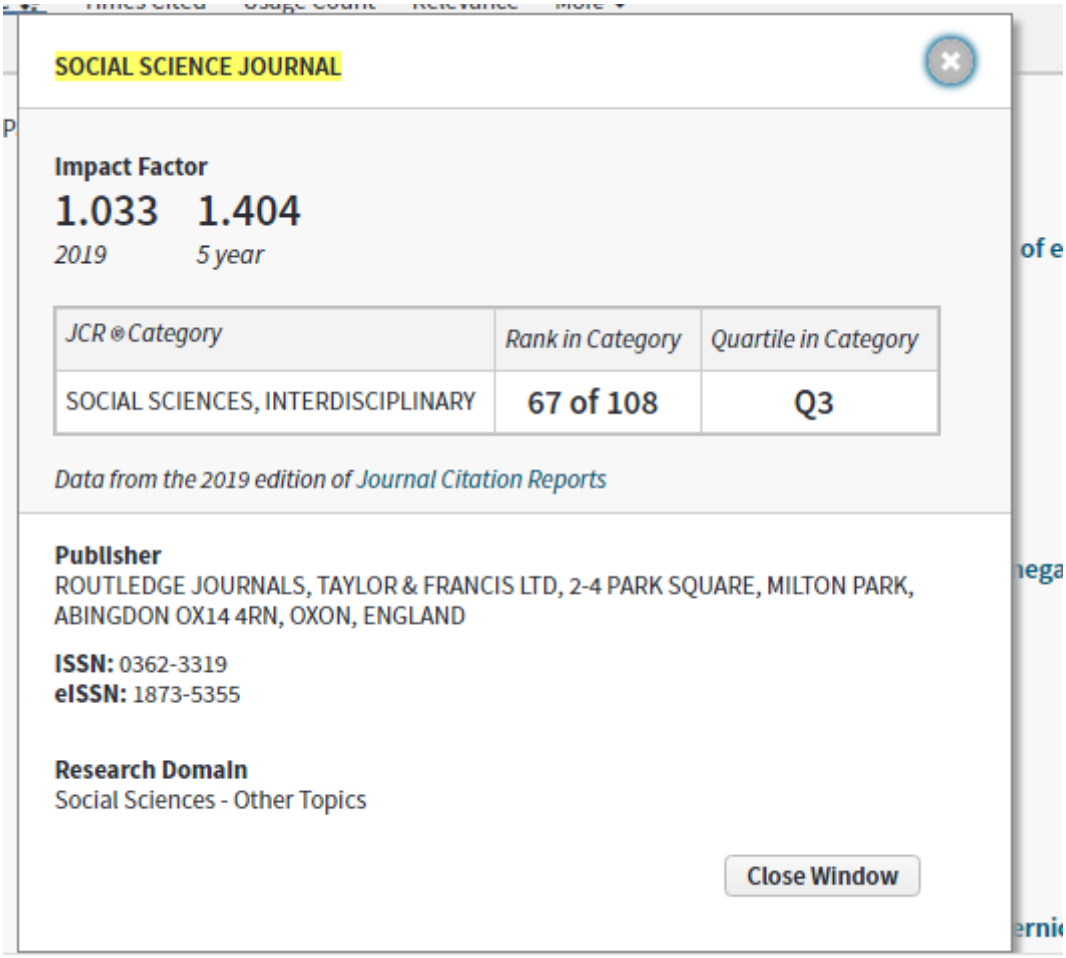

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Data from the 2019 edition of Journal Citation Reports
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ROUTLEDGE JOURNALS, TAYLOR & FRANCIS LTD, 2-4 PARK SQUARE, MILTON PARK, ABINGDON OX14 4RN, OXON, ENGLAND
ISSN: 0362-3319
eISSN: 1873-5355
Research Domain
Social Sciences - Other Topics
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Journal information

Print ISSN: 0362-3319 Online ISSN: 1873-5355

4 issues per year

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The Social Science Journal

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/ussj20

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To cite this article: Cem Tümlü , Ramazan Akdoğan & İ. Halil Diken (2020): Mental health of parents as a factor in dealing with Autism, The Social Science Journal, DOI: 10.1080/03623319.2020.1848291

To link to this article: https://doi.org/10.1080/03623319.2020.1848291

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THE SOCIAL SCIENCE JOURNAL
https://doi.org/10.1080/03623319.2020.1848291

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Mental health of parents as a factor in dealing with Autism

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ABSTRACT

This study was conducted to investigate the directly effect of an eclectic group counselling program on certain mental health indicators/symptoms (anxiety, depression and negative self-worth) of parents of children with autism and its indirect effect on the level of autistic symptoms (stereotypical behaviour, communication and social interaction problems) of the children. The participants involved 28 parents of children diagnosed with autism and their children with autism. Experimental and control groups were formed for both parents and children. Using the Symptom Check List to assess any mental health symptoms of the parents, and the Gilliam Autism Rating Scale-2 Turkish Version to measure levels of autistic symptoms of the children. The results show that not only did the psychological support given to the parents have a direct effect on the mental health of the parents, but that it also indirectly decreased the levels of autistic symptoms of the children.

KEYWORDS

Autism; parents of children with Autism; mental health; group counselling; experimental study

Autism, generally, defined as a developmental disorder which is characterised by limited social skills, difficulty in communication and obsessive or inappropriate behaviour (Ginn et al., 2017; Hartley et al., 2008). In this sense, it makes life difficult, not only for the child, but also for parents and teachers. In addition to this general approach 'Critical Autism Studies' offer a number of alternative perspectives for Autism (see Woods et al., 2018). According to these studies, it is not simply a developmental disorder, but a positive part of someone's identity. In addition, more attention could be paid to the role of societal barriers in causing mental health issues experienced by parents. In this way the problem is not solely located on the child. Ryan and Runswick-Cole (2008) emphasize that interdependency between parents and their children should be taken into account in dealing with autism-related problems.

The increasing incidence of autism in society (Center for Disease Control (CDC), 2007) and its challenging nature (Woodgate et al., 2008) has led researchers to seek new and functional routes in intervention for autism. Although there are various approaches described in the literature for intervention in autism, and reducing its lifetime negative effects, researchers have agreed on two main points; early educational intervention (Eldevik et al., 2006; Osborne et al., 2008; Ozonoff & Cathcart, 1998; Reed et al., 2007; Sallows & Graupner, 2005), and obtaining family participation (mother-father) (Brookman-Frazee & Koegel, 2004; Buschbacher et al., 2004; Ingersoll & Dvortcsak, 2006; Osborne & Reed, 2009).

In the intervention process to the challenges which stem from the autism spectrum disorder (ASD), besides professionals, the parents of child with autism also play a crucial role. Indeed, the majority of parents are seen as assistant teachers in the process of the special education required for the child (Brookman-Frazee & Koegel, 2004; Buschbacher et al., 2004; Osborne & Reed, 2009). This is closely related to parents being those who spend most time with the child (Buschbacher et al., 2004), providing family values and routines, as well as ensuring continuity of what is learned in

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social life and at home (Burrell & Borrego, 2012). In this context, it has been emphasised that family education must be included in intervention plans in order to provide the most appropriate educational intervention (Brookman-Frazee et al., 2006; Koegel et al., 1996; McConachie & Diggle, 2007; Stoner et al., 2005). The majority of training programs presented to parents aim to help them gain the skills required to understand and cope with the difficult behaviour of the child through development of their skill levels (Kaminski et al., 2008; Solomon et al., 2008), thereby focusing on increasing the academic success of the child (Brookman-Frazee et al., 2006).

The support of parents creates significant positive differences in achieving success in the educational services presented to the child (Buschbacher et al., 2004; Ingersoll & Dvortcsak, 2006), and research findings have demonstrated that a low level of family participation results in failure of the child (Osborne et al., 2008). However, there are various psychological factors which make it difficult for the parents of children with ASD to undertake the role expected of them. Beyond the difficulty of adapting to changing life conditions as the parent of a child with autism, the physical and mental health of the parents can be impaired (Allik et al., 2006; Khanna et al., 2011; Woolf et al., 2016). Although there are studies showing that training given to parents, aimed at increasing the academic success of the child, leads indirectly to a reduction in stress levels of the parents (Brookman-Frazee et al., 2006; Burrell & Borrego, 2012; Iadarola et al., 2018; Symon, 2001), there are also studies showing that such training has no effect on reducing parental stress levels (Abikoff et al., 2007; Wells et al., 2000). This suggests that the training given for the development of a child with ASD makes only a partial contribution to the mental health of the parents, but that it is insufficient.

Previous studies have reported that the parents of a child diagnosed with ASD experience more psychological problems, such as depression, anxiety and stress, than parents of healthy children and parents of children in other disability groups (Da Paz & Wallander, 2017; Hayes & Watson, 2013; Mugno et al., 2007; Weiss, 2002). It has also been reported that these parents isolate themselves from social activities (Dillenburger et al., 2010; Ülker-Tümlü et al., 2017), do not prioritise their own interests, needs and hobbies (Hoogsteen & Woodgate, 2013; Tümlü & Akdoğan, 2018), experience marital problems (Hartley et al., 2011; Tümlü & Akdoğan, 2019a), and evaluate their life satisfaction and well-being negatively (Abbeduto et al., 2004; Tümlü & Akdoğan, 2019b; Tümlü & Çapan, 2018). Furthermore, negative approaches within society, due to incorrect assumptions and a lack of information about individuals with special needs (Çimşir, 2017a), the strong effect on family functions of an individual with special needs (Çimşir, 2017b), and the fact that ASD is a chronic condition for which there is no medical treatment, can lead to an increase and continuation of the psychological difficulties of parents of a child with ASD (Burrell & Borrego, 2012; Rezendes & Scarpa, 2011). It has also been emphasised that not enough importance is given to the psychological experiences associated with being the parent of a child with disability (McConachie & Diggle, 2007; Pillay et al., 2011; Snyder et al., 2011).

There appears to be a strong negative correlation between psychological difficulties of the parents and the outcomes of intervention applied to the child (Burrell & Borrego, 2012; Strauss et al., 2012). Studies have demonstrated that psychological support provided for the parents not only makes a positive contribution to their mental health, but also to the outcomes after intervention to the child (Da Paz & Wallander, 2017; Gould et al., 2018; Osborne et al., 2008). Parallel to this, it has also been reported that parents who experience intense psychological difficulties do not function adequately in the educational intervention process and, therefore, their children can make less educational progress (Robbins et al., 1991). Therefore, it is emphasised that the mental health of parents should be directly targeted as a complementary study in the intervention process for ASD (Da Paz & Wallander, 2017; Koegel et al., 1996; Osborne et al., 2008).

As a result, the current situation has revealed a need to provide both educational and psychological support to the parents, in addition to the education given to the child with autism. The aim of this study is to experimentally examine the effects of psychological support presented to the parents of children with autism, directly on the mental health of the parents and indirectly on the skills development of children with autism.

Method

Study design

In this study, the effect of group psychological counselling (GPC), directly on the levels of psychological symptoms of the parents of children with autism, and indirectly on the skills development of the children with autism was examined. A 2 × 2 semi-experimental design was used taking both pre-test and final test measurements of an experiment and a control group (Campbell & Stanley, 2015; Kirk, 2013). Four groups were formed, with two groups of parents and two groups of their children, with one parent group and one child group designated as the experimental groups, with the other two groups being control groups. Pre-test data were obtained from all four of the groups. GPC was applied to the study group of parents and the Interaction-Based Early Childhood Intervention Program (Mahoney & MacDonald, 2007) was applied to both groups of children. Final test data were collected from all of the groups.

Participants

This study was conducted at the Research Institute of Anadolu University in the 2016–2017 academic year. The study was conducted with the parents of children with autism who were receiving special education at the institute and also the children themselves.

Certain criteria were taken into consideration in the determination of the parents and child participants. Firstly, it was decided that only one parent would participate in the study in order that parents would not be affected by each other. For the parents, the criteria of (a) having at least one child with autism, (b) not having any psychological help previously, and (c) not currently having any significant health problem were taken into consideration. Furthermore, at the end of the determination process given below, it was understood that the parents were not divorced, widowed or separated. The criteria were taken into consideration for children who: (a) had a documented diagnosis of ASD from a hospital or an examination report from a specialist showing that they were affected by ASD; or (b) had not received any special training from any public or private school or institution previously. In addition to these criteria, the participants were selected following the steps below:

(1) Official approval was obtained from the institute for the study.
(2) The first author employed at the Institute conducted one-to-one interviews to inform the parents about the study. Then, 117 volunteer parents (65 mothers, and 52 fathers) were selected and all gave permission for their participation and that of their children via an informed consent form.
(3) To determine the levels of psychological symptoms of the parents, the Symptom Check List-SCL (Şahin & Durak, 1994) was applied to 117 parents. From the results of the SCL, 28 parents with the highest points were identified and assigned by lottery to the experiment (N = 14) and control (N = 14) groups. The SCL results were accepted as pre-test data for the parents.
(4) The children of the parents assigned to the experiment group were designated as the child experiment group and the children of the parents assigned to the control group were designated as the child control group.
(5) To evaluate the degree of current autistic symptoms, the Gilliam Autism Rating Scale-2 Turkish Version -GARS-2 TV- (Diken et al., 2012) was applied to a group of 65 children diagnosed with ASD, including children of parents participating in the study, by specialists working at the Institute in collaboration with the parents. The GARS-2 TV results were accepted as pre-test data for the children.

Table 1. Demographics of the participants (N = 28).

		Educational status					
	Participants	University degree	High school	Primary school	N	Mean age	Sd
Experiment groups	Parents (9 mothers, 5 fathers)	7	5	2	14	34.36	4.84
	Children (3 females, 11 males)	-	-	-	14	4.57	1.08
Control groups	Parents (10 mothers, 4 fathers)	7	5	2	14	34.36	5.14
	Children (2 females, 12 males)	-	-	-	14	4.5	1.09
Total	Parents (19 mothers, 9 fathers)	14	10	4	28	34.36	4.90
	Children (5 females, 23 males)	-	-	-	28	4.55	1.07

As a result the study, groups were formed of 28 parents of children with autism and their children who have different levels of autistic symptoms. The demographics of the participants are given in Table 1.

Measures

Symptom check list (SCL)

SCL is a self-evaluation inventory, which was originally developed by Derogatis (1992), and the validity and reliability studies in Turkish were conducted by Şahin and Durak (1994). The Turkish form comprises 53 items in five sub-dimensions of anxiety, depression, negative self-worth, somatisation and hostility. Each item has a five-point Likert-type response, scored as 0 = none and 4 = advanced degree. Scores of 0–52, 0–48 and 0–48 from anxiety, depression, and negative self subscales can be obtained, respectively. The higher scores indicate a higher frequency and severity of symptoms. The Cronbach alpha reliability coefficient was found to be 0.95. In this study, the SCL used included the three sub-dimensions of anxiety, depression and negative self-worth.

Gilliam Autism rating scale2 Turkish version (GARS2-TV)

The GARS-2 TV is a scale which aims to classify and grade behaviour which characterises the autism disorder, originally developed by Gilliam (1995), and the validity and reliability studies were conducted by Diken et al. (2012). The scale was designed to be completed by the parents, teachers and carers of children with a diagnosis of ASD or with suspected ASD. It comprises three sub-dimensions of stereotypical behaviour, communication and social interaction. Each of the 14 items has a five-point Likert-type response, scored as 0 = never observed and 4 = frequently observed. A minimum 42 and a maximum 68 scores can be obtained from the scale, with higher total points indicating a higher level of autistic symptoms (Diken et al., 2012).

Experimental process

The experimental process included the special education services presented to the children with autism and the group psychological counselling provided for the parents. While the education of the children was ongoing, an eight-week group counselling program was applied to the experiment group parents by a counsellor as described below in detail, with no intervention being made to the control group parents. At the end of eight weeks, the SCL was applied to the parents of both groups, and the GARS-2 TV was applied to the children of the experiment and control groups, at the end of the academic year. The results of both were accepted as post-test data. Detailed explanations of the content and processes of the interventions are given below.

The process of psychological support based on the eclectic approach

The eclectic approach is a current approach widely used in solving psychological problems. It is generally accepted by many authors that an individuals' psychological problems are multi-dimensional and,

therefore, only one theory might not be sufficient in terms of providing correct and sufficient solutions (Cardoso, 2016; Lin, 2016; Wu et al., 2016). As a result, taking advantage of the conceptualizations or techniques of different approaches at the same time can be much more functional in dealing with problems. For example, while benefiting from the conceptualizations of the psychoanalytic approach, a specific technique of the behavioural approach can be used (Lin, 2016). In summary, eclectic approaches avoid both limiting the problems of an individual to a specific area and to a single theoretical approach (Hicks et al., 2016). Considering the fact that the difficulties the parents of children with disability are all interrelated and in a wide range (Akdoğan, 2016), an eclectic approach can be said to be a relatively functional intervention type.

A semi-structured group psychological counselling program (GPC) prepared on the basis of an eclectic approach and lasting for eight sessions was applied to the experiment group parents of children with autism. A basic function of GPC is to be effective in bringing awareness to the parents of children with disability that they are not alone and to meet the need they feel for social support (Akkök, 2003). Therefore, this type of intervention was preferred in this study, with the assumption that it would be helpful in overcoming psychological difficulties (Çakır, 2011).

The GPC applied aimed to develop the awareness of parents of the negative feelings, thoughts and behaviour related to having a child with autism, and to support them in adapting to varying difficult life conditions. In the preparation of the GPC program, the basic principle and techniques related to GPC were taken into consideration and an eclectic approach was adopted (Corey, 2004; Gazda, 1989; Voltan-Acar, 2005; Yalom, 1970/2002). In the development of the program, consideration was taken from GPC programs developed in the context of other studies of parents of children with special needs (Akdoğan, 2016; Tümlü & Akdoğan, 2019b; Ülker-Tümlü et al., 2017). In the group process, an attempt was made to encourage the parents to share their experiences, feelings, thoughts and behaviour related to such experiences. Several applications were used in the process, such as warm-up games, techniques to change thoughts and the empty chair exercise, in addition to real experiences and homework directed at changing behaviour.

The GPC sessions were managed by a psychology counsellor experienced in the field of group psychological counselling as leader (first researcher) and a faculty member experienced in the same field as supervisor (second researcher). Each session was held in the Group Psychological Counselling Room of the Disability Research Institute at Anadolu University, under the management of the same leader. Each session lasted for 90 min and, through evaluation at the end of each session, the session to follow was structured. In this process, first the functional and the failed aspects of the preceding session were reviewed as well as the reasons for them. Then, an attempt was made to determine the needs of the group members for the subsequent session and the means and the methods that would be functional in meeting these needs. The psychological difficulties of the parents were taken as the target in the process of managing the program and there was no focus on the academic or skills development of the children. The program content is summarised below:

Session I. This session was designated for introductions, setting the group rules, and defining individual and group aims. Its aim was to support free interaction of the parents within the framework of the basic principles and aims of the group.

Session II. In this session, the parents shared their thoughts and feelings about the changes in their lives since the birth of their child with autism. Interactions were provided related to the general difficulties of being a parent of a child with ASD.

Session III. The focus in this session was on the thoughts and feelings of the parents related to the past and the future of the child with ASD, and the behavioural outcomes of these thoughts. In this context, anxiety about the future of the child was discussed in particular. The group members were asked to write down their anxiety-based problems and then a discussion was held regarding what the reasons for these anxieties could be or what kind of incorrect beliefs could be underlying such anxieties.

Session IV. The focus of this session was relationships with spouses or others close to them, associated with being the parent of a child with ASD. In this context, being overburdened and problems with their spouses or relatives, social isolation and relationships with their social environment were discussed.

Session V. The focus of this session was especially on the feelings of anxiety, hopelessness, depression, and inhibition, and the somatic complaints of the parents. In this context, the function of the complaints was handled in the framework of the Adlerian Approach, and dysfunctionality was examined considering the principles of Cognitive Therapy. Alternative medical intervention, according to the severity of psychological symptoms and what action could be taken to overcome these symptoms, were discussed with the parents.

Session VI. The particular aim of this session was to develop awareness of the group members as to their personal needs. After this, potential ways of dealing with the difficulties of being a parent of a child with autism were investigated and these were promoted. Realistic expectations and disappointments were focused on in this session, and there was discussion of how parents should set realistic goals and what action should be taken to achieve these goals. This was an implementation conducted within the framework of Realistic Therapy.

Session VII. In this session, evaluation was made of the behavioural experiments, with the sharing of thoughts and feelings by members who had experienced both success and failure in these behavioural experiments.

Session VIII. This final session was designated for evaluation of the process and farewells. In this context, the benefits, the ongoing strengths and the thoughts and feelings about the group process were shared. There was also focus on future expectations, plans and predictions of the parents, with encouragement for the development of realistic expectations. Moreover, issues that the parents had not wanted to talk about until this time were also dealt with.

Special education intervention for the children

According to the pre-test results of the GARS-2 TV and the opinions of specialists, the children were separated into groups of four or five and the eight-month special education process was started. The children participating in the study were trained in four different groups. In the experiment process, the Interaction-Based Early Childhood Intervention Program (Mahoney & MacDonald, 2007) was applied to the children as is routine in the Institute. This is a special education program applied to groups of four-five children with autism who show similar autistic symptoms. In the context of the program, the aim is for the children to acquire daily living and academic skills (Diken et al., 2012). The group education, which continued for 8 months, was delivered by a special education specialist leader and three assistants. Other than this educational process, which is a routine application at the Institute, no other intervention was applied to the children in the experiment and control groups.

Before and after each session, the group leaders received supervision from a faculty member specialising in the field of special education. The participation of the parents within the education program was taken into consideration and, therefore, importance was given to the development of the teaching skills of the parents. Within the framework of this purpose, the special education specialists included the parents in the lesson process and informed them of how the skills could be used in the home and social environments. Therefore, in the routine practice of the Institute, parents participated in informative seminars regarding autism and training in how to deal with related problems. For this study, four different student groups were applied with the same education program within the Institute.

Results

Preliminary analysis

Data obtained in the study were analysed statistically using IBM SPSS (2013) vn 22.0 software. First, conformity of the data to normal distribution was examined (Büyüköztürk, 2016; Field, 2013), by applying Kolmogorov–Smirnov and Shapiro-Wilk tests to the skewness and kurtosis ranges of the measurements. The skewness values of all the measurements were within normal limits (+0.06 to −0.70) and the kurtosis values of certain measurements were outside normal limits (−1.57 to −0.11). All the measurement levels based on the variables of the groups were seen to not conform to normal distribution ($p < .05$). The group variables, and whether or not they met the assumptions of normality related to measurement levels, are shown in Table 2. In the analyses, great variation was seen in all of the variables of both groups and it was concluded that the data did not show normal distribution. Non-parametric tests were used in the analyses, taking into consideration that the measurements were limited to 14 participants. For comparison between the groups, the Mann Whitney U-test was applied, and for comparison within the groups, the Wilcoxon Signed Rank test was applied.

Results of the experimental process

To test the efficacy of the experimental application, examination was first made of whether there was any difference between the groups in respect of the pre-test points. The Mann Whitney U-test was applied to the SCL -anxiety, depression, and negative self-worth points of the parents of both groups and to the GARS-2 TV points of the children in both groups. The results show no statistically significant difference between the experiment and control groups [anxiety (U = 90.50, z = −0.35; $p > .05$)], [depression (U = 81.00, z = −0.78, $p > .05$)], [negative self-worth (U = 72.5, z = −1.18, $p > .05$)]; [GARS-2 TV (U = 96.00, z = −0.09, $p > .05$)].

The second stage of testing the efficacy of the experimental application was to compare the pre-test and final test data of the experiment groups. Final test data were collected from both the experiment and control groups. The Wilcoxon Signed Rank test was applied to determine any significant difference between the mean points obtained. The results are shown in Tables 3 and 4.

As can be seen in Table 3, a statistically significant decrease was determined in the final test points compared to the pre-test points for both the parents and children of the experiment groups [anxiety (T = 91.00, z = −3.19, $p = .001$, r = −0.85)], [depression (T = 75.00, z = −2.83, $p = .005$, r = −0.75)], [negative self-worth (T = 66.00, z = −2.94, $p = .003$, r = −0.80)], [GARS-2 TV (T = 105.00, z = −3.30, $p = .001$, r = −0.88)]. The effect size coefficients (r between −0.75 and −0.88) show that the differences between the pre-test and the post-test measurements can be accepted as large, in line with the Field recommendation (Field, 2013). In other words, a statistically significant decrease was seen in both the psychological symptoms of the parents who received group psychological counselling and in the levels of the autistic symptoms of their children.

Table 2. Normality of measurements.

		Pretest (SCL)										Posttest (SCL)									
		Anxiety				Depression				Negative self			Anxiety				Depression				Negative self
		S	K	KS	SW	S	K	KS	SW	S	K.KS	SW	S	K	KS	SW	S	K	KS	SW	S	K	KS	SW
Parents	Experiment group	✓	X	X	X	X	✓	X	X	✓	✓	X	✓	✓	X	X	✓	X	X	X	✓	X	X	X
	Control group	✓	X	X	X	✓	X	X	X	✓	X	X	✓	X	X	X	✓	X	X	X	✓	✓	X	X

Children		Pretest (GARS-2 TV)				Posttest (GARS-2 TV)			
		S	K	KS	SW	S	K	KS	SW
	Experiment group	✓	✓	X	X	✓	✓	X	X
	Control group	✓	✓	X	X	✓	X	X	X

(S) skewness, (K) kurtosis, (KS) Kolmogorov-Smirnov (KS), (SW) Shapiro-Wilk, (✓) meet the criteria, (X) not meet the criteria

Table 3. Comparisons of the pretest-posttest measurements of the experimental groups.

	Variables	Ranks	N	Mean rank.	Sum of ranks	Z	p
Parents	Anxiety	Negative ranks	13	7.0	91.00	−3.191	.001*
		Positive ranks	0	-	-		
		Ties	1	-	-		
	Depression	Negative ranks	10	7.50	75.00	−2.827	.005*
		Positive ranks	2	1.50	3.00		
		Ties	2	-	-		
	Negative self-worth	Negative ranks	11	6.00	66.00	−2.943	.003*
		Positive ranks	0	-	-		
		Ties	3	-	-		
Children	GARS-2 TV	Negative ranks	14	7.50	105.00	−3.301	.001*
		Positive ranks	0	-	-		
		Ties	0	-	-		

* p <.01

Table 4. Comparisons of the pretest-posttest measurements of the control groups.

	Variables	Ranks	N	Mean rank.	Sum of ranks	Z	p
Parents	Anxiety	Negative ranks	5	8.80	44.00	−0.566	.572*
		Positive ranks	9	6.78	61.00		
		Ties	0	-	-		
	Depression	Negative ranks	4	6.75	27.00	−0.549	.583*
		Positive ranks	7	5.57	39.00		
		Ties	3	-	-		
	Negative self-worth	Negative ranks	3	3.00	9.00	−1.913	.056*
		Positive ranks	7	6.57	46.00		
		Ties	4	-			
Children	GARS-2 TV	Negative ranks	7	5.43	38.00	−1.079	.281*
		Positive ranks	3	5.67	17.00		
		Ties	4	-			

* p >.05

As can be seen in Table 4, no statistically significant decrease was determined in the final test points compared to the pre-test points for both the parents and children of the control groups [anxiety (T = 44.00, z = −0.56, p > .05), [depression (T = 27.00, z = −0.55, p > .05)], [negative self-worth (z = −1.91, p > .05)], [GARS-2 TV (T = 38.00, z = −1.08, p > .05)]. In other words, at the end of the experiment, there was no significant difference in the psychological symptoms of the parents who did not receive group psychological counselling and in the levels of the autistic symptoms of their children.

Finally, to test the efficacy of the experimental application, the final test points were analysed to determine any difference between the groups. The Mann Whitney U-test was applied and the results are shown in Table 5.

As can be seen in Table 5, a statistically significant difference was determined between the experiment and the control tests in respect of the final test mean points, in favour of the experiment groups [anxiety

Table 5. Comparisons of the posttests measurements of the experiment and control groups.

	Variables	Groups	N	Mean ranks	Sum of ranks	U	Z	p
Parents	Anxiety	Experiment	14	9.89	138.50	33.500	−2.976	.003*
		Control	14	19.11	267.50			
	Depression	Experiment	14	11.21	157.00	52.000	−2.123	.034**
		Control	14	17.79	249.00			
	Negative self-worth	Experiment	14	11.32	158.50	53.500	−2.056	.040**
		Control	14	17.68	247.50			
Children	GARS-2 TV	Experiment	14	11.32	158.50	53.500	−2.047	.041**
		Control	14	17.68	247.50			

* p <.01, ** p <.05

(U = 33.50, z = −2.98, p = .003, r = −0.80)], [depression (U = 52.00, z = −2.12, p = .03, r = −0.60)], [negative self-worth (U = 53.50, z = −2.06, p = .04, r = −0.60)], [GARS-2 TV (U = 53.50, z = −2.05, p = .04, r = −0.60)]. The effect size coefficients (r) (between −0.60 and −0.80) show that the differences between the final test measurements of both groups were large in terms of all of the variables (Field, 2013). These differences demonstrate a statistically significant reduction in the level of the psychological symptoms of the parents at the end of the study and in the level of the autistic symptoms of the children compared to the control groups.

Discussion

The findings of this study demonstrate that group counselling is effective in reducing the level of the psychological symptoms of the parents. In addition, it was determined that the counselling program conducted with parents indirectly reduces the level of the autistic symptoms of the children of the parents. The finding that the psychological counselling process makes a positive contribution to the parents' well-being is consistent with the findings of similar studies (Tümlü & Akdoğan, 2019b; Ülker-Tümlü et al., 2017). However, unlike previous studies, the results of this study also show that the psychological support given to the parents of children with autism has an indirectly positive effect on the levels of the autistic symptoms of the children.

The improvements observed in both the parents and the children can be explained by the group psychology counselling delivered to the parents. Although this finding is supported by the findings of other studies, directed at reducing the psychological difficulties of parents with child-focussed family education (Burrell & Borrego, 2012; Iadarola et al., 2018; Symon, 2001), it has been shown that the education in question was insufficient in resolving the psychological difficulties of the parents. Therefore, the current study findings show a significant decrease in the level of psychological symptoms of the parents receiving psychological support in addition to child-focussed education compared to the parents who only received child-focussed education.

Even if child-focussed family education supports parents psychologically (Brookman-Frazee et al., 2006; Symon, 2001), it is basically centred on the educational outcomes of the child (Da Paz & Wallander, 2017; Gould et al., 2018). In other words, psychological support is a secondary outcome of the training of the parents (McConachie & Diggle, 2007; Pillay et al., 2011; Snyder et al., 2011). Furthermore, child-centred family education is provided by special education experts and does not naturally include an understanding of professional psychological help for parents. This study reveals the need for professional mental health services in the provision of special education services, and forms an ideal example of studies in the collaboration of special education specialists and mental health professionals.

Although this study reveals the benefits of professional psychological help, it also presents striking data related to the results of not giving such help. This situation can be easily understood from the change in the level of psychological symptoms of the control group parents throughout the experiment period. In contrast to the experiment group, when the differences between the pre-test and final test results are examined, there is a noticeable increase in the mean points of anxiety, depression and negative self-worth (positive rank 7–9). In other words, an increase can be observed in the level of psychological symptoms of the parents who did not receive psychological support.

Parents of a child with disability are known to experience various-associated problems in working life (Montes & Halterman, 2008), social life (Dillenburger et al., 2010; Estes et al., 2013) and in marital relationships (Hartley et al., 2011; Kwok et al., 2014; Tümlü & Akdoğan, 2019a), and have also been reported to neglect their own well-being (Tümlü & Akdoğan, 2019b). When information in the literature is considered in the context of parents facing these difficulties being at risk of psychological problems, such as low self-esteem, anxiety and depression (Hayes & Watson, 2013; Mugno et al., 2007; Weiss, 2002), it is clear that professional pychological support for parents dealing with autism should not be postponed. A striking finding of the current study is that the children of parents who do not receive psychological support benefit less from the special education process than the children of parents who

receive psychological support. These findings reveal that there is no improvement in the levels of autistic symptoms of children when their parents are not supported. It is emphasised in the literature that the participation of parents in the education process is extremely important (Eldevik et al., 2006; Ozonoff & Cathcart, 1998; Reed et al., 2007; Sallows & Graupner, 2005), and that the psychological difficulties of parents should not be ignored while they are participating in the process (Da Paz & Wallander, 2017; McConachie & Diggle, 2007).

The group psychology counselling presented to the parents in this study can be evaluated as a sign of their more active participation in the education processes of their children with autism. This can be more clearly understood when it is considered that parents taking on an effective role in the intervention process is one of the most important factors affecting the academic performance of the child (Koegel et al., 1996; McConachie & Diggle, 2007) and that unwillingness to do this is related to psychological problems (Strauss et al., 2012).

Limitations

There were a number of limitations to this study. Firstly, the data related to the development of the child were obtained from interviews with the parents. Therefore, the finding that the level of autistic symptoms of the child had reduced at the end of the study should be evaluated considering that the estimations of the parents could have been incorrect. However, although the effect of maturation was controlled with the control group, the reduction in the level of autistic symptoms in the children obtained at the end of the study cannot be said to be the result of the psychological support given to all of the parents. Other variables affecting the levels of autistic symptoms of the experiment and control group children could have played a role in this difference. For example, although the same syllabus was applied to both groups in the educational intervention, differences in the attitudes and skills of the trainers providing the education to the groups could have had an effect on this change. Moreover, there is a need for future observational studies to evaluate whether or not these changes in the parents and children are permanent.

Conclusion

In conclusion, the results of this study show that psychological support given to parents both assists them in overcoming their own psychological difficulties and indirectly serves to reduce the level of autistic symptoms in their children. It can be understood from these results that an important criterium in achieving family participation in early childhood special education intervention is the provision of psychological support for the parents. Therefore, when sufficient psychological support is not provided for the family, the development of the child will not reach the desired level. Furthermore, it is necessary that both special education experts and professional mental health specialists play a role in enabling the parents to deal with psychological difficulties.

This study provides evidence that parents' mental health is indirectly effective in the education and/or treatment process of children with autism. The relationship between the two variables can be strengthened with similar research results. The findings also show that, contrary to popular belief, children with autism are susceptible to emotional-psychological stimuli in their immediate environment. However, it is not clear what the emotional or psychological experiences of the children are in the relationship in question. Mediating variables, such as psychological or intrinsic satisfaction, feeling safe, trust, compassion and attention need, encouragement, self-esteem or self-regard, come to mind.

Ethical aspects

The authors declare that they have no conflict of interest.

All of the procedures performed in studies involving human participants were in accordance with the ethical standards of the institution of the investigators and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. In this context, the study was carried out within the framework of the institutional board decision of the Anadolu University Research Institute for Individuals with Disabilities (2015–20/1), and the relevant law (93–496).

All of the parents participated in the study voluntarily and all gave permission for the participation of their children via an informed consent form. The children did not give their own consent as they were very young, whereas in the context of this study, no other intervention was applied to the children in the experiment and control groups except for routine educational practice at the institute. As an ethical necessity, at the end of the experimental process, the counselling program was also conducted with the control group.

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