



ORIGINAL ARTICLE

Art Activities Used by Mothers with Intellectually Disabled Children and Their Levels of Psychological Resilience: A Cross-sectional and Correlational Study

Zihinsel Engelli Çocuğu Olan Annelerin Kullandıkları Sanat Etkinlikleri ve Psikolojik Sağlamlık Düzeyleri: Kesitsel ve İlişkisel Bir Çalışma

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Abstract

Objective: Art activities are one of the essential methods used to strengthen the psychological resilience of individuals. This study aimed to determine the relationship between the artistic activity practices of mothers with intellectually disabled children and their psychological resilience levels.

Method: This study used a cross-sectional and correlational research design. Personal information forms containing questions about mothers' unique and artistic practices and adult resilience scale (ARS) were used in data collection. SPSS 25.0 program was used to evaluate the data. The resulting relationships were assessed by regression analysis.

Results: While 76.7% of mothers relax with the art activities they use, 62% practice art activity methods with their children. Too many mothers-73.6% of them cannot find enough time for themselves. Mothers' ARS scores were found to be high.

Conclusion: Most mothers are interested in art activities. Therefore, psychological resilience scores were also found to be high. While there was a positive and significant relationship between the mothers' ARS scores and their age, there was a meaningful negative relationship between the total number of mentally disabled children.

Keywords: Mothers with intellectually disabled children, art activities, psychological resilience

Öz

Amaç: Sanat etkinlikleri bireylerin psikolojik sağlamlıklarını güçlendirmek için kullanılan temel yöntemlerden biridir. Bu çalışmada zihinsel engelli çocuğa sahip annelerin sanatsal etkinlik uygulamaları ile psikolojik sağlamlık düzeyleri arasındaki ilişkinin belirlenmesi amaçlanmıştır.

Yöntem: Bu çalışmada kesitsel ve ilişkisel araştırma deseni kullanılmıştır. Verilerin toplanmasında annelerin özgün ve sanatsal uygulamalarına ilişkin sorular içeren kişisel bilgi formları ve yetişkin psikolojik sağlamlık ölçeği (YPSÖ) kullanılmıştır. Verilerin değerlendirilmesinde SPSS 25.0 programı kullanılmıştır. Elde edilen ilişkiler regresyon analizi ile değerlendirilmiştir.

Bulgular: Annelerin %76,7'si kullandıkları sanat etkinlikleri ile rahatlarken, %62'si sanat etkinliği yöntemlerini çocuklarıyla birlikte uygulamaktadır. Annelerin %73,6'sı kendilerine yeterince zaman ayıramamaktadır. Annelerin YPSÖ puanları yüksek bulunmuştur.

Sonuç: Annelerin çoğu sanat etkinliklerine ilgi duymaktadır. Bu nedenle psikolojik sağlamlık puanları da yüksek bulunmuştur. Annelerin YPSÖ puanları ile yaşları arasında pozitif ve anlamlı bir ilişki bulunurken, toplam zihinsel engelli çocuk sayısı arasında negatif yönde anlamlı bir ilişki bulunmuştur.

Anahtar Kelimeler: Zihinsel engelli çocuğa sahip anneler, sanat etkinlikleri, psikolojik dayanıklılık

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Introduction

The roles and responsibilities of mothers and other family members change with the new child joining the family. Learning that a mother will have a child with special needs causes her to experience complex and negative emotions at the same time (1). Considering the social roles, mothers are given more responsibility than other family members in children's care, protection, and social development. Therefore, this situation dramatically affects mothers (2,3).

Having a child with special needs brings responsibilities related to the child's daily care, along with the role of motherhood (4). From now on, the mother has isolated herself from her environment and begun to ignore her wishes. Influenced by other family members, she experiences guilt and stress more (5).

Mothers with special needs children sacrifice their lives for their children. They keep their attention on their children. Almost all of his daily time is spent with his child. Most of the time, they can't even take time for themselves to rest. They stay away from their friends and close circle. They have to stay away from social life and activities. If he has dreams, maybe he has to give up. They are assuming responsibility, which causes mothers to give up other roles and not even participate in social activities (6,7).

The fact that mothers with special needs children are too involved in the care of their children prevents them from devoting enough time to themselves and other responsibilities. It may cause the mother to neglect other typically developing children if any. Active participation in social activities and social life areas in their environment is gradually decreasing. While the social life and social movements of the mother, who takes care of the child and puts more effort into the child, reduce, she has difficulty fulfilling her other roles (8-10).

Stress, anxiety, and anxiety levels increase with the difficulty of caring for their children. Mothers experience anxiety and stress if they do not find an immediate and practical solution when faced with a problem. As a result, this situation will adversely affect psychological health (11). While this situation experienced by the mother, who spends all day with her child, negatively affects her emotional state, the feelings of stress and pessimism dominate (12). Providing psychological support to mothers with children with special needs is essential in giving their children the attention and love they need, coping with stress and stressors, and establishing healthy relationships (13,14).

Main Points

- It is important for mothers with intellectually disabled children to relax.
- Art activities should be used frequently to relax.
- Art activities strengthen psychological resilience.
- Mothers who relax with art activities communicate more calmly with their children.
- School nurses need to know these methods and use them frequently.

Art, the method by which individuals express themselves, is the way of expressing their feelings, thoughts, and ideas with the help of artistic expressions. There is psychological relief on this path. The materials used while doing this enable people to reflect on their stress, anxiety, negative emotions, positive emotions, or what they want to tell with the shapes and symbols they reveal through art (15).

Through art activities, individuals question themselves while expressing their feelings and thoughts. Psychological relief is provided. Acquires the ability to manage their behavior. Gains skills and develops self-confidence. Individuals provide satisfaction and relaxation by reducing stress and anxiety (16-18). Art, on the one hand, strengthens the therapeutic relationship; on the other hand, it provides the connection between conscious and unconscious processes (19).

Psychological resilience is the ability of a person to adapt successfully by overcoming these adversities under challenging conditions. Psychological resilience is a concept associated with positive adjustment, including risk, protective, and coping factors. Risk factors are individual or environmental characteristics that prevent an individual from adapting to the environment in which they live. On the other hand, protective factors mean that the individual can cope with the negative situations in which he is exposed to risky environments and adapt to experiences. Creative art has a healing and protective effect on the individual's spiritual, physical and mental health. It also increases psychological resilience and supports the power to cope with negative emotions (20,21).

As mothers express their negative feelings openly with the help of art activities and are understood and accepted, their psychological well-being will improve. Emotional and psychological relaxation and well-being can be enhanced when mothers with special needs children are supported and allowed to express their feelings and experiences in appropriate environments. The positive emotions arising from the creative process with art can strengthen their psychological resilience (22).

The aim of this study: This research was carried out to investigate the art activities and psychological resilience levels used by the mothers of intellectually disabled students who receive education in private schools at pre-school, primary, secondary, and high school levels in a province in the western Black Sea Region of Turkey. Considering the purpose of the research, answers were sought to the following questions:

(1) What are the personal characteristics of mothers with intellectually disabled children?

(2) What do mothers use the art activities with intellectually disabled children?

(3) Is there a statistically significant difference between the personal characteristics of mothers with intellectually disabled children and the mean scores of the psychological resilience scale?

(4) Is there a statistically significant difference between the artistic characteristics of mothers with intellectually disabled children and the mean scores of the psychological resilience scale?

Material and Method

Study Setting and Sample

This study was designed as a cross-sectional and correlational research. The research universe consisted of the mothers of 193 students educated in public schools providing special education at pre-school, primary, secondary, and high school levels in the province where the research was conducted in the 2021-2022 academic year. It educates students in all disability groups in schools where the research was conducted. The sample best reflects the different perspectives of the students' mothers in the intellectual disability groups. According to the formula used to calculate the sample size for a general population (<https://www.calculator.net/sample-size-calculator.html>), it was seen that 129 mothers would be sufficient for sampling. The study was carried out with 129 mothers who were informed about the purpose of the study and filled out the data collection forms completely. Inclusion criteria: (1) Being the mothers of students studying in public schools providing exceptional education in the 2021-2022 spring semester, (2) volunteering to participate, is (3) not having communication problems.

Data Collection

This study was carried out between 01 May 2022 and 30 June 2022 in a province in the western Black Sea region of Turkey, in the waiting rooms of the schools with the mothers of the students who were educated in private schools.

Data were collected face-to-face using the personal information form and the adult resilience scale (ARS). Before filling out the questionnaires and forms, in the informed consent form giving information about the purpose of the research, the mothers were informed that (1) the data collected in the study would only be used for scientific purposes, (2) there are no questions about obtaining the identity information of the respondent in the data collection forms, (3) it was stated that the participants could withdraw from the study if they wanted to after examining the questions in the data collection forms, (4) the study would not have any negative impact on the participants. Assurance has been given that all rights and information will be secured and kept. Informed consent was obtained from all mothers. After the mothers filled out this form, they moved on to filling out the questionnaire and scale used in the research.

Measurements

Personel Information Form

A questionnaire consisting of 13 questions in total was used. This questionnaire contains the participant's personal information (mother's age, the total number of children, number of disabled children, mother's education level, child's education level, etc.) and interest in art activities (practicing an art activity, participating in individual group activities, practicing an art activity with your child, etc.).

Adult Resilience Scale (ARS)

Based on the child and adolescent resilience scale, the adult version of the scale was developed by Arslan (23). High scores obtained from the scale are indicative of increased resilience. The scale has four subscales, which are relational resources, individual resources, cultural and contextual resources, and familial resources. The scale's internal consistency coefficient was found as 0.94, and test-retest coefficient was found to be 0.85 (23). In the present study, the Cronbach's alpha coefficient of the scale was determined as 0.96.

Statistical Analysis

Statistical Package for Social Sciences (SPSS) for Windows 25.0 package program was used in the evaluation of the data. The distribution of the data was analyzed with the Shapiro-Wilk test. Descriptive statistics of the data were given as mean \pm standard deviation, minimum-maximum and median values. Descriptive statistics of categorical variables were given as number (n) and percentage (%). The independent samples t-test was used to compare the differences between two independent groups with normal distribution. Measurement comparisons with normal distribution were tested using repeated measurements ANOVA three times. If there was a difference, Bonferreni's analysis was used to determine the measure that made a difference. Differences between the groups in categorical variables were examined with Pearson chi-square test. In order to identify the relationship between continuous variables, Pearson correlation analysis was performed for the data with normal distribution. The results were evaluated within a 95% confidence interval, and the level of statistical significance was accepted as a p-value smaller than 0.05.

Ethical Considerations

The research was conducted by the ethical standards outlined in the 1964 Declaration of Helsinki and subsequent amendments or comparable ethical standards. Ethical approval was obtained from a Zonguldak Bülent Ecevit University's Clinic Research Ethics Committee to conduct the study (date: 18.06.2021, no: 49782, protocol no: 235). Written permission was obtained from the schools where the research was conducted.

Results

It is seen that the mean age of the mothers is 40.68±7.709, 38% (n=49) are high school graduates, and according to family types, 89.1% (n=115) are in the nuclear family group, and the total number of children they have is 2.43±1.022. It is seen that the number of intellectually disabled children of mothers is 1.04±0.194; according to the gender of their children, 69.8% (n=90) are boys, and 35.7% (n=46) of the children are in primary school education (Table 1).

While 54.3% (n=70) of the mothers are interested in art activities, 58.9% (n=76) participate in individual or group art activities. While 76.7% (n=99) of mothers relax with the art activities, they use in their lives, 62% (n=80) apply art activity

methods with their children. 73.6% (n=95) of mothers feel they cannot spare enough time (Table 1).

It is seen that the art activities that mothers are most interested in are handcraft-knitting at 49%, sewing and embroidery at 38.8%, music at 30.6%, and drawing and painting at 18.4% (Table 2).

The total score of the mothers on the ARS was 82.65±18.61; the relational resources subscale score was 23.40±5.36; the individual resources subscale score was 20.27±4.90, the cultural and contextual resources subscale score was 19.71±4.80 and the familial resources subscale score was 19.26±4.87. It is seen that the psychological resilience levels of the mothers are higher compared to the total mean scores (Table 3).

Table 1.
Socio-demographic Characteristics of Mothers and Their Intellectually Disabled Children (n=129)

		Mean ± SD	Median (min-max)
Mother's age		40.68±7.709	40.00 (23-63)
Total number of children		2.43±1.022	2.00 (1-6)
Number of intellectually disabled children		1.04±0.194	1.00 (1-2)
		n	%
Mother education	Reader-writer	2	1.6
	Primary school	32	24.8
	Secondary school	25	19.4
	High school	49	38.0
	University	21	16.3
Education level of an intellectually disabled child	Pre-school	31	24.0
	Primary school	46	35.7
	Secondary school	43	33.3
	High school	9	7.0
Gender of the intellectually disabled child	Female	39	30.2
	Male	90	69.8
Family type	Nuclear family	115	89.1
	Extended family	10	7.8
	Single parent family	4	3.1
Engaging in art activities	Yes	70	54.3
	No	59	45.7
Participating in art activities	Yes	76	58.9
	No	53	41.1
Relaxation of art activities	Yes	99	76.7
	No	30	23.3
The state of applying an art activity with his child	Yes	80	62.0
	No	49	38.0
Having enough time for yourself	Yes	34	26.4
	No	95	73.6
Total		129	100

SD=standard deviation

It is seen that there is a statistically significant difference between the scores of the ARS according to the mothers' participation in individual or group art activities ($p < 0.05$). It is seen that the medians and average scores of those who answered yes to participation in individual or group art activities were higher than those who answered no (Table 4).

It is seen that there is a statistically significant difference between the scores of the adult psychological resilience scale according to the family type of the mothers ($p < 0.05$). As a result, it is seen that the psychological resilience scores of the mothers in the nuclear family group are higher than the mothers in the single-parent family group (Table 4).

It is seen that there is a statistically significant difference between the mothers' interest in art activities and their child's practice of art activities ($p < 0.05$). Fifty-two (74.3%) people interested in art activities practice an art activity with their children. It is seen that there is a statistically significant difference between the mother's interest in art activities and the situations in which the art activities they use in their lives relieve themselves ($p < 0.05$). The art activities used by 66 (94.3%) people interested in art activities relax them (Table 5).

While there is a positive and significant relationship ($r = 0.354$; $p = 0.000$) between mothers' ARS scores and their

ages, there is an important negative relationship ($r = -0.226$; $p = 0.010$) between the total number of intellectually disabled children (Table 6).

Table 2. Art Activities That Mothers are Interested in (n=129)*

		n	%
Art activities that mothers are interested in	Painting	21	16.3
	Dance-move	21	16.3
	Music	39	30.6
	Drawing/painting	24	18.4
	Mandala drawing and coloring	16	12.2
	Play game	21	16.3
	Cinema	16	12.2
	Film	24	18.4
	Rhythm keeping	5	4.1
	Theatre	3	2.0
	Coloring studies	18	14.3
	Handcrafted-knitting	63	49.0
	Sewing embroidery, fabric embroidery	50	38.8

*=the participants chose more than one option

Table 3. Mothers' Adult Resilience Scale Score Distribution (n=129)

	Mean ± SD	Median (min-max)
Total resilience	82.65±18.61	88.00 (21-105)
Relational resources subscale	23.40±5.36	25.00 (6-36)
Individual resources subscale	20.27±4.90	22.00 (5-25)
Cultural and contextual resources subscale	19.71±4.80	21.00 (5-25)
Familial resources subscale	19.26±4.87	20.00 (5-25)

Min=minimum, Max=maximum, SD=standard deviation

Table 4. ARS Score Distributions According to Some Personal Characteristics of Mothers (n=129)

		n	Median (min-max)	Mean ± SD	t/F	p	Bonferroni
Participating in art activities	Yes	76	88.500 (22-105)	85.07±17.47	32.444 ^a	0.000*	-
	No	53	83.000 (21-105)	79.18±19.78			
Family type	Nuclear family (1)	115	88.000 (21-105)	84.49±16.73	6.591 ^b	0.002*	1>3
	Extended family (2)	10	84.000 (28-97)	71.80±26.05			
	Single parent family (3)	4	55.500 (34-83)	57.00±26.67			

ARS=adult resilience scale, ^a=one sample t-test, ^b=One-Way ANOVA test (F), *= $p < 0.05$, Min=minimum, Max=maximum, SD=standard deviation

It is seen that the total number of children with special needs has a statistically significant and negative effect on ARS ($t=-2.613, p<0.05$). A 1-unit increase in the variable of the total number of children with special needs causes a 21.7 decrease in the ARS ($\beta=-21.700$). It is seen that 4.4% of the change in ARS was explained (Adjusted $R^2=0.044$) (Table 7).

The mothers' age has a statistically significant and positive effect on ARS ($t=4.259, p<0.05$). A 1-unit increase in the

maternal age variable causes an increase of 0.854 on the ARS ($\beta=0.854$). It is seen that 11.8% of the change in ARS was explained (Adjusted $R^2=0.118$) (Table 8).

Discussion

This research was conducted to investigate the art activities and psychological resilience levels of mothers with intellectually disabled children. Answers were given to the research questions asked for this purpose. In this study, it is

Table 5.
Comparison of Some Characteristics of Mothers with Their Interest in Art Activities (n=129)

	Engaging in art activities			
	Yes	No	Total	
Practice an art activity with your child	Yes	52 (74.3%)	18 (25.7%)	70 (100%)
	No	28 (47.5%)	31 (52.5%)	59 (100%)
	Total	80 (62.0%)	49 (38.0%)	129 (100%)
X ² ; p	9.782			0.002*
Relaxation of art activities	Yes	66 (94.3%)	4 (5.7%)	
	No	33 (55.9%)	26 (44.1%)	
	Total	99 (76.7%)	30 (23.3%)	
X ² ; p	26.387			0.000*

*= $p<0.05$, *=chi-square test

Table 6.
The Relationship Between the Mothers' ARS Scores and the Age of the Mother and the Total Number of Children with Intellectually Disabled

		Mother's age	Total number of intellectually disabled children
ARS	r	0.354	-0.226
	p	0.000*	0.010*

*= $p<0.05$, ARS=adult resilience scale

Table 7.
Simple Linear Regression Analysis Results to Explain the Effect of the Total Number of Intellectually Disabled Children on the ARS

Dependent variable	Independent variable	β	Standard error	Beta	t	p	F	Model (p)	Adj. R ²	Durbin Watson
ARS	Constant	105.200	8.773	-	11.991	0.000*	6.829	0.010*	0.044	2.079
	Total number of intellectually disabled children	-21.700	8.304	-0.226	-2.613	0.010*				

*= $p<0.05$, ARS=adult resilience scale

Table 8.
Simple Linear Regression Analysis Results to Explain the Effect of Maternal Age on ARS

Dependent variable	Independent variable	β	Standard error	Beta	t	p	F	Model (p)	Adj. R ²	Durbin Watson
ARS	Constant	47.906	8.297	-	5.778	0.000*	18.140	0.000*	0.118	2.263
	Mothers age	0.854	0.200	0.354	4.259	0.000*				

*= $p<0.05$, ARS=adult resilience scale

seen that the psychological resilience levels of the mothers are high. While there is a positive and significant relationship between the MPSQ scores of the mothers and their ages, there is a negative and significant relationship between the total number of children with intellectual disabilities. In the study conducted by Çulhacik et al. (24), psychological resilience levels of mothers with disabled children were found to be high. In the study conducted by Özsavran and Ayyıldız (25), mandala art therapy activity significantly increased the psychological resilience and comfort level of mothers with disabled children.

While 54.3% of the mothers are interested in art activities, 58.9% participate in individual or group art activities. With art-related activities, 76.7% of mothers find relaxation. Engaging in art activities also means applying one or another of the psychological relaxation methods. Therefore, in this research, "The art activities used by 66 (94.3%) people interested in art activities relax." finding has emerged. It is seen that the art activities that mothers are most interested in for this purpose are handcraft-knitting at 49%, sewing and embroidery at 38.8%, music at 30.6%, and drawing and painting at 18.4%. Many individual or group studies (26-29) show that mothers feel psychologically relieved when they are also interested in different art activities. It can be thought that participation in art activities increases the well-being of mothers by enabling them to socialize. In addition, it can be said that the ability of mothers participating in art activities to express themselves through art activities and to share their positive-negative feelings/experiences about the child's disability in these environments increases their psychological well-being.

With their children, 62% of the mothers participating taking part in the study practice art. In addition, 52 (74.3%) people interested in art activities practice at least one art activity with their child. Mothers who want to communicate effectively with their children and receive positive feedback from them should be warm, kind, and sincere in their interactions with their children. They do this through art activities. This way strengthens the bond between them. Positive mother-child relationships enhance the bond between mother and child and facilitate the connection (16,17,30). The research finding, which aligns with this approach, confirms the knowledge in the literature.

Mothers with disabled children have difficulty allocating private time for themselves due to the care of the disabled child, family-spouse relations, and housework (31). Mothers should participate in social or cultural activities like other individuals. She should be ensured to spend time with her friends or other family members (32). Mothers who are not interested in art or other activities and cannot find time to spare for them feel as alone as possible. As in many studies, 73.6% of mothers in this study feel they cannot spare enough time for themselves (31-33).

Protective factors in psychological resilience mean that the individual copes with the negative situations in which

he is exposed to risky environments and can adapt due to experiences (20). Mothers participating in this study live with various risk factors for their children. Mothers may use art activities without knowing it or perhaps knowingly. These practices have become a coping method for adaptation by increasing the psychological resilience level of mothers. Therefore, it is seen that the psychological resilience levels of the mothers are high compared to the total mean scores obtained from the ARS. Studies using art activities have also resulted in similar results to the research findings (24,34).

According to the family type of the mothers, it is seen that the psychological resilience scores of the mothers in the nuclear family group are several times higher than the mothers in the single-parent family group. She undertakes the mothers' daily housework and childcare routines for the disabled by herself. For this reason, it is seen that stress levels increase, fatigue levels increase, times feel weak growth, and all burdens are loaded alone. Accordingly, it is thought that the psychological resilience of single-parent families is lower than nuclear families (35,36).

Increasing the number of children is complex, even in families with typically developing children. The increased number of children with disabilities also means the burden on mothers, caregivers, or other family members will gradually increase. This leads mothers and other members towards an area where they will eventually limit themselves in social support, economic, group activities, or individual activities. The mother in distress will be unable to develop a protective factor (25). This will cause the psychological resilience of mothers to decrease. This is one of the findings of this study, "A 1-unit increase in the variable of the total number of children with special needs causes a 21.7 decrease in the ARS." supports I.

From the moment a disabled child is born into the family, the ability of mothers to cope with the problems experienced has been increasing over the years. In this process, many things are getting in order over the years, such as the child's adaptation, knowing and meeting the child's wishes, and a family management suitable for this process. Mothers' time spent with their children increases as time passes, their harmony with their children increases, how the time spent is determined over time, and as a result, a routine is established and accepted. In this process, they may have developed protective factors against risk factors in the face of difficulties. This may mean that their psychological resilience is getting stronger (24). This is the research finding, "A 1-unit increase in the maternal age variable causes an increase of 0.854 on the ARS" it explains the. As a result, The increase in the age of mothers means that their psychological resilience levels will be strengthened-increased.

Study Strengths

The strengths of the study are that it was conducted as it targeted groups that are positively discriminated in society, it was conducted with the participation of mothers. Art

methods, one of the areas where mothers, who are known to be most interested in children with special needs, can raise awareness in their lives, were revealed.

Study Limitations

Including education schools affiliated with national education and not including private education and rehabilitation centers limited the sample. The results of this study cannot be generalized to all mothers with intellectually disabled children. It can be recommended to be done in a larger population.

Conclusion

In this study, it was found that the psychological resilience levels of mothers were high. While there is a positive and significant relationship between the ARS scores of the mothers and their ages, there is a negative significant relationship between the total number of mentally disabled children.

Recommendations

Mothers with disabled children go to school with their children. They accompany them to school. Mothers can also spend time in a waiting room or activity workshop in schools where their children are educated. Mothers can be allowed to do art activities in these workshops. Such areas can be expanded in schools. In these areas, mandala work, painting work, handicraft sewing and embroidery work, marbling art, dance and music activities etc. can be done.

These areas to be opened within the particular education school will become areas for mothers to strengthen their psychological resilience. Supporting mothers in this way will improve the interaction with the child. Improving child-mother interaction will mean other family members spend the day with more positive emotions. It will also enable these mothers who feel lonely to come together with other mothers who share the same feelings and to share their feelings.

As a result of this research, it has been revealed that mothers who are interested in art activities will be psychologically relieved, and their psychological resilience will be strengthened. Accordingly, randomized controlled studies can be conducted with mothers with intellectually disabled children using art therapy methods and activities.

Ethics Committee Approval: Ethical approval was obtained from a Zonguldak Bülent Ecevit University's Clinic Research Ethics Committee to conduct the study (date: 18.06.2021, no: 49782, protocol no: 235).

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