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An investigation of the effects of the psychoeducational programme structured on positive psychology based on Masnavi stories on marital harmony

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Abstract

The main purposes of this study are to examine the effects of the psychoeducation programme structured on Masnavi stories based on positive psychology, prepared by the researcher, on marital harmony to improve this through a psychoeducational programme and to increase their satisfaction with life. The research was an experimental study based on "pre-test, post-test and follow-up test model with control group". Examined group of the research consisted of 14 married couples who lived in Istanbul and who agreed to participate voluntarily. Of the 14 married couples, seven pairs were assigned randomly to the experimental group and seven pairs to the control group. In order to reveal the effectiveness of the psychoeducational programme, "Spousal Harmony Scale" and "Personal Information Form", prepared by the researcher were taken by the couples before the first session. Couples in the control group were visited and they were given the scale and the form. While couples in the experimental group took 11 weeks of psychoeducational programme structured on Masnavi stories based on positive psychology, no such procedure was applied to the control group. The effectiveness of the programme was tested by applying the same measurement tools to the couples in the experimental and control groups before, during and after the experiment. The data were analysed by Wilcoxon rank sum test. According to the results of the research, the psychoeducational programme structured on Masnavi stories based on positive psychology was found to be effective in increasing the level of harmony (marital harmony, marital satisfaction, showing love and marital commitment) between the married couples. In addition to these results, it was seen that Masnavi of Mevlana, which had themes of positive psychology and metaphors, had a psychotherapeutic aspect. The results obtained were discussed with the relevant literature and theoretical and practical suggestions were made for different fields of application.

Keywords: Positive psychology, marital harmony, psychoeducation, Masnavi

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1. Introduction

Psychology, as a social science aims at understanding people and making sense of their behavior, has shown a transformation in its historical development. The field of psychology initially treated human beings as an organism, but gradually went beyond this definition and began to evaluate humans as independent, free beings who act logically. The positive psychology was first put forward by Seligman (1998), and this lead a great change in the behavioral sciences. The purpose of positive psychology is to change the focus of psychology from anxiety, to repairing negative thoughts in life and building positive thoughts of quality (Seligman & Csikszentmihalyi, 2000). According to Seligman (1988), mental health services have two more important tasks neglected for a very long time: The first is to create necessary conditions for a good life, and the second is to reveal the strengths of individuals. According to Gable and Haidt (2005), positive psychology is an approach that investigates the situations and issues that enable individuals, groups, and institutions to reveal their potential, their positive and strong sides in the most effective and efficient way and support their positive development. Seligman and Csikszentmihalyi (2000) state that the goal of positive psychology is not only to repair the negative, but also to reveal and spread the positive, and even to structure society with these positive aspects. Today, positive psychology deals with hope, life satisfaction, meaning of life, optimism, gratitude, forgiveness, altruism, social interest, subjective well-being, and psychological resilience, and it also deals with positive values (Kendirci, 2018). According to Lyubomirsky, King, and Diener (2005), positive psychology aims to support individual development and to maintain a meaningful and satisfying life. It researches human nature and strong character traits. Considering a human's developmental potential, this approach is promising in improving the quality of life of individuals, families, and societies by trying to find the best for humans.

A person, in a process of rapid change throughout his life, starts to think that he/she cannot continue his/her life on his own, that he/she needs to interact emotionally and socially. He/she demonstrates attitudes and acts accordingly. One of the most important of these is bonding with the opposite sex. The individual makes his/her need even more meaningful by marrying tobe integrated into society, to satisfy his/her needs, to provide social support. All these contribute to well-being of an individual. Marriage is one of the

important decisions that an adult makes to establish a family, and it entails a great responsibility.

Meezon and Rauch (2005) define marriage as "making the relationship with the opposite sex legal in society". Considering its social and emotional context, marriage allows individuals of the opposite sex to fall in love and take their feelings away from their introverted lives, providing them with a social appearance (Waite & Gallagher, 2000). Apart from this social definition of marriage, there is also an aspect that concerns individuals. Marriage is a way of enabling an individual to unite his/herself with someone else and achieving happiness by developing his/her personality (Fowers, 1993). According to Gottman (1994), married people lead a happier and healthier life than unmarried people. In this respect, a harmonious married life is seen as a protection for the psychological health of both married couples and children.

Marriage has many individual and social functions. Increasing divorce rates affect individuals and families deeply, and a great part of the society. Thus, marriage is an important issue for researchers. Many researchers have sought an answer to the question what maintains a marriage concerning marriage itself and marital adjustment. In the earliest study accessed on marriage (Termen, Butterweiser, Ferguson, Johnson, & Wilson, 1938, cited by Gottman & Notarius, 2002), the reasons for happiness and unhappiness of some married couples are discussed. The question "why" in this study has been a constant focus in marriage research throughout the 20th century.

The concepts of marital adjustment and marital satisfaction were mostly examined in studies on maintaining a healthy married life. Most of the researchers have published studies on the concept of marital adjustment. Marital adjustment is described as one's success in marital life and functionality in marriage, and it a general concept that includes marital satisfaction and marital happiness (Kalkan, 2002). Nelson-Jones (1986; qtd. in Özaydınlık, 2014) states that human relations take place in four stages which are initiation, development, maintenance and termination. Maintenance requires a high harmony in marriage. Spreche (1993) stated that positive emotions, especially satisfaction and commitment decrease in marriages that result in separation, and that love disappears with the decrease of positive emotions. He argued that couples end their relationships not because they do not love each other anymore but because they are dissatisfied and unhappy.

The second wave of positive psychology focused on the spiritual aspect of and individual and considered virtues as important. These made research on made positive psychology even more valuable for people who look for meaning in life. Considering the positive contributions of people to their mental health by obtaining satisfaction in life and making life meaningful, marital adjustment becomes an important concept in maintaining a healthy and happy marital relationship. In this respect, when research on marital adjustment considered, basic concepts of positive psychology, positive values and emotions such as "love, commitment, meaning of life, hope, optimism, forgiveness, altruism, gratitude, patience" will positively affect marital adjustment.

Based on the idea that the positive psychology approach uses stories effectively in psychological counseling and psychotherapy, Mevlana Celalattin Rumi's stories (1207-1273) in Masnavi were used in this study. According to Tarhan (2012), in positive psychology, when telling stories, pedagogical meanings are emphasized, and the mental change of an individual is realized through story telling. According to Hayran (2013), stories that activate dreaming, identifying and modeling in a positive way have played a role in shaping human behavior from past to present. Stories can change individuals and they have been used by many cultures in history.

In some volumes of the Masnavi, he writes that "it heals the souls, unites lovers, heals the sick" (Tarhan, 2012). In this respect, Masnavi can be used to provide internal healing. According to Tarhan (2012), the stories told in Masnavi have different effects. First, stories serve as mirrors. An individual gains awareness and sees a kind of reflection about his or her own mental state. On the other hand, stories serve as models. They present a perspective on symbolic and conceptual thinking and social norms. Thus, they contribute to human development. They also have a cultural function. They transfer certain values and cultural accumulation from past generations to future generations.

When stories are evaluated in the light of the above, it is seen that they are not only works of literature and religion, but also, they contain the basic principles of positive psychology and have a regulative, curative and developing effects (Kendirci, 2019).

Although most of the studies aimed at improving the mental health of the individuals are insufficient worldwide, developed countries prepare preventive mental health programs that are effective and provide humanitarian and economic benefits to prevent inadequacy in studies on this subject. For this purpose, researchers have made efforts to

advance with more effective and scientific criteria by developing preventive programs for the last 25 years (Blocher, 2000). As a result of these studies, effectiveness on improving people's mental healthofthese preventive programs, which were scientifically tested and accepted, have been determined. Most of these are psychoeducational programs (Gazda, Ginter, & Horne, 2001). Researchers in the field of psychoeducational programs have conducted studies to develop different programs in many areas because of many different types of problems (Herr, 1999). In psychoeducation programs, researchers conduct research on one's ability to act effectively by working on what the problem is instead of learning about the past. Problem-oriented, education-based, target-oriented, and timebased programs are developed with a method that is considered as necessary in psychoeducational groups to make an individual gain these skills. It is thought that skills developed by the applied programs will prevent the emergence of psychological problems and the participants will become physically and psychologically healthier (Gazda et al., 2000). Couples who try to increase their skills in communication and problem solving and marital satisfaction levels have an important place in psychoeducation studies (Blocher, 2000).

Much research has been done in the field of psychology with the aim of healing mental disorders and many psychoeducational programs have been developed. Drawing on the regulatory, curative, and formative effects of positive psychology on individuals, families, communities and institutions, and considering the idea that marriage is a social institution that improves one's health and supports their life satisfaction (Hayward and Zhang, 2006), positive psychology may be a positive contribution to marital adjustment and marital satisfaction. For this purpose, Masnavi stories based on psychoeducation program for married couples, are arranged considering the basic approach and perspective of positive psychology. Masnavi stories were selected according to the topic of the session and intervention methods and counseling techniques of positive psychology are used.

Marital adjustment, one of the basic concepts of marriage, is an indispensable element for a healthy and happy marriage. Couples should focus on each other's positive sides to ensure harmony between spouses in marriage and emphasizing these can make a great contribution to this harmony. In this context, the importance and contribution of the positive psychology in marital adjustment is evident.

Marriage life, which is an intense emotional bond between two people of the opposite sex, constitutes the basis of social life for people who are trying to make sense of their life. Marriage can affect many things such as business life, psychological health, life satisfaction and mental health of families and societies. To maintain a healthy and stable married life, the bond between the spouses should become stronger over time and the marital adjustment should continue (Kendirci, 2018). Marriage is the most meaningful type of relationship among interpersonal relationships. It is an extremely important and meaningful type of relationship. It has individual and social effects. Problems encountered in marriage also pave the way for the emergence of social problems by affecting the mental and physical health of both spouses and children. The fact that the problems encountered in marriage have such a great impact demonstrates that studies on marital adjustment will shed light on both researchers and experts working in the field.

When the literature is examined, it is seen that in some of the studies on marital adjustment, one of the spouses is generally focused on evaluating the marital adjustment or they are evaluated as married individuals, not as a couple (Kahraman, 2011; Yüksel, 2013; Yalçın, 2014; Özden, 2014; Yeter, 2017; Ergül, 2017; Karakaş, 2018; Tekin, 2019). In terms of contribution to the literature, it is extremely important to increase the number of studies on the evaluation of marital adjustment by both men and women.

Today the dissolution of the idea of a family causes many individual and social problems. According to the data of the Turkish Statistical Institute (TUIK, 2018), 553.202 marriages took place in 2018, and it was observed that the crude marriage rate was 6.80%; however, it was seen that the number of divorces was 142,448, which was 1.75% in terms of crude divorce rate the number of divorces has increased. According to the data of the Institute of Statistics of Turkey (TUIK, 2017), 38.7% of the divorces in 2018 occurred within the first 5 years of marriage, and 20.7% within the 610 years of marriage.

The compatibility of the spouses, constituting the basic elements of the family, which is the smallest institution of the society, makes it possible for the society to be healthy at a large level (Demir, 2016). In this respect, it is seen that the harmony of couples in their marriage life has a significant impact on both their individual and social lives. The level and quality of harmony shapes married life. Knowing what values or attitudes and

behaviors they should have to increase their marital adjustment will also increase their level of happiness and life satisfaction.

In studies conducted in positive psychology, the basic values and powers of human beings have been determined, and values and virtues have also been taken into account, especially by emphasizing the spiritual aspects of individuals who have been neglected for years (Kendirci, 2018). Considering the positive contributions of these innovations in positive psychology to life satisfaction, these studies will also contribute to marital adjustment and marital life. In addition, works written by self-realized, transcendent individuals in Sufism and revealing the positive side of human beings can add many things to positive psychology (Kendirci, 2018). In Masnavi, Mevlana writes:

"You are just a thought. And the rest is flesh and bone. If you think of roses, you become a garden of roses. If you think of a thorn, you become a garden of thorns." The importance of positive thinking and positive psychology is apparent.

In related literature, there are many studies that deals with positive psychology and marital adjustment separately, but there is not a single study that deals with these two together. An approach that focuses on the positive aspects of human beings, such as positive psychology on an individually and socially important subject such as marriage will yield positive results and this kind of a study is necessary. In this respect, the results of the research are important.

For this purpose, within the framework of the literature examined in this study, the effect of a positive psychology-based psychoeducation program based on Masnavi stories on marital adjustment was investigated. The psychoeducation program, which was developed for married couples through an interdisciplinary study, is aimed to shed light on individuals who are in the process of getting married or who have not found the marital adjustment they expected in their marriage. When all these explanations are evaluated, this study is the first psychoeducation program based on positive psychology-based Masnavi stories and it is the first study investigating the effects of this psychoeducation program on marital adjustment. In this respect, this study will help researchers, experts, psychologists or psychological counselors, couple and family therapists working in the field. As it is an interdisciplinary study, it is anticipated that this research will make significant contributions to the relevant literature.

As a result, the main purpose of this study is to test the effects of a positive psychology-based psychoeducation program based on Masnavi stories on marital adjustment of married couples. Within the framework of the aim of the research, a psychoeducational study was conducted to increase the adjustment of married couples. Depending on the main purpose of this research, the following hypotheses were tested:

- 1. There is no significant difference between the dyadic adjustment pretest scores of the experimental and control groups.
- 2. The dyadic adjustment posttest mean scores of the experimental group are higher than those of the control group.
- 3. The mean scores of dyadic adjustment follow-up in the experimental group are higher than in the control group.
- 4. Experimental group dyadic adjustment posttest mean scores are higher than pretest mean scores.
- 5. The difference between the follow-up test mean scores of the experimental group and the posttest mean scores is insignificant.

2. Method

This study, which examines the effect of a positive psychology-based psychoeducational program based on Masnavi stories on marital adjustment, is an experimental study based on the "control group pretest, posttest and follow-up test model". The independent variable is the applied psychoeducation program, and the dependent variable is marital adjustment. The study was planned as a "trial model". Trial models are research models in which the data to be observed are produced directly under the control of the researcher in order to reveal the cause-effect relationship (Karasar, 1991).

2.1. Working Group

The study group consisted of 14 married couples residing in Istanbul and voluntarily agreed to participate in the research. The determination of the sample was made randomly by drawing lots. Individuals were also randomly assigned to the control and experimental groups.

In order to create the experimental and control groups, brochures stating the content and aims of the psychoeducation study were prepared by means of

advertisements and announcements in Istanbul, and a preliminary interview was held with those who wanted to participate. In the preliminary interview, couples were given detailed information about the study. It was decided to work with 28 volunteers who promised to continue the 11-session psychoeducation program. Out of 14 couples, seven couples were randomly assigned to the experimental group and seven couples to the control group. In order to reveal the effectiveness of the psychoeducation program, the "Couple Adjustment Scale" and the "Personal Information Form" prepared by the researcher were applied to the couples before the first session. The related scales and forms were applied to the couples in the control group by visiting them before the program started.

2.2. Data Collection Tools

2.2.1 Dyadic Adjustment Scale

In this study, the scale for couples developed by Spanier (1976) was used to evaluate the marital adjustment of married couples. Dyadic Adjustment Scale (DAS) has 32 items and 30 items include 7-point Likert-type questions which can be scored between 0-7. The other two items have yes, no questions and they are scored by 0 or 1 point. High scores indicate that the relationship quality of married couples is high.

In the study conducted by Spanier (1976), the mean of the scale for married couples was 114.8 (SD=17.8), the Cronbach's Alpha coefficient in the total score of the scale was .96, and the values of the subscales were between .73 and .94. The criterion-related validity of the Locke-Wallace Marriage Adjustment Test was found to be .86. These results demonstrate that the validity and reliability of the Couples Adjustment Scale (CIS) is appropriate.

Fişiloğlu and Demir (2000) adapted the Dysparity Scale into Turkish. The reliability and validity study of the scale was conducted on 264 individuals, 132 men and 132 women. The Locke-Wallace Marital Adjustment Scale was used in the construct validity of the scale (r = .82). As a result of the research, the internal consistency reliability of the scale was found to be 0.92, which is close to the reliability result of the original test.

The scale measures four dimensions of the relationship between couples in married life, and these sub-dimensions are as follows:

- 1. Couple Harmony Sub-Dimension consists of 13 questions in total, including the level of agreement and consensus on important issues in marital life.
- 2.Dual Satisfaction Sub-Dimension consists of a total of 10 questions evaluating the positive and negative characteristics of couples related to emotion and communication.
- 3. Showing Affection Sub-Dimension consists of four questions in total, including the love behavior of spouses and the way they can get along.
- 4. Couples' Commitment Sub-Dimension consists of a total of five questions about the time married couples spend together (Fişiloğlu & Demir, 2000).

2.2.2. Personal Information Form

A Personal Information Form was created by the researchers in order to obtain a descriptive information of the study group. The personal information form includes age, gender, educational status, socio-economic level, number of children, marriage age, and the type of marriage.

2.3. Data Collection Process

Married couples who volunteered to participate in the study were divided into experimental and control groups. Psychoeducation started with the experimental group on January 12, 2019. The program was planned as 11 sessions and was held once a week on Saturday evenings between 20:00 and 22:00. Pre-tests were applied to the experimental and control groups before the first session on January 12, 2019, and post-tests were applied to the experimental group in the last session on March 23, 2019. The control group was also visited in the same week and post-tests were applied. About two months after the applications, the Dyadic Adjustment Scale (DAS) was applied to the experimental and control groups again (follow-up test) and data were collected.

2.4. Psychoeducation Program Based on Masnavi Stories Based on Positive Psychology Purpose of the Program

The aim of psychoeducation program is to raise awareness and skills about nine basic values that will increase the marital adjustment of married couples. However, this skill is to help couples in a happy and harmonious marriage by enabling them to see how this awareness affects their married life.

In the 11-session psychoeducation program prepared on the basis of positive psychology, values such as "love, commitment, forgiveness, meaning of life, hope, optimism, altruism, gratitude, loyalty and patience" were emphasized. Their maintaining a more harmonious marriage is aimed by their internalizing these values, which can positively affect their relationships.

2.4.1. Program Application Process

Techniques such as oral expression, storytelling, group work, discussion, activity, video, and feedback were used in the application of the program. This study conducted by researchers lasted for 11 weeks. Sessions are conducted once a week and lasted between 90 minutes to 120 minutes. Control group was not included in this session, but they were informed that they could participate in the same program in the autumn of 2019. psychoeducation program was applied to the experimental group in Relational Psychology Institute in Istanbul Bakırköy.

2.4.2. Content of the Program

This psychoeducation program, prepared to increase the level of marital adjustment, aims to increase the marital adjustment of couples by making values that can positively affect marital adjustment usable in marital life. Within the framework of the prepared program, "love, devotion, forgiveness, meaning of life, hope, optimism, altruism, gratitude-loyalty and patience" were included. Each value was examined during a session, and the readiness of married couples was studied by making conceptual briefings. In each session, Mr. The values were analyzed by supporting a story suitable for the subject chosen from Mevlana's Masnavi. Then, the activities were applied and it was aimed to transform the acquired gains into behavior. In this context, some practice assignments were given at the end of the session, and until the next session, married couples were asked to put their achievements into practice and to turn these gains into skills and try to use them in their married life. In the last session, evaluations were made by sharing the experiences of married couples during the program process.

2.5. Data Analysis

Data obtained with the measurement tools used in the program process was analyzed in SPSS 23.0. As the sample size was less than 30, non-parametric tests were used in the

analysis of data (Büyüköztürk, 2010). For this purpose, Wilcoxon Signed Rank Test was used to examine whether there was a significant difference between the couples in the experimental and control groups in terms of dyadic adjustment. Wilcoxon Signed Rank Test, which can be seen as the non-parametric equivalent of the Dependent Group t-test, is used to examine whether the distributions of two related sample scores differ significantly from each other (Balcı, 1997). This technique is suitable for use when the distribution of the sample group in terms of the relevant variable is not normal and the sample diameter is below 30 (Ünver & Gamgam, 1996).

3. Results

This part of the study deals with demographic findings of the Couples Adjustment Scale, descriptive analysis results and Wilcoxon analysis results for the experimental and control groups are included. As research population was less than 30 participants, non-parametric tests were used. Moreover, as non-parametric tests do not seek normal distribution and variance congruence (Akbulut, 2010) it made reasonable to use non-parametric tests. The Wilcoxon test is used to test the significance of the difference between the scores of the two measurement sets (Büyüköztürk, 2015). Wilcoxon test was used to determine whether the mean scores of the experimental and control groups differed significantly. The details of the comparative scores of the measurement scores are presented below.

This study was carried out in pre-test, post-test and follow-up in stages seen in the table and a total of 14 men and women were included in the study in equal numbers. The ages of the participants were divided into three groups and the age distribution of these groups is parallel to each other. Moreover, the majority of the participants in the research are university graduates. The compatibility of couples was tested. They are asked questions concerning their marital status as it was thought to be important. Accordingly, the majority of them got married between the ages of 21-25 and 26-30.

Most of the participants decided to marry on their own (78.6%) and through arranged marriage (17.9%). Moreover, 14.3% of the participants were married for 1-5 years, 35.7% of them for 6-10 years, 21.4% of them for 11-15 years, 21% of them for 16-20, and 7.2% of them for above 21 years. 64.3% of the participants had 2-3 children, 14.3% of them had

only child and 21.4% had none. The majority of the participants defined their economic status as middle (75.0%) and above-average (25.0%).

Table 1. Results regarding the socio-demographic characteristics of the research participants

Socio-Demographic Information	f	%
Gender		
Woman	14	50.0
Man	14	50.0
Age		
23-32	8	28.6
33-40	13	46.4
41-48	7	25.0
Education		
Middle School	1	3.6
High school	5	17.9
University	16	57.1
Graduate	6	21.4
Marriage Type		
Arranged	5	17.9
Own Decision	22	78.6
Consanguineous Marriage	1	3.6
Marriage Age		
between 15-20	1	3.6
between 21-25	13	46.4
between 26-30	13	46.4
between 31-35	1	3.6
duration of marriage		
1-5	4	14.3
6-10	10	35.7
11-15	6	21.4
16-20	6	21.4
21 and over	2	7.2
Number of children		
none	6	21.4
only one child	4	14.3
2-3 children	18	64.3
Economic status		
Middle	21	75.0
upper middle	7	25.0

Table 2 demonstrates the results of the descriptive analysis applied to the experimental group related to the sub-dimensions of the dyadic adjustment scale. There is a

mathematical increase in all sub-dimensions of the experimental group, which are dyadic adjustment, dyadic satisfaction, showing love and couples commitment.

Table 2. Descriptive analysis results of the experimental group Dyadic Adjustment Scale

	Experimental group			X	ss	min.	Max.
		pretest	14	2.70	.298	3.31	4.69
	Dyadic Adjustment	posttest	14	3.13	.350	2.62	3.62
	Aujustinent	follow-up test	14	3.93	.403	2.23	3.23
ule		pretest	14	3.85	.480	3.20	4.90
t Sca	Dyadic Satisfaction	posttest	14	3.92	.491	2.90	4.60
Dyagine Satisfactory Square Square Statisfactory Showing Showi	Savislasvisii	follow-up test	14	4.47	.272	3.80	4.80
Adju		pretest	14	2.82	.345	2.25	3.50
adic.	Showing Love	posttest	14	2.96	.392	1.75	2.25
Dya		follow-up test	14	2.96	.337	1.75	2.50
		pretest	14	3.18	.703	3.40	4.40
	Dyadic Commitment	posttest	14	4.14	.403	3.40	4.80
	Commitment	follow-up test	14	4.15	.401	3.40	4.80

The descriptive analysis results of the control group sub-dimensions of the dyadic adjustment scale are presented in Table 3. There is a mathematical increase in all sub-dimensions of dyadic adjustment, dyadic satisfaction, showing love and dyadic commitment. However, there is a decrease that can be considered insignificant in the post-test of the control group's dyadic satisfaction subscale, while a rise is observed again as a result of the follow-up test.

	1	0					
	Control Group)	N	X	ss	min.	Max.
		pretest	14	2.82	.385	2.69	4.08
	Dyadic Adjustment	posttest	14	3.50	.377	2.23	3.38
		follow-up test	14	3.94	.405	3.31	4.77
ale		pretest	14	3.90	.507	3.10	5.10
Dyadic Adjustment Scale	DyadicSatisfaction	posttest	14	3.85	.491	2.90	4.60
tme		follow-up test	14	4.22	.611	2.90	4.80
Adjus		pretest	14	1.44	.200	2.25	3.50
dic 4	Showing Love	posttest	14	1.67	.267	1.00	2.00
Dya		follow-up test	14	2.92	.345	1.00	1.75
		pretest	14	3.38	.624	2.40	4.80
	DyadicCommitment	posttest	14	4.14	.403	3.40	4.80
		follow-up test	14	4.15	.401	3.40	4.80

Table 3. Descriptive analysis results of the control group Couples Adjustment Scale

The Wilcoxon test analysis results, which was applied to determine whether the pretest results of the experimental and control groups showed a significant difference in dyadic adjustmentare presented in Table 4. It was determined that the results of the dyadic adjustment test of the couples participating in the study did not differ significantly for the experimental and control groups pretests (z= -189, p>0.05).

Table 4. Pre-Test Wilcoxon signed ranks test analysis results of experimental and control group dyadic adjustment

Experimental-Control Pretest	Group	n	Rank Average	Rank Sum	Z	P
Negative Rank		6	9.25	55.50		
Positive Rank		8	6.19	49.50	- .189	.850
Equal		0			.109	

Wilcoxon test was applied for the pretest, posttest and follow-up scores on the axis of the experimental and control groups to the four sub-dimensions of the dyadic adjustment scale: dyadic adjustment, dyadic satisfaction, showing love and commitment

of couples. In this context, first, it was tested whether there was a significant difference between the experimental and control groups of the participants in the sub-dimensions of the adjustment scale posttest. As can be seen in Table 5, it was found that results demonstrate statistically significant difference in all sub-dimensions of the dyadic adjustment scale.

Accordingly, dyadic adjustment z=-2.587, p<0.05, dyadic satisfaction z=-2.893, p<0.05, showing love z=-2.556, p<0.05, and dyadic commitment z=-2.416, p<0.05. Considering these results regarding the experimental and control groups, program is effective for couples.

Table 5. Wilcoxon signed ranks test results of posttest scores of the experimental and control groups adjustment scale sub-dimensions

	Dimensions		N	Rank Average	Rank Sum	z	p
		Negative Rank	2	2.00	4.00	-2.587	.010*
	Dyadic Adjustment	Positive Rank	9	6.89	62.00		
		Equal	3				
sttest	Dyadic Satisfaction	Negative Rank	2	3.25	6.50		
ol Pos		Positive Rank	12	8.21	98.50	-2.893	.004*
ont		Equal	0				
Experimental-Control Posttest		Negative Rank	2	3.50	7.00		
erime	Showing Love	Positive Rank	10	7.10	71.00	-2,556	.011*
хbе		Equal	2				
Ħ	Dyadic Commitment	Negative Rank	3	3.67	11:00		
		Positive Rank	10	8.00	80.00	-2,416	.016*
		Equal	1				

^{*} The difference between the means is significant at the 0.05 level.

The research continued with the analyzes carried out for the experimental-control group follow-up tests of the four sub-dimensions of dyadic adjustment. As can be seen in

Table 6, the Wilcoxon analysis results applied showed that there was a significant difference between the couples participating in the study in all sub-dimensions of the dyadic adjustment test. Accordingly, the sub-dimensions of the dyadic adjustment follow-uptest; dyadic adjustment score z=-3.299, p<0.00, dyadic satisfaction z=-2.735, p<0.00, showing affection score z=-3.208, p<0.00, dyadic commitment score z=-2.646, p<0.00 show that there is a statistically significant difference. When the follow-up test results of the experimental and control groups are examined, it can be stated that the positive effect of the applied psychoeducation program is sustainable.

Table 6. Wilcoxon signed ranks test results of follow-up scores of the experimental and control group adjustment scale sub-dimensions

	Dimensio	ons	N	Rank Average	Rank Sum	Z	p
		Negative Rank	0	.00	.00		
	Dyadic Adjustment	Positive Rank	14	7.50	105.00	-3.299	.001*
test	•	Equal	0				
dn-∞		Negative Rank	2	4.50	9.00		
'ollo	Dyadic Satisfaction	Positive Rank	12	8.00	96.00	-2.735	.006*
trol I	2441214441311	Equal	0				
Cont		Negative Rank	0	.00	.00		
ntal-	Showing Love	Positive Rank	13	7.00	91.00	-3.208	.001*
rime		Equal	1				
Experimental-Control Follow-up test		Negative Rank	3	3.50	10.50		
	Dyadic Commitment	Positive Rank	11	8.59	94.50	-2.646	.008*
		Equal	0				

^{*} The difference between the means is significant at the 0.05 level.

The Wilcoxon test analysis results applied to determine whether the pretest-posttest results of the experimental group dyadic adjustment show a significant difference are presented in Table 7. According to the results of the analysis, the results obtained from the sub-dimensions of the dyadic adjustment test of the couples participating in the study were dyadic adjustment (z=-3.235. p <0.05), dyadic satisfaction

(z=-2.735, p<0.05), showing love (z=-3.317, p<0.05). p<0.5) and dyadic commitment (z=-3.187, p<0.05). When the total scores and the mean rank of the difference scores are examined, it is seen that the observed difference is in favor of the positive ranks, that is, in favor of after the program. In other words, the dyadic adjustment scores of the application group in the posttest were found to be significantly higher than the dyadic adjustment scores in the pretest. This result is considered important as it shows that the applied program is effective on dyadic adjustment.

Table 7. Wilcoxon signed ranks test results of pretest-posttest scores of the experimental group dyadic adjustment scale sub-dimensions

	Dimensions		n	Rank Average	Rank Sum	Z	p
		Negative Rank	1	1.00	1.00	-3.235	.001*
4	Dyadic Adjustment	Positive Rank	13	8.00	104.00		
tes		Equal	0				
t Post		Negative Rank	2	4.50	9.00	-2.735	.006*
osttes	Dyadic Satisfaction	Positive Rank	12	8.00	96.00		
t-po		Equal	0				
retes		Negative Rank	0	.00	.00		
nent p	Showing Love	Positive Rank	14	7.50	105.00	-3.317	.001*
Experiment pretest-posttest Posttest		Equal	0				
	Dyadic Commitment	Negative Rank	0	.00	.00		
		Positive Rank	13	7.00	91.00	-3.187	.001*
		Equal	1				

^{*} The difference between the means is significant at the 0.05 level.

The Wilcoxon test analysis results applied to determine whether the posttest and follow-up test results of the experimental group dyadic adjustment show a significant difference are given in Table 8. The results of dyadic adjustment test of the couples participating in the research show that there is no significant difference between the experimental group posttest and follow-up test results z=-812, p>0.05. The positive effect of the applied psychoeducation program is sustainable.

Table 8. Wilcoxon Signed Ranks Test results of posttest and follow-up scores of pairs adjustment in the experimental group

Experimental Group Post and Follow- up Test	N	Rank Average	Rank Sum	Z	P
Negative Rank	4	6.00	24.00		
Positive Rank	7	6.00	42.00	812	.417
Equal	3				

Another question in the study was whether the control group couples compatibility pretest and posttest scores showed a significant difference. Wilcoxon test analysis results applied for this purpose are presented in Table 9. The results of the dyadic adjustment test of the couples participating in the study show that there is no statistically significant difference between the control group pre-test and post-test results. z=-.094, p>0.05 According to these results, there is no difference between the dyadic adjustment scores of the control group.

Table 9. Wilcoxon Signed Ranks Test Results of Pre-Test and Post-Test Scores of Couples Adjustment of the Control Group

Control Group Pre and Post Test	N	Rank Average	Rank Sum	Z	P
Negative Rank	7	7.29	51.00		
Positive Rank	7	7.71	54.00	094	.925
Equal	0				

4. Discussion and Conclusion

"Psychoeducation program based on positive psychology-based Masnavi stories" applied in the study positively affected the marital adjustment level of married couples with all its sub-dimensions (dyadic adjustment, dyadic satisfaction, showing love and dyadic commitment), and therefore the applied psychoeducation program was effective. The detailed results of the experiments of the study are as follows:

- 1. There was no significant difference between the pretest mean scores of the experimental and control groups.
- 2. The posttest mean scores of the experimental and control groups were found to be significantly higher in favor of the experimental group. This demonstrates that the psychoeducation program applied to the experimental group was effective.
- 3. Mean monitoring scores of the experimental group were higher than those of the control group. This result indicates that the effect of the applied psychoeducation program continues.
- 4. Posttest mean scores of the experimental group were higher than the pretest mean scores. These findings also demonstrate that the psychoeducation program applied to the experimental group was effective.
- 5. There was no significant difference between the follow-up test mean scores of the experimental group and the posttest mean scores. This result is important as it demonstrates that the effectiveness of the psychoeducation program continues.
- 6. Finally, there was no significant difference between the pretest mean score and the posttest mean score of the control group. This result demonstrates parallelism with the hypothesis about the control group.

It all starts with the family, the nest established by the spouses for a peaceful and health society. Societies have always given importance to family as an institution and strengthened this institution by establishing it on solid foundations and values to have prosperous future (Kendirci, 2013). According to the findings obtained from the study, statistically significant differences were found in the total mean scores of dyadic adjustment levels of the couples who participated in the applied psychoeducation program and in the mean scores of the sub-dimensions of dyadic adjustment, dyadic satisfaction, love and dyadic commitment after the psychoeducation program (see Tables 2 and 3). Moreover, while there was no significant difference between the mean scores of dyadic adjustment before the psychoeducational group of the experimental and control group couples (see Table 4), a statistically significant difference was observed in favor of the experimental group after the applied psychoeducation program (see Table

5). However, after the psychoeducation program no statistically significant difference was observed in the mean dyadic adjustment levels of the control group couples, which the researchers did not participate in any psychoeducation program (see Tables 5 and 7). At the same time, in the follow-up test conducted for couples participating in the psychoeducation program, no significant difference was observed in the mean scores of dyadic adjustment levels (see Table 8).

These results support the related hypotheses of the research and show that the "psychoeducation program based on Masnavi stories based on positive psychology" has a positive effect on dyadic adjustment, and it also explains that the effectiveness of the program is sustainable. Although there are many models related to pathological structures that make human life meaningless in theoretical explanations, there are fewer models for positive qualities such as optimism, hope, responsibility, future orientation, productivity, and values. Positive psychology offers models in these areas (Seligman & Csikszentmihalyi, 2000). Considering the expressed characteristics of the positive psychological perspective and the development potential of human beings, this approach is important in terms of showing the most suitable and best for human beings, and it also has a hopeful effect on improving the living conditions of individuals, families, and groups. Studies conducted for this purpose have shown that positive emotions and values pave the way for success in different areas of life; people who are inclined to positive emotions have a healthier, longer lasting and successful marriage life and relationships, and have higher income and superior job performance (Lyubomirsky, King, & Diener, 2005). In this context, the effectiveness of the psychoeducation program based on Masnavi stories, prepared on the basis of positive psychology, is in parallel with the relevant literature, and it contributes to the personal development of couples and contributes to maintaining a meaningful and satisfying marriage life.

In the related literature, positive psychology has a regulative, curative, and formative effects for the individual, family, society and institutions, and marriage is a social structure that supports people's satisfaction with their lives, and it also positively affects their general health (Hayward & Zhang, 2006). Considering these approaches and the basic assumptions of positive psychology, the "psychoeducation program based on positive psychology-based Masnavi stories" shows that married couples have a positive effect on marital adjustment.

When the relevant literature is examined, it has been found that the concept of marital adjustment is related to many variables (Spanier, 1976; Sabatelli, 1988; Spreche, 1993; Şener & Terzioğlu, 2002; Yeşilyaprak. 2003). It was seen that the second wave positive psychology focused especially on positive values, and psychoeducation program was implemented by considering the most important values of positive psychology, which are "love, attachment, meaning of life, hope, optimism, forgiveness, altruism, gratitude and patience". The relationship between these values and marital adjustment has been evaluated within the scope of the relevant literature. There are related studies in the literature on the direct or indirect relationship between these related concepts and marital adjustment, and positive findings are seen in the results of this research. For example, Bouchard, Lussie and Sabourin (1999); observed that open, tolerant, and conscientious variables were positively related to marital adjustment. Forgiveness as a value is used as an intervention method because it contributes to the long-term continuation of marriage (Fenell, 1993) andto the reduction of negative situations in married life (Diblasio, 2000; Gordon & Baucom, 2003).

Within the scope of the relevant literature, the effectiveness of the psychoeducation program, which was prepared considering that the concepts in the psychoeducation program have a curative, regulative and formative effect on the marital life of individuals and they contribute to marital adjustment are seen. Moreover, it can be said that analyzes used the Masnavi stories and in the psychoeducation program greatly contributed to the internalization of the values in the sessions. Using stories related to problems is one of the most important principles and techniques in a positive psychologybased counseling approach (Eryılmaz & Mutlu Süral, 2014). By realizing mental transformations of individuals through stories, their behaviors are shaped (Hayran. 2013). Based on this technique of the positive psychology, in this study Mevlana Celalattin Rumi's (1207-1273) stories in his work named Masnavi were used. According to Kendirci (2019), when Mevlana's Masnavi is examined within the scope of positive psychology, it is seen that it is not only a work of art, but also has annugalative, curative, and formative aspects for human beings, which has the basic concepts of positive psychology. Mevlana's Masnavi provided internal healing and contributed to the dyadic adjustment of married couples and reshaped their behaviors. Masnavi is not only a work of art, literature, and mysticism, but it also has a therapeutic aspect that shapes human behavior.

As a result, it is seen that the "psychoeducation program based on positive psychology-based Masnavi stories" positively affects the marital adjustment (dyadic adjustment, dyadic satisfaction, love and dyadic commitment) of married couples. In this context, the observed results are considered important in improving dyadic harmony and strengthening the healthy spousal relationship within the family system.

Awareness of couples on their being a good parent in their married life may improve, but as the necessary investment is not made in the spousal subsystem, the process of being a good spouse may be disrupted and marital adjustment may be adversely affected. The fact that "Being a good parent is about being a good wife" should not be forgotten. While the results obtained in this study are important in terms of improving marital adjustment, they are also considered to be valuable in terms of preventive mental health. Psychoeducation program may improve marital relationship, protect, and increase the marital adjustment in bad marriages in any period and when their adjustment is adversely affected. Even in the pre-marital period, it can be used as a preventive mental health program that will positively affect the marital relationship.

The scarcity of experimental studies within the scope of positive psychology in Turkey and in the world draws attention. On the other hand, it has been assumed in studies that positive psychology may have positive contributions to the marital relationship, but studies on marital adjustment and marital relationship have been given less attention. The study is important in terms of filling this gap. In this sense, it can be stated that the study makes an important contribution to the related literature. Therefore, although it is seen that the research findings and results are in parallel with the theory on which positive psychology is based, it is thought that the psychoeducational results of the study are of critical importance in terms of improving dyadic adjustment and relationship.

5. Suggestions

According to the findings and results of the study, the following suggestions can be made:

1. The positive psychology-based psychoeducation program and different group studies that will increase dyadic adjustment included in the study should be given

- within the body of institutions or non-governmental organizations such as the Ministry of Family and Social Policies, governorships and district governorships, municipalities, public education centers, counseling centers and universities, and on this occasion, the community The institution of family and marriage, which forms its basis, should be protected and supported in a healthy way.
- 2. Spouses seek support so that they can solve this problem in their relationship when they cannot overcome their problems and are in a dead end. Instead of going to a marriage and family counselor in the first place and getting psychological support, they first seek this support from their closest relatives. The important thing is to handle the problem professionally and to increase marital adjustment and marital satisfaction (Kendirci, 2018). For this reason, information and awareness-raising activities should be carried out to encourage couples who have problems in their relationships in psychological counseling and psychotherapy environments.
- 3. A harmonious marriage contributes to the psychological well-being of couples and children by making a significant impact on the lives of individuals (Sardoğan and Karahan, 2005). Based on the idea that a healthy marriage relationship and healthy families are the guarantee of society; psychoeducational studies that will structure the marital relationship and increase marital adjustment should be increased and researchers working in the field should be encouraged.
- 4. Studies supporting marriage and family relations within the Ministry of Family and Social Policies should be supported and offered to the couples in need within the scope of the project.
- 5. Such psychoeducational groups should be opened under the leadership of the municipalities for the couples who will marry within the scope of pre-marital protective mental health, and the couples who will get married should be made aware of these.
- 6. In order to increase marital adjustment, studies like psychoeducation should be applied to couples with different socio-demographic backgrounds and the program should be continuously tested.
- 7. The possible contributions of the Mevlana's Masnavi, which has the effect of shaping behaviors by providing internal healing and which has a therapeutic aspect, to different concepts and study topics of positive psychology should be

investigated, and Masnevi stories that have the feature of transforming people positively within the scope of positive psychological should be evaluated as a therapeutic technique.

6. Conflict of Interest

The authors declare that they have no conflicts of interest.

8. Acknowledgement

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References

- Akbulut, Y. (2010). Sosyal bilimlerde SPSS uygulamaları: Sık kullanılan istatiksel analizler ve açıklamalı SPSS çözümleri. İstanbul: İdeal KültürYayıncılık.
- Büyüköztürk, Ş. (2015). Sosyal bilimler için very analizi el kitabı: İstatistik, araştırma deseni SPSS uygulamaları ve yorum. Ankara: Pegem Yayıncılık.
- Blocher, D.H. (2000). Counseling: A developmental approach. New York. Wiley and Son.
- Bouchard, G., Lussier, Y., & Sabourin, S. (1999). Personality and marital adjustment: Utility of the five-factor model of personality. *Journal of Marriage and the Family*, 651-660.
- Can, Ş. (2001). Mesnevi'den Seçmeler 1.Ankara: ÖtükenYayınları.
- Can, Ş. (2001). Mesnevi'denS eçmeler 1I, Ankara: ÖtükenYayınları.
- Diblasio, F.A. (2000). Decision-based forgiveness treatment in cases of marital infidelity. *Psychotherapy*, 37(2), 149-158.
- Gazda, G.M., Ginter, E.J., & Horne, A.M. (2001). Group counseling and group psychotherapy: theory and application. USA: Allyn and Bacon.
- Eryılmaz, A., & Mutlu-Süral, T. (2014). Kuramdan uygulamaya bireyle psikolojik danışma. Ankara: Anı Yayıncılık.
- Fenell, D.L. (1993). Characteristics of long-term first marriages. *Journal of Mental Health Counseling*, 15, 446-460.
- Fışıloğlu, (2001). Consanguineous marriage and marital adjustment in Turkey. *The Family Journal.* 9, 215-222.
- Fowers, B.J. (1993). Psychology as public philosophy: An illustration of the moral dimension of psychology with marital research. *Journal of Theoretical and Philosophical Psychology*, 13(2), 124.
- Gable L.S., & Haidt J. (2005). What (and Why) is positive psychology? *Review of General Psychology*, 9(2), 103–110.
- Gottman, J.M. (1994). Evlilik terapisi için bir gündem. Meselenin özü: Evlilik terapisinde duyguya bakış açıları, 256-293.
- Gottman, J., & Notarius, J. (2002). Marital research in the 20th century and a research agenda for the 21st century. *Family Process.* 41(2), 159-197.
- Gordon, K.C., & Baucom, D.H. (2003). Bağışlama ve evlilik: Evlilikte ihanetten kurtulma modeline dayalı bir önlem için ön destek. *Amerikan Aile Terapisi Dergisi, 31*, 179-199.
- Hayward, M., & Zhang, Z. (2006). Gender, the marital life course, and cardiovascular disease in late midlife. *Journal of Marriage and Family*, 68(3), 639-657.
- Hayran, R. (2010). Pozitif Psikoterapi nedir? Retrieved from;

- http://docplayer.biz.tr/5450812-Dr-rukiye-hayran-istanbul-pozitif-psikoterapi-merkezi.html
- Herr, E. L. (1999). Counseling in a dynamic society: Contexts and practices for the 21st century. Alexandria: American Counseling Association.
- Kalkan, M. (2002). Evlilik ilişkisini geliştirme programının, evlilerin evlilik uyum düzeylerine etkisi. [Unpublished doctoral dissertation] Ondokuz Mayıs Üniversitesi Sosyal Bilimler Enstitüsü, Samsun.
- Karasar, N. (1991). Bilimsel araştırma teknikleri. Ankara: Sanem Matbaacılık.
- Kendirci, A. (2018). Psikolojik iyi oluş ve psikolojik danışma. http://pozitifpsikolojienstitusu.com/2018/09/27/psikolojik-iyi-olma-ve-psikolojik-danisma/
- Kendirci, (2019, Nisan). Pozitif Psikolojik Danışmanlık ve Mesnevi, 3. Avrasya Pozitif Psikoloji Kongresi. İstanbul.
- Kendirci, A. (2013). Evli bireylerin öfke ifade tarzları ve şiddet sorumluluğunun incelenmesi. [Unpublished master thesis] Tokat Gaziosmanpaşa Üniversitesi Eğitim Bilimleri Enstitüsü, Tokat.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131(6), 803.
- Meezon, W., & Rauch, J. (2005). Gay marriage, samesex parenting, and America's children. *Future of Children*, 15(2), 97-115.
- Özaydınlık, Ş. (2014). Evli çiftlerin evlilik uyumu ile kişilik özellikleri ve romantic ilişkilerindeki sosyal ilginin incelenmesi. [Unpublished master thesis] Marmara Üniversitesi, eğitim Bilimleri Enstitüsü, Istanbul.
- Sabatelli, R.M. (1988). Measurement issues in marital research: A review and critique of contemporary survey instruments. Journal of Marriage and the Family, 50, 891-915.
- Seligman, M.E. (1998). Learned optimism: How to change your mind and your life. New York: Pocket Books.
- Seligman, M. (1999). Teaching positive psychology. *APA Monitor on Psychology*, 30(7). www.apa.org.
- Seligman, M.E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *Am Psychol*, 55, 5–14.
- Seligman, M.E. (2002). Authentic happiness: Using the new positive psychology to realize your potential your potential for lasting fulfillment. New York, Free Press.
- Seligman, M., Steen, T.A., Park, N., & Peterson, C. (2005). Positive psychology progress: empirical validation of interventions. *American Psychologist*, 60(5), 410.
- Seligman, M. E., Rashid, T., & Parks A. C. (2006). Positive psychotherapy. *Am Psychol*, 61(8), 774-788.

- Seligman, M.E. (2011). Flourish: a visionary new understanding of happiness and well being. New York, Free Press.
- Seligman, M.E. (2013). Martin Seligman, Pozitif Psikoloji Üzerine Konuşması (video) Web: https://www.ted.com/talks/martin seligman on the state of psychology? language tr
- Sprecher, S. (1999). I love you more today than yesterday: romantic partners' perceptions of changes in love and related affect over time. Journal of Personality and Social Psychology, 76(1), 46.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. Journal of Marriage and the Family, 38, 15-28.
- Şener, A., & Terzioğlu, R.S. (2002). Ailede eşler arasında uyuma etkieden faktörlerin araştırılması. Ankara: T.C. Başbakanlık Aile Araştırma Kurumu Başkanlığı Yayınları.
- Tarhan, N. (2012). Mesnevi terapi. İstanbul: Timaş Yayınları.
- Top, M.Ş., Özden, S.Y., & Sevim, M. E. (2003). Psikiyatride yaşam kalitesi. Düşünen Adam Dergisi, 16(1), 18-23.
- Ünver, Ö., & Gamgam, H. (1996). Uygulamalı istatistik yöntemler. Ankara: Siyasal Kitabevi.
- Yeşilyaprak, B. (2003). Çalışan anne ve çocuk. İstanbul: Morpa Kültür Yayınları.
- Yüksel, R. (2013). Genç yetişkinlerde aşk tutumları ve yaşamın anlamı. [Unpublished master thesis] Sakarya Üniversitesi Eğitim Bilimleri Enstitüsü, Sakarya.

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