



The effect of positive psychotherapy-based training given to mothers of children with autism on the psychological well-being, hope and quality of life

Otizimli çocuk annelerine verilen pozitif psikoterapi temelli eğitimin psikolojik iyi oluş, umut ve yaşam kalitesi üzerine etkisi

Derya Yanık¹, Rukiye Arslan²

¹Batman University, Faculty of Health Sciences, Department of Nursing, Batman, Türkiye
²Batman University, Faculty of Health Sciences, Department of Child Development, Batman, Türkiye

ABSTRACT

Aim: This study was conducted in order to determine how Positive Psychotherapy (PPT)-based training given to mothers of children with autism affects their psychological well-being, hope, and quality of life.

Methods: The study was conducted as an experimental study with a pretest-posttest control group, with mothers of children diagnosed with autism. The study was conducted between October 2021-February 2022. The study was completed with the 34 mothers of children with autism (23 in the control group and 11 in the experimental group). While the mothers in the experimental group were delivered eight sessions of PPT-based training, no intervention was applied to mothers in the control group.

Results: It was found that the scores of the mothers in the experimental group on the psychological well-being (41.72 ± 1.74), hope (49.45 ± 1.35) and quality of life (91.72 ± 2.59) scales following the PPT-based training increased when compared to their scores on the psychological well-being (35.27 ± 2.00), hope (44.36 ± 1.65) and quality of life (74.18 ± 4.24) scales before the training. In the study, it was determined that PPT-based training caused a statistically significant difference between the psychological well-being, hope, and quality of life levels of mothers in the experimental group ($p < 0.05$).

Conclusion: It was found that providing PPT-based training to mothers of children with autism was effective in raising their levels of psychological well-being, hope, and quality of life.

Keywords: autism; hope; maternal welfare; psychotherapy; quality of life

ÖZ

Amaç: Bu araştırma otizimli çocuk annelerine verilen Pozitif Psikoterapi (PPT) temelli eğitimin psikolojik iyi oluş, umut ve yaşam kalitesi üzerine etkisini belirlemek amacıyla yapıldı.

Yöntem: Araştırma ön test- son test kontrol gruplu deneysel bir çalışma olarak otizm tanısı alan çocukların anneleri ile yürütüldü. Araştırma, Ekim 2021- Şubat 2022 tarihleri arasında gerçekleştirildi. Araştırma otizimli çocuğu olan 34 anne (23 kontrol, 11 deney) ile tamamlandı. Deney grubundaki annelere 8 oturumluk PPT temelli eğitim verildi, kontrol grubunda olan annelere herhangi bir girişim uygulanmadı.

Bulgular: Deney grubundaki annelerin PPT temelli eğitim sonrası psikolojik iyi oluş (41.72 ± 1.74), umut (49.45 ± 1.35) ve yaşam kalitesi (91.72 ± 2.59) puanlarının eğitim öncesi psikolojik iyi oluş (35.27 ± 2.00), umut (44.36 ± 1.65) ve yaşam kalitesi (74.18 ± 4.24) puanlarına oranla yükseldiği saptandı. Araştırmada, PPT temelli eğitim uygulamasının deney grubunda bulunan annelerin psikolojik iyi oluş, umut ve yaşam kalitesi düzeyleri üzerinde istatistiksel olarak önemli bir fark oluşturduğu belirlendi ($p < 0.05$).

Sonuçlar: Otizimli çocuk annelerine verilen PPT temelli eğitimin annelerin psikolojik iyi oluş, umut ve yaşam kalitesi düzeyini yükseltmekte etkili olduğu bulundu.

Anahtar kelimeler: anne refahı; otizm; psikoterapi; umut; yaşam kalitesi

Introduction

Every parent who decides to have children has dreams about the child to be born, and these dreams are generally focused on a healthy child. While waiting for a healthy child to give birth, the birth of a child with different developmental characteristics may lead parents to have complicated emotions, thoughts, and behaviours. Different developmental characteristics of the born child elicit strong sentiments and concerns, with the burst of all expectations and dreams of parents. Furthermore, parents might suffer guilt, profound sorrow, and intense stress by perceiving themselves as the cause of the child's condition (Kılınc, 2018; Özgür, 2013; Şahin et al., 2011; Yavuz, 2020).

When parents realize that they have a child with different developmental characteristics, they experience many feelings and display varying emotional reactions to one another

depending on those feelings. These emotional reactions include shock, denial, depression, guilt, anger, helplessness, despair, weakness and constant sadness (Ediz & Kartal, 2023; Sönmez-Kartal, 2019; Yavuz, 2020). When parents first hear the diagnosis of autism, they experience a tremendous sense of shock, which leads to changes in their mental states. Despite the fact that fathers are less anxiously concerned about this diagnosis, it is reported that mothers are more anxious, their stress levels and feelings of burnout grow, and they are even depressed (Sönmez-Kartal, 2019).

Having an autistic child leads to changing the existing balances in the family, particularly the mother's responsibilities and the disruption of the order to which they are accustomed. Because the mother must dedicate most of her time to her autistic child, who has special requirements. Furthermore, the mother's lack of knowledge of autism is effective in

exacerbating negative emotions such as anxiety and stress (Arslan & Sağlam, 2021a; Eracar, 2016). Although many factors, such as the intense stress experienced by families with autistic children, social alienation of the child, challenges faced in the child's education, and economic and social problems, lead the family to feel anxious and hopeless about the future, they also have a detrimental impact on the quality of life of parents (Börte-Gürbüz et al., 2017). Autistic children, who have neurodevelopmental differences, have limited social skills and communication, as well as behavioural difficulties throughout their lives. These deficiencies in autistic children impede the development of healthy communication and interaction between mother and child. Furthermore, having an autistic child lays a responsibility on the mother to teach the child many different abilities, including self-care, social communication, and language skills, as well as eliminating improper behaviours in the child. Therefore, emotional and mental problems may develop in the mother while trying to cope with the existing deficiencies in the child. The mother requires support in adapting to her own process (Ediz & Kavak Budak, 2023). Different cultures have different treatment methods and approach for both autistic children and their mothers. Positive psychotherapy interventions are one of these approaches (Al-Khalaf et al., 2014; Arslan & Sağlam, 2021a; Dawson-Squibb et al., 2019; Ingersoll & Dvortcsak, 2006; Usta et al., 2020).

Positive psychotherapy is a therapeutic approach that views humans from a positive standpoint, based on the belief that all people are actually good and possess two basic capacities to love and know, emphasizing that psychology must deal with both strength and weakness. This approach focuses on constructing the finest aspects of life as well as repairing the worst, helping people in moving their lives to a more positive level. Given the different limitations of autistic children, such as behavioural disorders, establishing and maintaining relationships, the mother, particularly as the primary caregiver of an autistic child, must reduce her negative emotional reactions, enhance her psychological well-being, raise her understanding and patience, and improve her quality of life (Sarı, 2015; Rashid, 2015; Aypay & Kara, 2018; Koenig & Levine, 2011). To that end, this study was conducted in order to examine the effect of positive psychotherapy-based training for mothers of autistic children on their psychological well-being, hope, and quality of life. For this purpose, answers to the following research questions were sought:

- Is positive psychotherapy-based training for mothers of autistic children effective on psychological well-being?
- Is positive psychotherapy-based training for mothers of autistic children effective on hope?
- Is positive psychotherapy-based training for mothers of autistic children effective on quality of life?

Methods

Design, location, and sample selection

This experimental research was conducted with a pretest-posttest control group. The study was conducted with mothers residing in a province in South-eastern Türkiye and having children diagnosed with autism. The study was conducted between October 2021-February 2022. The population consisted of mothers of 53 autistic children registered in the Guidance and Research Center of a province. The sample group consisted of a total of 41 mothers (experimental group=18 and control group=23). The study was completed

with a total of 34 mothers (experimental group=11, control group=23).

Inclusion criteria: Being able to speak Turkish at a level to communicate, and being able to read and write Turkish.

Exclusion criteria: Being illiterate in Turkish, failing to attend two consecutive training sessions, and having a mental health diagnosis.

Participants

When the demographic characteristics of the mothers in the study were examined, it was determined that 45.4% of the mothers in the experimental group were between the ages of 30 and 34, 36.4% completed primary school, 90.9% were unemployed, and 81.8% never received psychiatric support before. Also, 54.5% of the mothers in the experimental group had equal income and expenditure levels, 45.5% of their children were between 9 and 11 years old, and 54.5 % of their children were diagnosed with autism between the ages of 1 and 3 years old.

Table 1. Comparison of control variables of mothers in experimental and control groups

Descriptive Characteristics	Experimental Group (n=11)		Control Group (n=23)		Test and Significance	
	n	%	n	%		
Age of mothers						
Ages 25-29	-		5	21.7	$\chi^2=5.113$ $p=0.276$	
Ages 30-34	5	45.4	4	17.4		
Ages 35-39	3	27.3	7	30.4		
Ages 40-44	3	27.3	6	26.2		
Age 45 and above	-		1	4.3		
Mother's educational status						
Literate	4	36.4	4	17.4	$\chi^2=4.300$ $p=0.367$	
Primary school	4	36.4	12	52.2		
Secondary school	2	18.2	6	26.1		
Higher education	1	9.0	1	4.3		
Mother's working status						
Yes	1	9.1	1	4.3	$\chi^2=0.302$ $p=0.582$	
No	10	90.9	22	95.7		
Family income level						
Income is less than expenses	5	45.5	9	39.1	$\chi^2=1.574$ $p=0.455$	
Income is equal to expenses	6	54.5	11	47.8		
Income is more than expenses	-		3	13.1		
Age of the child						
3-5 years	-		5	21.7	$\chi^2=10.151$ $p=0.170$	
6-8 years	2	18.2	11	47.8		
9-11 years	5	45.5	6	26.1		
12-14 years	4	36.3	1	4.3		
Age at which the child was diagnosed						
1-3 ages	6	54.5	11	47.8	$\chi^2=2.325$ $p=0.676$	
4 age	3	27.3	3	13.0		
5 age	1	9.1	3	13.0		
6 age	1	9.1	4	17.4		
7 age	-		2	8.7		
The mother's previous receiving psychiatric support						
Yes	2	18.2	3	13.0		$\chi^2=0.157$ $p=0.692$
No	9	81.8	20	87.0		

It was determined that 30.4% of the mothers in the control group were between the ages of 35 and 39, 52.2% completed primary school, 95.7% were unemployed, and 87.0% never received psychiatric support before. Also, 47.8% of the mothers in the control group had equal income and expenditure levels, 47.8% of their children were between 6 and

8 years old, and 47.8 % of their children were diagnosed with autism between the ages of 1 and 3 years. In the study, it was found that the demographic characteristics of the mothers in the experimental and control groups were homogeneous ($p>0.05$, Table 1).

Measures

The socio-demographic information form

It was prepared by the researchers by reviewing the literature in order to collect data on the mothers of autistic children, and the children (Arslan & Sağlam, 2021b). This form consists seven questions in total.

Psychological Well-Being Scale (PWB)

It was developed by Diener et al. (2009) to assess socio-psychological well-being. In 2013, Telef adapted it into Turkish as the “Psychological Well-Being Scale” and conducted its validity and reliability study. The Cronbach’s alpha found in the scale’s reliability study was calculated to be 0.80. The eight-item scale identifies crucial aspects of human functioning, such as having a meaningful and purposeful existence, positive connections, and sensations of efficacy. The items of the scale are rated using a 7-point Likert system. The minimum score that can be obtained from the scale is 8 and the maximum score is 56. A high score from the scale shows that the individual has various psychological resources and power. Each item of the scale is expressed positively (Telef, 2013). In this study, the Cronbach’s alpha was found to be .88.

Dispositional Hope Scale (DHS)

Snyder et al. (1991) developed the Hope Scale, consist of 12 items and two subscales. Tarhan and Bacanlı (2015) adapted the scale to Turkish and conducted its validity and reliability study in 2015. The Cronbach’s alpha internal validity coefficient of the scale, called the “Dispositional Hope Scale” was calculated as 0.84. The Dispositional Hope Scale has two subscales, “Pathways” and “Agency”, each of which is measured by four items. When calculating the scale score, no points are assigned to the fillers, and total score that may be obtained from the scale is comprised of the scores for the subscales of pathways and agency. The minimum score of the scale is 8 and the maximum score is 64 points (Tarhan & Bacanlı, 2015). In this study, the Cronbach’s alpha was found to be 0.92.

Quality of Life in Autism Questionnaire-Parent Version (QoLA)

The questionnaire developed by Eapen et al., (2014) assess the quality of life of parents of autistic children consists of two subsections (A and B). There are 28 questions in the section A of the questionnaire that assess how parents perceive their quality of life. Section B consists of 20 questions designed to assess parents’ perceptions of how problematic their child’s challenges related to autism are for them (Eapen et al., 2014).

Table 2. Content of PPT-based training program sessions

Sessions	Content	Homework	Training Material	Time
1 st Session	-Meeting mothers -Introducing the content of training program -Training days and hours were determined - Collection of pretest data			40 min.
2 nd Session	- What is autism? (Its causes, diagnosis, treatment) -What is the importance of special education in autism? -What are the social, psychological, economic and public aspects of the problems in autism?		-Power point Presentation -Video display	60 min.
3 rd Session	- What are the concepts of emotion, thought and behavior? - It is ensured that mothers realize their feelings. -Mindful breathing practice is taught. -Example story about awareness was told to mothers.	-Mindful breathing practice	-Power point Presentation -Video display - Music	40 min.
4 th Session	- How to achieve a healthy life and success? -It is ensured that mothers can see their strengths through their own life stories.	- Write three positive things in their daily life	-Power point presentation	40 min.
5 th Session	-What is stress? -What are the symptoms of stress? -What are the methods of coping with stress? - Example stories about coping with stress were told to mothers. -Relaxation exercises taught.	- Use the methods of coping with stress. - Relaxation exercises	-Power point Presentation -Video display - Music	40 min.
6 th Session	-What is communication? -What are effective communication techniques? -What is the problem? -What are problem solving skills?	- Use the effective communication techniques they learned in daily life.	-Power point Presentation	40 min.
7 th Session	-What is hope and hopelessness? -What can be done to increase hope? -What are the things to do for a healthy and balanced life? -What can be done to improve the quality of life? - Example stories about hope were told to mothers.		-Power point Presentation	40 min.
8 th Session	- What to do for a healthy and balanced life? -Mothers were asked to prepare and write their future plans. -Program evaluation. -Receiving feedback -Collection of post-test data			40 min.

It is recommended that sections A and B of the scale be utilized individually, and independent scoring should be performed for each section.

Data collection and training intervention

The Turkish validity and reliability study of the scale was conducted by Börte Gürbüz and colleagues in 2017. In this research, only the section A of the questionnaire was utilized. The Cronbach's alpha was calculated to be 0.93 for section A of the scale. In section A of the questionnaire, each item is rated on a five-point Likert scale. Four of the 28 items in section A of the questionnaire (2, 4, 17, 22) are scored reversely. Total score of section A of the questionnaire ranges from 28 to 140. A low score on Section A of the questionnaire indicates a low quality of life for the parents, while a high score suggests a high quality of life for the parents (Börte-Gürbüz et al., 2017).

Pre-test data of the mothers in the control group were collected at the beginning of the study, and post-test data were collected four weeks after the pre-test data were collected. No intervention was applied to the mothers in the control group. In the second stage of the study, the mothers in the experimental group were informed by the researcher about the PPT-based education program in the first session. The mothers in the experimental group were divided into three groups, each consisting of six people, by drawing lots, and the training days and hours of each group were determined. Pretest data were collected before starting the training intervention. The content of the training program was prepared by the researcher in line with the literature (Yanik & Kavak-Budak, 2023; Yanik & Kavak-Budak, 2024) Table 2 outlines the content of the PPT-based training program sessions. In addition to technical materials such as computers, audio systems, and projections, music and video screenings were utilized in the training. Additionally, after the third, fourth, fifth and sixth sessions of the training program, the mothers were given homework to reinforce what they learned. The PPT-based training program was completed in a total of eight sessions over four weeks, two sessions per week.

Ethical considerations

In order to conduct the study, ethics committee approval numbered 2021/01-19 was obtained from Batman University Scientific Ethics Committee on 09.04.2021. Participants in the research were promised that the information they give will be kept confidential and that this information will not be used anywhere other than the results of the research. It was noted that participants had the right to withdraw from the study at any time. Written and verbal consent was obtained from the participants.

Data analysis

Statistical Package for the Social Sciences (SPSS) 26.0 software was utilized in the analysis of the data, and the value of $p < 0.05$ was accepted for significance level. The skewness and kurtosis values of the total scores were checked for compliance with the normal distribution, and if the coefficients of these values fell within the range of -1.5 to +1.5, the distribution of the points were considered as normal (Tabachnick & Fidell, 2013). Data analyzes were evaluated using descriptive statistics (arithmetic mean, standard deviation, number, and percentage), and Independent samples t test and dependent samples t test were used to compare the mean scores of the scale in the experimental and control groups.

Results

Table 3. Comparison of the pretest and posttest psychological well-being scale mean scores of the mothers in the experimental and control groups (n=34)

Psychological Well-being Scale			
Groups	Pretest (X±SD)	Posttest (X±SD)	**Test and Significance
Experimental group (n=11)	35.27±6.66	41.72±5.78	t=-5.092 p=0.000
Control group (n=23)	38.60±8.94	40.0±6.60	t=-0.588 p=0.565
*Test and Significance	t=1.096 p=0.281	t=-0.741 p=0.464	

* Independent samples t test, **Dependent samples t test, $p < 0.05$ was significant

When the pretest-posttest mean scores of the mothers in the experimental and control groups on the psychological well-being scale were examined, it was determined that the difference between the pretest-posttest total mean scores of the groups on the psychological well-being scale was not statistically significant ($p > 0.05$, Table 4). Upon the intra-group examination of the pretest-posttest mean scores of the mothers in the experimental and control groups on the psychological well-being scale, it was determined that the total mean score of mothers in the experimental group on the psychological well-being scale increased in the posttest compared to the pretest and this difference was statistically significant ($p < 0.05$, Table 3).

When the pretest-posttest mean scores of the mothers in the experimental and control groups on the dispositional hope scale were examined, it was determined that the difference between the pretest-posttest total mean scores of the groups on the dispositional hope scale was statistically insignificant ($p > 0.05$, Table 4). Upon the intra-group examination of pretest-posttest mean scores of the mothers in the experimental and control groups on the dispositional hope scale, it was determined that the posttest total mean score of mothers in the experimental group on the dispositional hope scale increased the compared to the pretest, and this difference was statistically significant ($p < 0.05$, Table 4).

Table 4. Comparison of the pretest and posttest dispositional hope scale mean scores of the mothers in the experimental and control groups (n=34)

Dispositional Hope Scale			
Groups	Pretest (X±SD)	Posttest (X±SD)	**Test and Significance
Experimental group (n=11)	44.36±5.50	49.45±4.50	t=-4.631 p=0.001
Control group (n=23)	47.04±10.34	45.34±8.78	t=0.554 p=0.585
*Test and Significance	t=0.802 p=0.428	t=-1.453 p=0.156	

* Independent samples t test, **Dependent samples t test, $p < 0.05$ was significant

When the pretest-posttest mean scores of the mothers in the experimental and control groups on the quality of life questionnaire were examined, it was determined that the difference between the pretest total mean scores of the groups on the quality of life questionnaire was statistically significant, and the difference between their posttest mean scores was statistically insignificant ($p < 0.05$). The pretest total mean scores of the mothers in the control group on the quality of life questionnaire were higher when compared to their

counterparts in the experimental group (Table 5). Upon the intra-group examination of pretest-posttest mean scores of the mothers in the experimental and control groups on the quality of life questionnaire, it was determined that the posttest total mean score of the mothers in the experimental group on the quality of life questionnaire increased compared to the pretest and this difference was statistically significant ($p < 0.05$, Table 5).

Table 5. Comparison of the pretest and posttest quality of life in autism questionnaire-parent version mean scores of the mothers in the experimental and control groups (n=34)

Quality of life in Autism Questionnaire-Parent Version			
Groups	Pretest (X±SD)	Posttest (X±SD)	**Test and Significance
Experimental group (n=11)	74.18±14.06	91.72±8.59	t=-7.520 p=0.000
Control group (n=23)	88.86±13.67	84.43±11.39	t=1.188 p=0.247
* Test and Significance	t=2.903 p=0.007	t=-1.877 p=0.070	

*Independent samples t test, **Dependent samples t test, $p < 0.05$ was significant

Discussion

The results of the study, which was conducted to determine the effect of PPT-based training for the mothers of autistic children on their psychological well-being, hope and quality of life, were discussed in accordance with the literature. In the reviews, a limited number of studies with the mothers of autistic children were reached in order to establish the effectiveness of the PPT-based training intervention. Therefore, the results were tried to be discussed in light of the most relevant literature.

The difference between the pretest and posttest total mean scores of mothers in the experimental group on the psychological well-being scale was statistically significant ($p < 0.05$) following the PPT-based training. It was observed that the posttest total mean scores of the mothers in the experimental group on the psychological well-being scale increased following the PPT-based training program compared to the pretest total mean score. The literature states that the stress, anxiety, and depression levels of parents of autistic children are high, whereas their psychological well-being, life satisfaction, and quality of life are worse than those of parents of children with normal development (Alsa et al., 2021; Muhammad et al., 2019). In a study, it was determined that six sessions of problem-solving training for mothers of autistic children alleviated their parental stress and depressive symptoms (Feinberg et al., 2014). Another study reported that parents of autistic children who had attended a mindfulness-based stress reduction program had a reduction in stress, depressive, and anxiety symptoms (Santulli et al., 2020). Positive psychology interventions are stated to be effective in alleviating depressive symptoms and improving psychological and subjective well-being (Ashrafian et al., 2019; Taghvaenia & Alamdari, 2020). The results of the study are similar to those found in the literature.

In the PPT-based training, an effort was made to raise mothers' awareness of their bodies and mind and mothers were taught the steps for coping with stress, using effective communication techniques, and problem-solving. Also, mothers were encouraged to discover their strengths through their own life stories, build a positive way of thinking and develop a positive perspective on the flow of life through

homework given in the PPT-based training program. The factors, such as realizing their strengths and successful aspects of the mothers, focusing on their abilities, and adopting a positive way of thinking are believed to be effective in improving the psychological well-being of the experimental group mothers who attempted to integrate what they learnt through the PPT-based training program into their life. According to the research findings, it may be asserted that PPT-based training is an effective psychosocial intervention in improving the psychological well-being of mothers of autistic children.

It was determined that the posttest total mean score of mothers in the experimental group on the dispositional hope scale increased compared to the pre-test following the PPT-based training and the difference between the total mean scores was statistically significant ($p < 0.05$). A study conducted in Spain reported that the parents of autistic children were suffering from a sense of bereavement and their hopes were low (Bravo-Benítez et al., 2019). A study of mothers of children with developmental disabilities reported that these mothers had low hope and there was a correlation between hope and life satisfaction (George-Levi & Laslo-Roth, 2021). Mueller and Mozkowitz reported that providing mothers of autistic children with an eight-week positive family intervention training lessened their irrational beliefs, pessimistic thoughts, and stress while raising their self-efficacy (Mueller & Moskowitz, 2020). The results of the present study are compatible with the literature. During the PPT-based training, hope and hopelessness concepts, as well as stories about hope, were narrated to the mothers and we tried to raise their hope level. The factors, such as developing positive thinking, raising their courage and hope in coping with the social, psychological and societal challenges of autism, and improving their problem-solving and coping capacity may have helped to raise the hope level of mothers in the experimental group through the PPT-based training program.

It was determined that the posttest total mean score of mothers in the experimental group on the quality of life questionnaire increased compared to the pretest following the PPT-based training, and the difference between the total mean scores was statistically significant ($p < 0.05$). Studies on the quality of life of autistic children and their families indicated that the quality of life of mothers of autistic children was low (Naheed et al., 2020), and music therapy enhanced the quality of life of both the child and the family (Thompson, 2017), and interventions such as mindfulness-based stress reduction and positive adult development practice alleviated mothers' anxiety and depression, and improved their sleep and well-being (Dykens et al., 2014). The study by Esentürk and Yarımkaaya revealed that the adapted physical exercise program by mothers of autistic children affected the quality of life of mothers positively (Esentürk & Yarımkaaya, 2021). Pavandi et al. on the other hand, reported that the seven-session strategic solution-focused psychological counselling they delivered to mothers of autistic children lessened their emotional fatigue and enhanced their quality of life (Pavandi et al., 2021). A systematic review concluded that therapeutic and training interventions with parents of autistic children, such as awareness, stress management, acceptance, and problem solving skills, improved the parents' mental health, well-being, and quality of life (Merriman et al., 2020).

In the PPT-based training, the mothers in the experimental group were informed about what they should do to maintain a

healthy and balanced life, and the importance of being physically, mentally, and socially balanced was highlighted in order to improve their quality of life. Mothers were asked to draw up a short-middle-long-term future plan, and it was tried to ensure that they took control, balance and responsibility for their lives. When examined holistically, the PPT-based training program may have been effective on general perspectives of mothers in realizing their strengths, learning positive thinking style, and employing effective communication strategies, coping skills, and problem-solving steps. Due to these factors, it is believed that the quality of life for mothers has improved.

According to the research findings, it may be asserted that the PPT-based training is an effective psychosocial intervention in improving the psychological well-being, hope, and quality of life of mothers of autistic children. In this context, it may be concluded that it is important to routinely adopt the PPT-based education practices within the scope of support practice for parents of autistic children.

Limitations and Generalizability

The limitations of the study are that only literate mothers of children with autism registered in the Guidance and Research Center of just one province were studied and no retention tests were run. Therefore, the results of the study can be generalized to the mothers in the experimental group of the study.

Conclusion and Recommendations

The present study determined that the psychological well-being, hope, and quality of life scores of the mothers in the experimental group increased in the posttest compared to the pretest following the PPT-based training. PPT-based training was effective in improving the psychological well-being, hope and quality of life of mothers of children with autism. Based on these results; the following recommendations are made: the training programs to support mothers of children with autism should be planned; positive psychotherapy techniques should be included in the training programs; professionals in the field of autism should learn positive therapeutic techniques, and practise these techniques to psychosocial interventions, and similar training programs should be prepared for fathers of children with autism. It may also be recommended to undertake similar studies in larger sample groups and different geographical regions in order to determine the effectiveness of PPT-based training.

Conflict of Interest

The authors declare that there is no conflict of interest.

Acknowledgements

We are indebted to all participants who took part in the research.

Sources of Funding

The authors received no financial support for the research, authorship, and publication of this article.

Ethics Committee Approval

In order to conduct the study, ethics committee approval numbered 2021/01-19 was obtained from the Batman University Scientific Ethics Committee on 09.04.2021. All procedures in our study followed were in accordance to the

relevant guidelines and regulations of 1963 Helsinki declaration and its later amendments. Participants in the research were promised that the information they give will be kept confidential and that this information will not be used anywhere other than the results of the research. It was noted that participants had the right to withdraw from the study at any time.

Informed Consent

Written and verbal consent was obtained from the participants.

Peer-Review

Externally peer-reviewed.

Author Contributions

D. Y.: Concept, Design, Supervision, Data Collection, Analysis, Literature Review, Writing Manuscript, Critical Review.

R. A.: Concept, Design, Data Collection, Literature Search, Writing Manuscript, Critical Review.

References

- Al-Khalaf, A., Dempsey, I., & Dally, K. (2014). The effect of an education program for mothers of children with autism spectrum disorder in Jordan. *Int J Adv Counselling*, 36, 175-187. <https://doi.org/10.1007/s10447-013-9199-3>
- Alsa, A., Sovitriana, R., Ekasari, A., & Endri, E. (2021). Psychological well-being of mothers with autistic children. *Journal of Educational and Social Research*, 11(6), 247-254. <https://doi.org/10.36941/jesr-2021-0144>
- Arslan, R., & Sağlam, M. (2021a). *Otizmli çocuklara yönelik duyuşal gelişimlerini destekleyen alternatif bir program*. Ankara: Eğiten Kitap.
- Arslan, R., & Sağlam, M. (2021b). Investigating the effects of sensory development support program prepared for mothers on sensory and social development of children with autism. *P J M H S*, 15(9), 2624-2629. <https://doi.org/10.53350/pjmhs211592624>
- Ashrafian, F., Sadeghi, M., & Rezaei, F. (2019) The effect of integrative of positive cognitive behavioral therapy on infertility stress and hope in infertile women. *Journal of Clinical Nursing*, 8(3), 436-445. <http://jcnm.skums.ac.ir/article-1-1101-en.html>
- Aypay, A., & Kara, A. (2018). Development of the balanced life scale and the balanced life basic skills scale in the context of positive psychotherapy balance model. *Sakarya University Journal of Education*, 8(3), 63-79. <https://doi.org/10.19126/suje.408531>
- Börte- Gürbüz, Ö., Aksu, H., & Eser, E. (2017). Turkish validity and reliability of quality of life in Autism questionnaire- parent version. *Anatolian Journal of Psychiatry*, 18(4), 344-352. <https://doi.org/10.5455/apd.249390>
- Bravo-Benítez, J., Pérez-Marfil, M. N., Román-Alegre, B., & Cruz-Quintana, F. (2019). Grief experiences in family caregivers of children with autism spectrum disorder (ASD). *International Journal of Environmental Research and Public Health*, 16(23), 4821. <https://doi.org/10.3390/ijerph16234821>
- Dawson-Squibb, J. J., Davids, E. L., Harrison-Johnson, A., Molony, M. A., & De Vries, P. J. (2020). Parent education and training for autism spectrum disorders: Scoping the evidence. *Autism*, 24(1), 7-25. <https://doi.org/10.1177/1362361319841739>
- Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D. W., & Oishi, S. (2009). New measures of well-being. *Assessing well-being: The collected works of Ed Diener*, 247-266.
- Dykens, E. M., Fisher, M. H., Taylor, J. L., Lambert, W., & Miodrag, N. (2014). Reducing distress in mothers of children with autism and other disabilities: A randomized trial. *Pediatrics*, 134(2), 454-463. <https://doi.org/10.1542/peds.2013-3164>
- Eapen, V., Crncec, R., Walter, A., & Tay, K. P. (2014). Conceptualisation and development of a quality of life measure for

- parents of children with autism spectrum disorder. *Autism Research and Treatment*, 160783. <https://doi.org/10.1155/2014/160783>
- Ediz, Ç., & Kartal, S. (2023). Examination of social support, burnout, and hopelessness levels perceived by mothers with children in need of special education in terms of sociodemographic characteristics: A cross-sectional study from a rural region of Turkey. *The Journal of World Women Studies*, 8(1), 1-8. <http://doi.org/10.5281/zenodo.815496>
- Ediz, Ç., & Kavak Budak, F. (2023). Effects of psychosocial support-based psychoeducation for Turkish pregnant adolescents on anxiety, depression and perceived social support: A randomized controlled study. *Rural and Remote Health*, 23(3), 7553. <https://doi.org/10.22605/RRH7553>
- Eracar, N. (2016). Farklı gelişim gösteren çocukların aileleriyle yapılan çalışmaları. (A. Kulaksızoğlu, Ed.), *Farklı gelişen çocuklar*. Ankara: Nobel Akademik Yayıncılık.
- Esentürk, O. K., & Yarımkaaya, E. (2021). The effect of adapted physical activities implemented by mothers having children with autism spectrum disorder on the mothers' quality of life. *Ankara University Faculty of Educational Sciences Journal of Special Education*, 22(2), 343-367. <https://doi.org/10.21565/ozelegitimdergisi.686849>
- Feinberg, E., Augustyn, M., Fitzgerald, E., Sandler, J., Ferreira-Cesar Suarez, Z., Chen, N., Cabral, H., Beardslee, W., & Silverstein, M. (2014). Improving maternal mental health after a child's diagnosis of autism spectrum disorder: Results from a randomized clinical trial. *JAMA Pediatrics*, 168(1), 40-46. <https://doi.org/10.1001/jamapediatrics.2013.3445>
- George-Levi, S., & Laslo-Roth, R. (2021). Entitlement, hope, and life satisfaction among mothers of children with developmental disabilities. *Journal of Autism and Developmental Disorders*, 51, 3818-3828. <https://doi.org/10.1007/s10803-020-04832-6>
- Ingersoll, B., & Dvortcsak, A. (2006). Including parent training in the early childhood special education curriculum for children with autism spectrum disorders. *Journal of Positive Behavior Interventions*, 8(2), 79-87. <https://doi.org/10.1177/10983007060080020601>
- Kılınc, F. E. (2018). Özel ihtiyaçları olan çocukları olan aileler. (N. Aral ve F. Gürsoy, Ed.), *Özel gereksinimli çocuklar ve eğitimleri özel eğitim*. Ankara: Hedef CS Yayıncılık.
- Koenig, K., & Levine, M. (2011). Psychotherapy for individuals with autism spectrum disorders. *Journal of Contemporary Psychotherapy*, 41, 29-36. <https://doi.org/10.1007/s10879-010-9158-9>
- Merriman, K., Burke, T., & O'Reilly, G. (2020). A systematic review of the effectiveness and efficacy of clinician-led psychological interventions for parents of children with ASD. *Research in Autism Spectrum Disorders*, 76, 101584. <https://doi.org/10.1016/j.rasd.2020.101584>
- Mueller, R. A., & Moskowitz, L. J. (2020). Positive family intervention for children with ASD: Impact on parents' cognitions and stress. *Journal of Child and Family Studies*, 29, 3536-3551. <https://doi.org/10.1007/s10826-020-01830-1>
- Muhammad, N., Zaman, F., & Rahim, R. (2019). Psychological well-being and life satisfaction of parents with autistic children. *Jagannath University Journal of Life and Earth Sciences*, 5(2), 146-159. ISSN 2414-1402
- Naheed, A., Islam, M. S., Hossain, S. W., Ahmed, H. U., Uddin, M. M. J., Tofail, F., Hamadani, J. D., Hussain, A. H. M. E., & Munir, K. (2020). Burden of major depressive disorder and quality of life among mothers of children with autism spectrum disorder in urban Bangladesh. *Autism Research*, 13, 284-297. <https://doi.org/10.1002/aur.2227>
- Özgür, İ. (2013). *Engelli çocuklar ve eğitimleri özel eğitim*. Adana: Karahan Kitabevi.
- Pavandi, M., Naderi, F., Heidari, A., & Ehtesham Zadeh, P. (2021). The effectiveness of strategic solution oriented therapy on fatigue and quality of life among mothers of children with an autism spectrum disorder. *International Journal of Pediatrics*, 9(7), 14085-14096. <https://doi.org/10.22038/ijp.2020.49105.3932>
- Rashid, T. (2015). Positive psychotherapy: A strength-based approach. *The Journal of Positive Psychology*, 10(1), 25-40. <https://doi.org/10.1080/17439760.2014.920411>
- Santulli, M., Dykens, E. M., Juárez, A. P., & Warren, Z. E. (2020). Mindfulness-based stress reduction for parents implementing early intervention for autism: An RCT. *Pediatrics*, 145(Suppl 1), 81-92. <https://doi.org/10.1542/peds.2019-1895K>
- Sarı, T. (2015). Positive psychotherapy: Its development, basic principles and methods, and applicability to Turkish culture. *Journal of Happiness & Well-Being*, 3(2), 182-203.
- Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology*, 70(2), 321.
- Sönmez-Kartal, M. (2019). Zihinsel engelli ve otizm spektrum bozukluğu olan bireylerin aileleri. (M. A. Melekoğlu ve M. Sönmez-Kartal, Ed.), *Zihinsel engellilik ve otizm spektrum bozukluğu*. Ankara: Eğiten Kitap.
- Şahin, S., Işıtan, S., & Gündüz, S. (2011). Özel gereksinimli çocuklar ve aileleri. (N. Baykoç Ed.), *Özel ihtiyaçları olan çocuklar ve özel eğitim*. Ankara: Eğiten Kitap.
- Tabachnick, B. G. & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson.
- Taghvaenia, A., & Alamdari, N. (2020). Effect of positive psychotherapy on psychological well-being, happiness, life expectancy and depression among retired teachers with depression: A randomized controlled trial. *Community Mental Health Journal*, 56, 229-237. <https://doi.org/10.1007/s10597-019-00471-z>
- Tarhan, S., & Bacanlı, H. (2015). Adaptation of dispositional hope scale into Turkish: Validity and reliability study. *The Journal of Happiness & Well-Being*, 3(1), 1-14. https://toad.halileksi.net/sites/default/files/pdf/surekli-umut-olcegi-toad_0.pdf
- Telef, B. B. (2013). The adaptation of psychological well-being into Turkish: A validity and reliability study [in Turkish]. *Hacettepe University Journal of Education*, 28(3), 374-384. <https://dergipark.org.tr/tr/download/article-file/87222>
- Thompson, G. A. (2017). Long-term perspectives of family quality of life following music therapy with young children on the autism spectrum: A phenomenological study. *Journal of Music Therapy*, 54(4), 432-459. <https://doi.org/10.1093/jmt/thx013>
- Usta, M. B., Duman-Kurt, A., Gülşen, H., & Karabekiroğlu, K. (2020). The effect of parental perception of causes of autism spectrum disorder on treatment choice. *Namık Kemal Medical Journal*, 8(2), 177-185. <https://doi.org/10.37696/nkmj.729140>
- Yanık, D., & Kavak-Budak, F. (2023). The effect of positive psychotherapy-based training on psychological well-being and hope level in women receiving infertility: experimental study. *Journal of Reproductive and Infant Psychology*, 1-14. <https://doi.org/10.1080/02646838.2023.2206853>
- Yanık, D., & Kavak-Budak, F. (2024). The effect of positive psychotherapy-based training on stigma and self-efficacy in women receiving infertility treatment. *Journal of the American Psychiatric Nurses Association*, 30(2), 384-396. <https://doi.org/10.1177/10783903221122801>
- Yavuz, M. (2020). Özel ihtiyaçları olan çocuk ve aile. (B. N. Koçbeker-Ed, Y. Çıkılı, S. Deniz, Ed.), *Özel eğitim ve kaynaştırma*. Ankara: Eğiten Kitap.