education.

Beck Depression Inventory II (BDI II)

BDI-II was developed by Beck, Steer and Brown (1996). It was adapted to Turkish, and its reliability and validity studies were conducted by Dikmen (Dikmen, 2020). 208 teacher candidates studying at the Faculty of Education participated in the Turkish reliability and validity study of the scale. The scale consists of 21 items and seven sub-dimensions. As for the number of items of scale sub-dimensions, it is 5 for feeling restless and unhappy (FRU), 4 for feeling of guilt (FG), 2 for feeling of failure (FF), 3 for suicidal tendency and complex emotions (STCE), 2 for appetite and weight loss (AWL), 3 for life satisfaction (LS), and 2 for sleep disorder and loss of sex drive (SDLSD), respectively.

The scale was subjected to exploratory and confirmatory factor analysis. As a result of this analysis, it was determined that the findings of the exploratory factor analysis of the inventory kept the number of items in the original form and explained 57.3% of the total variance of the inventory. In addition, the findings show that the Turkish version of the scale consists of seven dimensions. When the data obtained regarding the construct validity of the inventory were tested with confirmatory factor analysis, it was detected that the fit indices for the seven-factor structure were at an acceptable level.

Coping with Stress Inventory

The Coping with Stress Inventory (CSI) was developed by Türküm (2002). As a result of the validity and reliability studies carried out by collecting data from 498 university students, it consists of 23 items and 3 sub-dimensions. Considering the sub-dimensions of the scale, it consists of 8 items in avoidance, 8 items in problem-focused coping (PFC) and 7 items in social support (SS) sub-dimensions. Items 10, 17 and 20 are reverse scored in the inventory. It was found that the CSI had three factors explaining 41.7% of the total variance, and the internal consistency coefficient for the whole inventory was .78. The figures found for the subscales were .85, .80 and .65. Besides, item-total correlations of the subscales are .61, .48 and .34, and the correlation coefficient found by the method of repeating the test with an interval of ten weeks was .85.

Data Collection

Firstly, a total of SERC was visited to collect the data. Firstly, the purpose of the research was introduced by meeting with the directors of the institutions. Then, with the guidance of the institution directors, parents were interviewed face-to-face in the parents' room individually or as a group. The purpose of the research was also introduced to the parents. Parents who volunteered to participate in the study were informed about how to fill in the inventories. A total of 400 inventories were sent to the parents, and 245 of them were returned. As a result of the examinations, it was seen that 33 of the inventories were filled incorrectly or incompletely, so the analysis of the data was carried out based on 212 inventories. In total, 25 SERC were visited and interviews with parents were conducted between 01.12.2022 and 30.12.2022.

Data Analysis

IBM SPSS 24.0 program was used for data analysis. First of all, normality test was applied to the data, and it was observed that the data were not normally distributed. For this reason, it was decided to analyze the data using parametric tests. Mann-Whitney U, Kruskal-Wallis test and Spearman correlation analysis were used in the analysis of the data (Yaratan, 2020). To observe the differences between the groups according to the Kruskal-Wallis test results, the double Mann-Whitney U test was applied between the groups.

Findings

Table 2. The Result of Descriptive Statistics of Parents' Depression Levels

	N	M	x̄	S
Depression	212	21	2.46	0.85
FRU		5	3.34	0.45
FG		4	2.36	.94
FF		2	2.14	.92
STCH		3	2.45	.77
AWL		2	3.31	3.75
LS		3	2.21	.54
SDLSD		2	2.51	.93

As can be seen in Table 2, it is seen that the depression level mean score of 212 parents participating in the study is ($\bar{x}$=2.46). The mean scores of the sub-dimensions of the inventory were FRU ($\bar{x}$=3.34), FG ($\bar{x}$=2.36), FF ($\bar{x}$=2.14), STCH ($\bar{x}$=2.45), AWL ($\bar{x}$=3.31), LS ($\bar{x}$=2.21) and SDLSD ($\bar{x}$ =2.51).

Table 3. Mann-Whitney U test results of depression levels of parents in terms of gender variable

	Gender	N	Mean Rank	Rank Sum	U	P
Depression	Female	131	126.59	7848.50	2226.50	.00
	Male	62	83.00	10872.50		
FRU	Female	131	108.58	6732.00	3343.00	04
	Male	62	91.52	11989.00		
FG	Female	131	126.69	7855.00	2220.00	.00
	Male	62	82.95	10866.00		
FF	Female	131	108.94	6754.00	3321.00	.04
	Male	62	91.35	11967.00		
STCH	Female	131	128.65	7976.00	2099.00	.00
	Male	62	82.02	10745.00		
AWL	Female	131	125.19	7761.50	2313.50	.00
	Male	62	83.66	10959.50		
LS	Female	131	123.87	7680.00	2395.00	.00
	Male	62	84.28	11041.00		
SDLSD	Female	131	122.88	7618.50	2456.50	.00
	Male	62	84.75	11102,50		

As seen in Table 3, based on the Mann-Whitney U test results, the depression levels of the parents differed significantly in favor of the female parents regarding the gender variable (U=2226.50. p=.00). Inventory sub-dimensions, which are FRU (U=3343.00, p=.04), FG (U=2220.00, p=.00), FF (U=3321.00. p=.04), STCH (U=2099.00, p=.00), AWL (U=2313.50, p=.00), LS (U=2395.00, p=.00) and SDLSD (U=2456.50, p=.00), were significantly different in favor of female parents.

Table 4. Mann-Whitney U test results of depression levels of the parents in terms of the child's gender variable

	Child's Gender	N	Mean Rank	Rank Sum	U	P
Depression	Female	91	122.71	11167.00	4030.00	.32
	Male	121	114.31	11411.00		
FRU	Female	91	112.02	10193.50	5003.50	.15
	Male	121	102.35	12384.50		
FG	Female	91	122.08	11109.00	4088.00	.25
	Male	121	113.79	11469.00		
FF	Female	91	113.58	10336.00	4861.00	.14
	Male	121	101.17	12242.00		
STCH	Female	91	119.57	10881.00	4316.00	.18
	Male	121	110.67	11697.00		
AWL	Female	91	124.46	11326.00	3871.00	.23
	Male	121	116.99	11252.00		
LS	Female	91	120.67	10981.00	4216.00	.16
	Male	121	118.84	11597.00		
SDLSD	Female	91	121.87	11090.00	4107.00	.11
	Male	121	111.94	11488.00		

Considering Table 4, the depression levels of the parents did not differ significantly in terms of the child's gender variable (U=4030.00, p=.32) based on the Mann-Whitney U test results. Sub-dimensions of the inventory, FRU (U=5003.50, p=.15), FG (U=4088.00, p=.15) and FF (U=4861.00, p=.14), STCH (U=4316.00, p=.18), AWL (U=3871.00, p=.23), LS (U=4216.00, p=.16) and SDLSD (U=4107.00, p=.11) did not differ significantly.

Table 5. Mann-Whitney U test results of depression levels of the parents in terms of the child's disability type (DT) variable

	DT	N	Mean Rank	Rank Sum	U	P
Depression	DT	105	92.35	9696.50	4131.50	.00
	ASD	107	120.39	12881.50		
FRU	DT	105	104.78	11367.00	5433.00	.00
	ASD	107	108.26	11211.00		
FG	DT	105	90.21	9472.00	3907.00	.00
	ASD	107	122.49	13106.00		
FF	DT	105	93.94	9863.50	4298.50	.00
	ASD	107	118.83	12714.50		
STCH	DT	105	88.72	9315.50	3750.50	.00
	ASD	107	123.95	13262.50		
AWL	DT	105	89.51	9398.50	3833.50	.00
	ASD	107	123.17	13179.50		
LS	DT	105	96.65	10148.50	4583.50	.00
	ASD	107	116.16	12429.50		
SDLSD	DT	105	88.62	9305.50	3740.50	.00
	ASD	107	124.04	13272.50		

As for Table 5, based on the Mann-Whitney U test results, the depression levels of the parents showed a significant difference in terms of the child's DT variable (U=4131.50, p=.00) compared to those who had a child with ASD. Scale sub-dimensions, which are FRU (U=5433.00, p=.00), FG (U=3907.00, p=.25) and FF (U=4298.50, p=.14), STCH (U=3750.50, p=.00), AWL (U=9398.50, p=.00), LS (U=4583.50, p=.00) and SDLSD (U=3740.50, p=.00) differed significantly in favor of those with children with ASD.

Table 6. Kruskal-Wallis test results of depression levels of parents in terms of economic class variable

	Economic level	N	Mean Rank	sd	Kruskal-Wallis H	P
Depression	Lower class	55	104.71	2	5.741	.06
	Middle class	98	98.11			
	Upper class	59	122.11			
FRU	Lower class	55	100.21	2	8.057	12
	Middle class	98	118.74			
	Upper class	59	92.03			
FG	Lower class	55	108.92	2	14.385	.24
	Middle class	98	91.38			
	Upper class	55	87.03			
FF	Lower class	98	111.33	2	8.173	32
	Middle class	59	116.63			
	Upper class	55	123.26			
STCH	Lower class	98	93.37	2	9.391	.21
	Middle class	59	112.68			
	Upper class	55	98.46			
AWL	Lower class	98	111.17	2	1.577	46
	Middle class	59	106.24			
	Upper class	55	104.00			
LS	Lower class	98	98.86	2	5.439	.17
	Middle class	59	121.53			
	Upper class	55	99.40			
SDLSD	Lower class	98	107.07	2	1.312	.52
	Middle class	59	112.18			
	Upper class	55	104.71			

As seen in Table 6, based on the Kruskal-Wallis test results, no significant difference was determined in the general inventory findings ($\chi 2$(sd=2 n=212) = 06, p>.05) in terms of the economic level variable of the parents. Considering the sub-dimensions of the inventory, FRU ($\chi 2$(sd=2 n=212)= 12, p>.12), FG ($\chi 2$(sd=2 n=212)= 00, p>.24), FF ($\chi 2$(sd=2) n=212)= 32, p>.05), STCH ($\chi 2$(sd=2 n=212)= .21, p>.05), AWL ($\chi 2$(sd=2 n=212)= 46, p> .05), LS ($\chi 2$(sd=2 n=212)= 17, p>.05) and SDLSD ($\chi 2$(sd=2 n=212)= 52, p>.05) no significant difference was observed.

Table 7. Kruskal-Wallis test results of depression levels of parents in terms of education level variable

	Education Level	N	Mean Rank	sd	Kruskal-Wallis H	P
Depression	Primary school	22	95.00	3	19.106	.00
	High school	80	102.26			
	University	90	115.13			
	Master's degree	20	135.66			
FRU	Primary school	22	161.17	3	24.712	.00
	High school	80	128.39			
	University	90	102.84			
	Master's degree	20	92.26			
FG	Primary school	22	135.50	3	40.178	.00
	High school	80	123.93			
	University	90	100.62			
	Master's degree	20	90.77			
FF	Primary school	22	124.68	3	4.999	.17
	High school	80	110.09			
	University	90	104.28			
	Master's degree	20	125.00			
STCH	Primary school	22	138.66	3	40.959	.15
	High school	80	116.36			
	University	90	132.86			
	Master's degree	20	118.05			
AWL	Primary school	22	139.16	3	19.209	.23
	High school	80	118.71			
	University	90	115.11			
	Master's degree	20	109.00			
LS	Primary school	22	132.56	3	43.052	.00
	High school	80	112.50			
	University	90	96.76			
	Master's degree	20	39.50			
SDLSD	Primary school	22	142.59	3	17.488	.25
	High school	80	116.09			
	University	90	120.27			
	Master's degree	20	106.00			

As can be seen in Table 7, a significant difference was determined in the general inventory findings ($\chi 2$(sd=2 n=212) = 00, p<.05) in terms of the educational level of the parents based on the Kruskal-Wallis test results. A significant difference was also detected in the sub-dimensions of FRU ($\chi 2$(sd=2 n=212)= 00, p<.05), FG ($\chi 2$(sd=2 n=212)= 00, p<.05), p<.05), STCH ($\chi 2$(sd=2 n=212)= 00, p<.05), AWL ($\chi 2$(sd=2 n=212)= 00, p<.05), LS ($\chi 2$(sd=2 n=212)= 00, p<.05) and SDLSD ($\chi 2$(sd=2 n=212)= 00, p<.05). However, no significant difference was found ($\chi 2$(sd=2 n=212) = 17, p>.05) in the FF sub-dimension. To find between which education levels there is a significant difference in terms of the education level variable of the parents' depression levels, double Mann-Whitney U test was implemented between the groups. In the double Mann-Whitney U test general scale score, a significant difference in favor of primary school graduates between primary and high school; as for high school and

master's degree, in favor of high school graduates, and regarding university and master's degree, in favor of university graduates was detected. In the FRU sub-dimension of the inventory, a significant difference in favor of primary education graduates between primary and high school graduates was detected. Similarly, a significant difference in favor of primary school graduates between primary school and university graduates was found. As for primary school graduates and master's degree holders, a significant difference in favor of primary school graduates was determined. In the FG sub-dimension, a significant difference was detected in favor of primary school graduates considering primary school and university graduates, and as for high school graduates and master's degree holders, a significant difference in favor of high school was found. When considering the LS sub-dimension, a significant difference was detected in favor of primary school graduates considering primary school graduates and master's degree holders, and as for high school graduates and university graduates, a significant difference in favor of high school was found. In addition, regarding high school graduates and master's degree holders, a significant difference in favor of high school graduates was detected.

Table 8. Descriptive statistical results of parents' levels of coping with stress

	N	M	$\bar{x}$	S
CSI	212	23	2.51	.23
Avoidance		8	2.48	.29
PFC		8	2.49	.30
SS		7	2.58	.31

As seen in Table 8, it is seen that the mean score of coping with stress levels of 212 parents participating in the research is ($\bar{x}$=2.51). It is seen that the mean score of the sub-dimensions of the inventory for avoidance ($\bar{x}$=2.48), for CSI ($\bar{x}$=2.49), and for SS is ($\bar{x}$=2.58).

Table 9. Mann-Whitney U test results of parents' levels of coping with stress in terms of gender variable

	Gender	N	Mean Rank	Rank Sum	U	P
CSI	Male	62	85.98	6075.00	4000.00	.00
	Female	131	96.53	12646.00		
Avoidance	Male	62	77.76	5875.00	3922.00	.69
	Female	131	99.06	12846.00		
PFC	Male	62	75.81	5692.50	3739.50	01
	Female	131	99.45	13028.50		
SS	Male	62	83.22	6027.50	4047.50	.00
	Female	131	98.90	12693.50		

Considering Table 9, based on the Mann-Whitney U test results, the CSI levels of the parents differed significantly in favor of females in terms of gender (U=4000.00, p=.00). As for other sub-dimensions of the scale, PFC (U=3739.50, p=.01) and SD (U=4047.50, p=.00), they suggested significant differences in favor of females. However, the inventory did not show a significant difference in the avoidance sub-dimension (U=3922.00, p=.69).

Table 10. Mann-Whitney U test results of parents' levels of coping with stress in terms of the child's gender variable

	Child's Gender	N	Mean Rank	Rank Sum	U	P
CSI	Female	91	103.51	9419.50	5233.50	.53
	Male	121	108.75	13158.50		
Avoidance	Female	91	99.10	9018.00	4832.00	.12
	Male	121	112.07	13560.00		
PFC	Female	91	108.86	9906.50	5290.50	.62
	Male	121	104.72	12671.50		
SS	Female	91	103.21	9392.00	5206.00	.48
	Male	121	108.98	13186.00		

As can be seen in Table 10, no significant difference was found in the CSI levels of the parents in terms of the child's gender variable (U=5233.50, p=.53) based on the Mann-Whitney U test results. Besides, no significant difference was detected in scale sub-dimensions for avoidance (U=4832.00, p=.12), for PFC (U=5290.50, p=.62) and for SD (U=5206.00, p=.48).

Table 11. Mann-Whitney U test results of parents' levels of coping with stress in terms of the child's DT variable

	Disability Type	N	Mean Rank	Rank Sum	U	P
CSI	ID	105	104.53	10976.00	5411.00	.64
	ASD	107	108.43	11602.00		
Avoidance	ID	105	108.86	11430.00	5370.00	.57
	ASD	107	104.19	11148.00		
PFC	ID	105	100.15	10515.50	4950.50	.13
	ASD	107	112.73	12062.50		
SS	ID	105	103.30	10847.00	5282.00	.45
	ASD	107	109.64	11731.00		

As seen in Table 11, CSI levels of the parents did not differ significantly in terms of the child's DT variable (U=5411.00, p=.87) based on the Mann-Whitney U test results. The sub-dimensions of the inventory, which are avoidance (U=5370.00, p=.57), PFC (U=4950.50, p=.13) and SD (U=5282.00, p=.45), did not differ significantly.

Table 12. Kruskal-Wallis test results of the parents' levels of coping with stress in terms of the variable of economic level

	Economic Level	N	Mean Rank	sd	Kruskal-Wallis H	P
CSI	Lower class	55	103.51	2	103.51	.79
	Middle class	98	103.55		109.55	
	Upper class	59	109.22		104.22	
Avoidance	Lower class	55	110.69	2	110.69	.83
	Middle class	98	104.53		104.53	
	Upper class	59	105.86		105.86	
PFC	Lower class	55	99.33	2	99.33	.55
	Middle class	98	110.30		110.30	
	Upper class	55	106.88		106.88	
SS	Lower class	98	98.76	2	105.76	.99
	Middle class	59	106.33		106.33	
	Upper class	55	107.47		107.47	

Considering Table 12, no significant difference was found in the general inventory findings ($\chi 2$(sd=2 n=212) = 79, p>.05) in terms of the education level variable of the parents' CSI levels based on the Kruskal-Wallis test results. No significant difference was detected in the inventory sub-dimensions that are avoidance ($\chi 2$(sd=2 n=212) = 79, p>.05), PFC ($\chi 2$(sd=2 n=212) = 79, p>.05) and SD ($\chi 2$(sd=2) n=212)= 79, p>.05).

Table 13. Kruskal-Wallis test results of the parents' levels of coping with stress in terms of the education level variable

	Education Level	N	Mean Rank	sd	Kruskal-Wallis H	P
CSI	Primary school	22	96.11	3	1.000	.00
	High school	80	101.56			
	University	90	110.13			
	Master's degree	20	111.48			
Avoidance	Primary school	22	110.57	3	2.667	.45
	High school	80	118.28			
	University	90	113.38			
	Master's degree	20	104.25			
PFC	Primary school	22	96.36	3	6.084	.02
	High school	80	107.84			
	University	90	123.29			
	Master's degree	20	135.70			
SS	Primary school	22	91.98	3	2.230	.00
	High school	80	104.01			
	University	90	111.83			
	Master's degree	20	118.45			

As can be seen in Table 13, a significant difference is seen in the general inventory findings ($\chi 2$(sd=2 n=212) = 80, p>.05) in terms of the educational level variable of parents' CSI levels based on the Kruskal-Wallis test results. A significant difference was found between the inventory sub-dimensions PFC ($\chi 2$(sd=2 n=212) = 11, p>.05) and SD ($\chi 2$(sd=2 n=212) = 53, p>.05). However, no significant difference was detected in avoidance sub-dimension ($\chi 2$(sd=2 n=212) = 45, p>.05). To find out between which education levels there is a significant difference in terms of the parent's CSI levels, the double Mann-Whitney U test was applied between the groups. Considering the Mann-Whitney U test results, a significant difference was determined in favor of the parents whose education level is high regarding the general inventory score. In the sub-dimensions of the inventory, significant differences in PFC and SS dimensions were found among master's degree holders, university and primary school graduates. It was also revealed that master's degree holders and university graduates mostly resort to PFC and SS strategies.

Table 14. Spearman Correlation analysis between parents' levels of coping with depression and stress

	Depression	FRU	FG	FF	STCH	AWL	LS	SDLSD	CSI	Avoidance	PFC	SS
Depression	1,000											
FRU	.640*	1.000										
FG	.961**	.119*	1.000							-		
FF	.912**	.268*	.907**	1.000								
STCH	.786**	.068*	.694**	.603**	1.000							
AWL	.890**	.145*	.812**	.811**	.767**	1.000						
LS	.837**	.091	.832**	.768*	.623**	.660*	1.000					
SDLSD	.911**	.130*	.844**	.800*	.790**	.934*	.707*	1.000				
CSI	-.680*	-.451*	-.307	-.203*	-.318	-.113	-.533	-.330	1.000			
Avoidance	-.215	-.355	-.206	-.314	-.062	-.254	.549	-.143	.565*	1.000		
PFC	-.437*	-.331	-.304	-.410	-.105	-.585	-.623	-.109*	.464*	.230**	1.000	
SS	-.515*	-.420	.422	-.521	-.332	-.123	-.144	-.121	.731**	.510**	.174*	1.000

Significant correlations in a negative way were found between parents' depression levels (r= -.680, p<.01) and CSI levels. Besides, negative significant correlations were also found between the depression levels of the parents and the CSI sub-dimensions PFC (r= -.437, p<.01) and SS (r= -.515, p<.01). A negative significant correlation was detected between parents' CSI levels and FRU (r=-.451,

p<.00) and FF (r= -.203, p<.00), which are depression scale sub-dimensions. Furthermore, a negative significant correlation was determined between SDLSD (r= -.109, p<.00), a sub-dimension of parents' depression levels, and PFC, one of the CSI sub-dimensions. However, no significant relationship was found between other dimensions.

Discussions and Implications

Based on the results of this study, it was discovered that the depression levels of the parents were moderate. In the literature, there are studies reporting that parents have high levels of depression (Dereli & Okur, 2008; Görgü, 2005; Kim, 2017; Mugno, Ruta, D'Arrigo, & Mazzone, 2007; Natan, 2007; Olsson & Hwang, 2001; Özcanarslan, Karataş, & Aydın, 2014). However, there are also studies reporting that the depression level of their parents is moderate (Softa Kaçan, 2013). Depression levels of parents of children with disabilities are higher when compared with parents of typically developing children (Uğuz, Toros, İnanç & Çolakkadıoğlu, 2004). This situation can be explained by the fact that the parents encounter an unexpected situation with the birth of the child with a disability and the additional burden and responsibilities that the child brings to the parents in the years ahead (Cavkaytar & Özen, 2010).

Considering another result of this study, it is seen that the depression levels of the parents suggested a significant difference in favor of the female parents in terms of the gender variable. There are research results in parallel with our results in the literature (Alshubaili, Awadalla, Ohaeri & Mabrouk, 2007; Dereli & Okur, 2008; Kim, 2017; Mbugua, Kuria, & Ndetei, 2011; Softa Kaçan, 2013). In addition, there are studies reporting that parents of children with disabilities are more depressed than parents of typically developing children (Glidden & Schoolcraft, 2003; Sipahi, 2002). In general, this situation can be explained by the fact that the mother takes care of the child at home and the father works in jobs that bring income to the home. In addition, it can be thought that the limited social life of the mothers due to the constant care of the child during the day and the additional responsibilities that they need to have increased both their stress and depression (Glidden & Schoolcraft, 2003).

Another result of this paper underlines that the depression level of the parents did not differ significantly in terms of the gender of the children. When we examine the literature, it can be found that there are studies that could not find any differences in terms of the gender of the child (Ceylan & Aral, 2007; Dereli & Okur, 2008, Görgü, 2005; Softa Kaçan, 2013; Özkan, 2001). However, Yazkan (2018) discovered in his research that the parents of female children with ASD are more hopeless. The reason for this result could be that syndrome levels of females with ASD may be more severe than males, and parental attitudes may differ according to the gender variable (Aksoy, 2013). According to the results of this research, the fact that the depression level of the parents does not differ in terms of the gender of the children can be explained by the fact that the parents show developmentally similar characteristics despite the different genders of the children, and the families primarily focus on the basic needs of their children, regardless of their children's gender. The fact that the level of depression of the parents do not differ in terms of the gender of the children based on the results of this research can be explained by children's presenting developmentally similar features despite having different genders, and that the families primarily focus on the basic needs of their children regardless of their gender.

Another result to consider of this research is that there was a significant difference in favor of the parents of children with ASD in terms of the depression levels of the parents regarding the variable of the child's DT. In the literature, there are research results reporting that parents of children with ASD have higher levels of stress and depression compared with parents of children with physical disability or chronic health problems (Mugno, Ruta, D'Arrigo, & Mazzone, 2007; Olsson & Hwang, 2001). In addition, there are also studies reporting that parents' level of depression increases as the degree of their child's disability increases. According to Özkan (2001) it was stated that mothers who perceived the ASD level of their child as mild had lower depression scores. There are also studies reporting that there is not a significant difference between the type of disability of the child and the depression levels of the parents (Dereli & Okur, 2008; Softa Kaçan, 2013). It can be thought that intense behavioral, cognitive and adjustment problems of the children with ASD increase the depression levels of their parents (Cohen & Tsiouris, 2006).

Considering a different result of this research, it can be suggested that the depression level of the parents did not show a significant difference in terms of the perceived economic level variable. In

the literature, there are findings parallel to our research results (Olsson & Hwang, 2001). On the other hand, there are also studies reporting that the level of depression increases as the income level decreases (Dereli & Okur, 2008; Kim, 2017; Softa Kaçan, 2013; Özkan, 2001). Children of parents with a high-income level will have easier access to the information, education and health services they need, which may protect parents against stress and depression (Mcconnell, Savage & Breitkreuz, 2014). The reason why no significant difference was detected in terms of education level variable concerning the results of this study is that this variable should not be defined as a variable that causes depression alone. Therefore, parents' depression levels should be evaluated taking variables such as the communication within the family, the harmony between spouses, religious beliefs, social support, etc., into account together with the economic level variable.

As for another result of this study, it can be concluded that as the education level increases, parents' depression level decreases. In the literature, there are findings parallel to this finding of our research (Gönen, Yıkmış, & Halil, 2014; Görgü, 2005). On the other hand, when the literature is examined, studies stating that there is no significant difference in terms of education level can be found (Alshubaili, Awadalla, Ohaeri & Mabrouk, 2007; Dereli & Okur, 2008; Softa Kaçan, 2013; Özkan, 2001). However, it can be claimed that having a high level of education is an important variable for coping with depression. A person with a high education level may access better opportunities not only for himself but also for the education and health of his child (Sarıkaya, 2011), which, eventually, could positively affect the depression level of the parents.

When another result of this study is considered, it is seen that no significant difference was found in parents' levels of coping with stress. However, there are different research findings in the literature. For example, it was revealed that the parents of children with ASD use the strategies of seeking external help, active planning, cognitive acceptance, resorting to religion and avoidance-abstraction to cope with stress (Kurşun, 2018; Sivrikaya & Tekinarslan, 2013; Çan Aslan, 2010; Dunn, Burbine, Bowers & Tantleff- Dunn, 2001 and Black, 2008). In addition, Lin, Orsmond, Coster and Cohn (2011) found that parents' coping strategies were problem-solving, emotion-focused coping, seeking social support, while Wang, Michaels and Day (2011) found that parents' coping strategies were acceptance, active coping, positive reinterpretation. and using planning strategies.

The CSI levels of the parents differed significantly in favor of the women in terms of the gender variable. PFC and SS sub-dimensions of the inventory also indicate significant differences in favor of women. When we consider the literature, there are research findings which state that there is no significant difference between parents' levels of coping with stress in terms of gender (Kurşun, 2018; Sarıkaya, 2011; Yazkan, 2018). In the literature, it was determined that mothers got higher scores in the subscales of seeking external help, resorting to religion, avoidance-abstraction and acceptance and cognitive restructuring than fathers, while fathers scored higher in active planning and avoidance-abstraction subscales (Çan Aslan, 2010). In addition, it was found that mothers exhibit a helpless and submissive approach (Albayrak, 2015). In a study conducted by Wang, Michaels and Day (2011) it was revealed that mothers used coping strategies such as focusing, non-competition and expressing their emotions more than fathers, while fathers used narcotic drugs. According to Dervishaliaj (2013), while fathers tend to suppress or avoid their emotions by working until late or staying away from home, mothers were found to employ a wider range of strategies such as sadness, frustration, anger, crying and talking more with others about their emotional distress. Considering the result of our research, it can be assumed that the reason why parents are equally affected by stress coping strategies could be due to the equal sharing of all responsibilities by the parents.

Regarding a different finding of this study, it is seen that no significant difference was observed in the level of parents' coping with stress in terms of the child's gender. Albayrak (2015), Demirtaş (2020), Görgü (2005) and Sarıkaya (2011) did not detect a significant difference in terms of the gender of the child in their research. In addition, in their studies where Lin, Orsmond, Coster and Cohn (2011) compared Taiwanese and American parents, they could not find a significant difference in terms of the child's gender. However, in his study (Yazkan, 2018) found that the mean score of the parents having daughters is higher than those who have sons in terms of hopelessness sub-dimension in the gender variable. Bilal and Dağ (2005) revealed that mothers having sons use the safe approach strategy more

often than mothers having daughters. They attributed this to the fact that mothers realize having a son as an advantage.

No significant difference was detected in the level of parents' coping with stress in terms of the type of disability variable based on the results of this study. Demirtaş (2020) did not observe a significant difference in the level of coping with stress of the parents of individuals with intellectual and physical disabilities in terms of the disability type variable. In the study conducted by Jenaabadi (2014), no significant difference was found in parents of children with visual, hearing and intellectual disabilities in the level of coping with stress. Aktürk (2012) revealed a significant positive relationship between the child's disability type and the avoidance sub-dimension of the coping strategy. Albayrak (2015), on the other hand, found that children with intellectual disabilities and ASD had higher scores among children with intellectual disabilities + children with ASD in terms of seeking social support sub-dimension. Sarıkaya (2011) determined that as the level of disability increases, the level of coping with stress decreases. In a study by Choi (2019), the stress levels of parents of children with ASD were found to be higher than those of mothers with other disability types. The reason why there was no significant difference regarding the level of disability in our research may stem from whether the child exhibited behavioral problems or not.

No significant difference was observed in the level of parents' coping with stress in terms of income level variable in our study. Consistent with our results, there are some studies in the literature reporting that there is no significant difference in terms of the income level variable (Albayrak, 2015; Ayyıldız, Şener, Kulakçı, & Veren, 2012; Yazkan, 2018). In addition, Çan Aslan (2010) found that parents differ in terms of active planning and avoidance-abstraction/emotional- performative dimensions in coping with stress. This result is due to the lack of financial resources and the need for social support. Gülşen and Özer (2009) revealed that families with low incomes showed a helpless approach in coping with stress, while families with a high-income level applied for social support. As for our research, it can be concluded that the income level of the parents alone cannot predict coping with stress. It can be thought that besides the economic level, variables such as the social assistance provided by the state, educational opportunities, support within the family, etc. affect the parents' coping with stress.

We found in our research that parents with high education levels used PFC and SS strategies in coping with stress in terms of education level variable. There are studies in the literature reporting that there is no significant difference in terms of education level variable (Sarıkaya, 2011; Yazkan, 2018). Albayrak (2015) determined that primary school graduate parents exhibit a helpless and submissive approach. Jenaabadi (2014) detected that parents of children with ASD and hearing impairment who have a high level of education use the problem-focused participation strategy. Çan Aslan (2010) found that the scores parents got in the subscales of active planning, avoidance-abstraction (emotional-performative), and avoidance-abstraction (biochemical) differed significantly regarding their education levels. Conk and Yıldırım (2005) and Çoşkun and Akkaş (2009) stated that the problem-solving skills of parents with a high level of education enhanced, and they sought better solutions for their children. Based on our research findings, it can be asserted that education is an important variable in coping with stress. Parents with a high level of education may recognize their children's needs in advance and meet these needs for their children. Thus, the probability of experiencing stress and depression may decrease (Yavuz & Gümüşkaya, 2021).

Negative significant relationships were found between the depression levels of the parents and the CSI levels. Similarly, negative significant relationships were found between the depression levels of the parents and PFC and SS, which are sub-dimensions of CSI. However, a significant negative correlation between parents' CSI levels and FRU and FF, which are depression scale sub-dimensions was found. Besides, a negative significant relationship between SDLSD, one of the sub-dimensions of parents' depression levels, and PFC, one of the CSI sub-dimensions was detected. Examining the literature, Eyüboğlu (2019) found that while the parents' depression levels and the scale of coping were positively related to the avoidance and separation sub-dimension, those of the parents negatively related to the religion, spirituality and acceptance restructuring sub-dimension. Evgin and Erdem (2017) revealed in their study that there was a positive relationship between the desperate and submissive approach scores of mothers and their depression scores, while there was a positive relationship between

the desperate approach and depression scores of fathers. Alpan (2013) detected in his study that the depression level of the parents and the stress coping scale had a negative relationship with the sub-dimensions of focusing on the relationship, positive effective coping, and self-support, while the negative passive coping, withdrawal and denial-postponing sub-dimensions were positively related. Considering our research and the studies in the literature, we see that the parents of individuals with disabilities use different coping strategies. The reason for this is that stress refers to the situation that occurs when the physical and mental limits of the individual are threatened and forced. It is known that the parents of individuals with disabilities have high levels of stress due to reasons such as dealing with the child with disability, behavioral problems of the child, care costs, etc. (Küçüker, 2001; Sarı, 2007). Parents show various reactions to relieve their own stress. Although parents give the same bodily responses to stress, their psychological reactions differ according to their personality traits and the support they receive from their entourage (Alpan, 2013). In other words, it is normal for parents to use different coping strategies according to their personality traits and the support they receive from their entourage.

Some suggestions can be made based on the results of this research. This research can be carried out with different samples and different types of disability. Moreover, the relationship between parents' depression levels and variables such as social support they get, their life and marital satisfaction, etc. can be examined. Training can be held for parents to reduce their depression levels and teach them how to cope with stress. Family education, individual and group counselling services can be provided in rehabilitation and counselling centres to help parents reduce their depression levels and help them cope with stress. Information and training can be provided to parents on how to help their children with disabilities.

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