





The Effect of Cognitive Behavioral Therapy-Based Psychoeducation on Irrational Beliefs, Expressing Emotions, and Mental Well-Being

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Abstract

The study aimed to measure how irrational beliefs, emotional expression, and mental well-being levels of high school student participants changed following the psychoeducation intervention. A pre-test-post-test control group experimental design without pairing was used as the research model. Data was collected from twenty high school students, ten in the control group and ten in the experimental group. The Personal Information Form, the Irrational Beliefs Test (IBT), the Emotional Expression Scale (EES), and the Warwick-Edinburgh Mental Well-Being Short Form (WEMWBS) were used in the study. The psychoeducation consisted of eight semi-structured sessions, each lasting 90 minutes. The dataset was analyzed using repeated measures ANOVA with a mixed design. The findings indicate that the level of irrational beliefs in the experimental group decreased significantly more than in the control group. Significant differentiation was observed in the sub-dimensions of approval-seeking and emotional irresponsibility. However, no statistically significant difference was found for the other two variables. The findings of the study were discussed in relation to the relevant literature, and recommendations were provided for researchers and practitioners.

Keywords: Cognitive behavioral, psychoeducation, irrational belief, emotional expression, well-being.

Introduction

Emotions, which enable individuals to react, act or make a decision when an event or situation occurs, are signals for our needs. In his psychodynamic work with hysterical patients, Freud (2009) considers emotions as a form of unconscious structures, conflicts or impulses repressed in the unconscious that provide catharsis at the conscious level. Emotions, on the other hand, do not make sense on their own if individuals do not notice them. Awareness of emotions involves the individual distinguishing and naming the emotions they feel (Greenberg & Goldman, 2019). In this way, it is easier for individuals to give functional behavioral reactions by processing the events they experience. According to the cognitive behavioral theory, emotions enable the individual to give functional reactions in line with automatic thoughts (Türkçapar & Sargın, 2012). Automatic thoughts: It can result in functional or erroneous thinking processes in relation to schemas, and in this case, healthy or problematic behaviors may develop. In cases where automatic thoughts are unhealthy, it is seen that



individuals develop negative thought patterns called "irrational beliefs", and when they use these thought patterns, they experience negative affect and behave disfunctionally. Schemas, on the other hand, express automatic thoughts that have been formed since childhood. In summary, automatic thoughts shape the emotions of individuals by influencing what they think in the face of an event; It is decisive in the development of behavior in a certain form. As individuals have irrational beliefs, they develop more dysfunctional behavior patterns.

Aydın and Özyürek (2024): In his study with adults, he determined that there was a negative and statistically significant relationship between the participants' childhood traumas and the level of expression of emotions and empathy. There is a positive and significant relationship between the level of expression of emotions and the level of empathy of the participants. In a similar study, Chen et al. (2024) state that the conflict of expressing emotions regulates the relationship between childhood trauma and psychological pain in their studies with university students. Therefore, it is revealed that expressing the emotions of individuals in the field of psychological counseling should be considered as an important psychological quality, and it is thought that expressing their emotions is a protective factor in the development of individuals with traumatized childhood experiences. In addition, it is seen that the inability to express emotions in adulthood increases the negative effects of childhood traumas and negative life events. This situation indicates that increasing the level of emotional expression in individuals during childhood and adolescence can be considered as a protective factor when adulthood psychological well-being is considered.

Recognizing and expressing emotions may differ from culture to culture. When it comes to emotions, cultural differences can be effective. In their research, Tsai and Clobert (2019) found that different emotions are at the forefront in Eastern and Western cultures; They state that individualistic emotions such as pride and anger are at the forefront in the West, and more relational emotions such as shame and commitment are at the forefront in the East. In addition, in this research, it was stated that the expression of emotions was prevented or possible in more indirect forms in Eastern cultures, but in the West, individuals were encouraged to express themselves more. In a related study, Kuyumcu and Güven (2012) stated that the level of recognition and expression of emotions of the participants in their research with Turkish and British university students predicted psychological well-being. On the other hand, in the research of İşleröğlü (2012), it was found that the level of expression of emotions of university students did not predict subjective well-being and was slightly related to this variable. In a similar study, Yıldız and Eldeleklioğlu (2020) designed a structural equation model in which they identified university students as participants and determined that there was a statistically significant relationship between expressing emotions and psychological resilience and psychological resilience and subjective well-being. This shows that the relationship between the expression of emotions and psychological well-being differs according to different studies and needs to be investigated further.

When studies conducted on high school students are examined, there is evidence to show that adolescents who are better at expressing emotions are psychologically healthier in many variables. According to Aksoy (2020), adolescents who are successful in social emotional areas express themselves better. On the other hand, there is a statistically significant difference between 12th grade students and 10th grade students in favor of 12th grade students in the social awareness sub-dimension. According to Piaget, social-emotional learning has an important place for adolescents who are in the abstract processing period. Adolescents express themselves better as their abstract processing skills develop. In addition, Önder and Ayazseven (2019) revealed that adolescents' expression of emotions negatively predicted physical aggression levels, and processing emotion negatively predicted verbal aggression and hostility.

It is thought that it would be meaningful to plan group work to improve the expression of emotions and well-being in high school students. The semi-structured format of these group studies makes it easier for group members to conduct a more efficient group process (Gordon & Kenny, 2018; Hale & Cowls, 2015). Öksüz (2004) used a pre-test-post-test control group design in his study and each group consisted of twenty-two university students. In this study, it was found that the assertiveness levels of the students increased by supporting the level of opening of emotions. In a more recent study, Buzlu and Şişman (2021) applied an emotion-oriented emotional awareness and emotion expression program using a placebo group with university nursing students and revealed that this program increased students' levels of emotional awareness and expression of emotions. Varol (2018), on the other hand, stated that the interpersonal relations psychoeducation program in adults resulted in positive developments in subjective happiness, expression of emotions and attachment patterns. It is seen that the psychoeducation applied in university samples positively affects the level of awareness and expression of emotions and well-being of individuals. On the other hand, there is limited information in the literature regarding the effectiveness of group work in high school students.

Similarly, Mercan et al. (2023) found that as the scores of university students in the sub-dimension of cognitive distortions to logic increased, the level of expressing emotions decreased; They state that as the scores they get from the mind reading and catastrophizing sub-dimensions increase, expressing negative emotions is also parallel. In addition, as students' cognitive distortion levels increase, their depression and anxiety levels also increase. Therefore, it can be thought that expressing emotions with irrational beliefs affects psychological resilience in high school students. The aim of this study was to measure how Cognitive Behavioral Therapy-Based Psychoeducation on Recognizing and Expressing Emotions affects the levels of irrational belief, expression of emotions, and mental well-being of participating high school students. For this purpose, the problems of the research are listed below:

1. Do the levels of irrational beliefs of high school students in the experimental group differ significantly compared to the control group after psychoeducation?
2. Does the level of emotional expression of high school students in the experimental group differ significantly compared to the control group after the psychoeducation?
3. Do the mental well-being levels of high school students in the experimental group differ significantly compared to the control group after psychoeducation?

Methodology

In this section, the research model, the characteristics of the participants who make up the study group of the research and the data collection tools are included. In addition, the reliability coefficients of the scales used in data collection in this study were specified; Details about the preparation process of the psychoeducation program, data collection, and analysis are explained.

Research Model

Research; How applied psychoeducation affects irrational beliefs, emotion expression levels, and well-being in high school students was examined by designing an experimental design with a pre-test – post-test unmatched control group. According to Büyüköztürk et al. (2020), unbiased assignment is not used in this design, and the design is included in weak experimental designs because there are unequalled groups, but controlling the preliminary tests with statistical methods is the strong aspect of this design.

Study Group

The study group consists of 22 (12 experiment-10 control) high school students in one of the districts of Antalya. On the other hand, two students from the experimental group were excluded from the study because they could not attend all the sessions. In the study, data were collected from the remaining twenty high school students. Psychoeducation was applied to 11th grade students, considering the students' ability to take the university exam. An appropriate sampling method was used in the study. By making an announcement to the 11th grade students in the school, those who volunteered to participate in the "Psychoeducation for Recognizing and Expressing Emotions" were determined, and these students were included in the study. It is known that the group size suitable for psychoeducation groups is 8-12 (Voltan-Acar, 2015). In the study, the experimental group consisted of ten people who regularly participated in psychoeducation. Table 1 below provides demographic information on the demographic information of the participants.

Table 1. Demographic Information of Participants

Variables			N	%
Gender	Experiment	Woman	7	70
		Male	3	30
	Control	Woman	3	30
		Male	7	70
Academic Average	Experiment	45-60	0	0
		60-75	3	30
		75-85	6	60
		85-100	1	10
	Control	45-60	1	10
		60-75	0	0
		75-85	4	40
		85-100	5	50
Mother Education	Experiment	Primary	1	10
		High school	4	40
		University	5	50
	Control	Primary	8	80
		High school	2	20
		University	0	0
Father Education	Experiment	Primary	2	20
		High school	3	30
		University	5	50
	Control	Primary	7	70
		High school	1	10
		University	2	20
Sum	Experiment		10	50
	Control		10	50

Instruments for Data Collection

Personal Information Form: In the study, the Personal Information Form prepared to determine the gender, grade levels, academic averages, and education levels of the parents of the participating high school students was used.

Irrational Beliefs Test (IBT): The 10-factor 100-item test developed by Jones (1968) was adapted to Turkish by Yurtal-Dinç (1999) as forty-five items. Factor analysis studies were conducted for the original scale and after adaptation. The validity of the adaptation scale was ensured by taking expert opinion, and the validity of the external appearance was ensured by

going through the translation-retranslation process. The 45-item test has eight sub-dimensions. These dimensions are "Need for Approval", "High Expectations", "Tendency to Blame", "Emotional Irresponsibility", "Excessive Anxiety", "Dependence", "Helplessness" and "Perfectionism". While scoring, some items are coded as reverse items; Their scores are reversed and included in the total score. The reliability of the adaptation of the scale was obtained by applying the scale to ninety-three university students twice with an interval of 3 weeks and examining the correlations between the tests. While the reliability of the sub-dimensions ranged between .67-.87; The Cronbach- α coefficient of the total scale was found to be .92. In this study, the Cronbach- α coefficient, which is the reliability coefficient of the scale, was determined as .68.

Emotional Expression Scale (DIES): The 3-factor scale developed by King and Emmons (1990) was adapted to Turkish by Kuzucu (2011). Exploratory and confirmatory factor analysis was performed for the scale of fifteen items. In exploratory factor analysis, it was found that the scale had a one-dimensional structure, and it was found that the factors predicted 35% of the total variance. In addition, this structure was evaluated with confirmatory factor analysis, and the suitability of the values was accepted (RMSEA=.09; GFI=.86; CFI=.72; $\chi^2/sd= 3.43$). The reliability coefficients of the scale were .74 for the sub-dimensions of "Positive Emotion Expression"; It is .67 for "Negative Emotion Expression" and .63 for "Affinity Expression." The reliability coefficient of the entire scale is .78. For test-retest reliability, 96 university students were re-applied, and this coefficient was found to be .85 ($p<.01$). In this study, the Cronbach- α coefficient, which is the reliability coefficient of the scale, was determined as .75.

Warwick-Edinburgh Mental Well-Being Scale Short Form: The scale developed by Tennant et al. (2007) has 7 items and is one-dimensional and adapted to Turkish culture by Demirtaş and Baytemir (2019). Confirmatory factor analysis was performed for the construct validity of the scale (RMSEA=.06; GFI=.9; CFI=.99; $\chi^2/sd= 1.58$). In addition, the criterion validity of the scale was determined by calculating the correlation coefficient with the Perceived Stress Scale. It was decided that the correlation between this scale and the adapted scale was negative and moderate. The reliability coefficient for the scale was calculated as .84.

Structuring of Psychoeducation

"Recognizing and Expressing Emotions" is a psychoeducation that takes a total of eight sessions. Each session lasted between 60-90 minutes and one session was administered each week. The activities implemented in the sessions were structured by compiling various activities from the theses and activity books about recognizing and expressing emotions before the sessions took place. However, the activities are planned to be implemented according to the needs and dynamics of the group. On the other hand, during the psychoeducation process, care was taken to establish and function the group dynamics. The aim of psychoeducation is to support the participating students to rationally determine the emotions they experience in the face of daily events and problems and to improve their functional expression of these emotions. How each session is structured is presented in Table-2 below:

Table 2. Psychoeducation for Recognizing and Expressing Emotions

Purpose of the Sessions	Process
<p>1. Session</p> <p>Getting acquainted with, setting group rules, reviewing the group process, and learning about feelings.</p>	<p>Members introduce themselves. Then the "Grouping" activity is done. After the event, members are asked to share their feelings and thoughts. They are asked about their expectations from the psychoeducation process. Process objectives are shared and information about the process is given. Group rules are shared. Feedback is received on whether there is a group rule they want to add. Information is given on the definition of emotions, recognizing, and understanding emotions. The session ends with the "What's in My Heart?" activity.</p>
<p>2. Session</p> <p>Recognizing emotions, noticing when and under what conditions emotions arise, noticing where they are felt in your body, and learning to express emotions.</p>	<p>The previous session is summarized. "Feelings I Don't Want to Disappear from the World" event is held. They are asked to prepare a list of emotions. The leader asks when and under what conditions they experience these feelings, and sharing is done. The "Language of Emotions" event is being held. After the event, members share their experience. Homework papers are distributed, and the session is ended.</p>
<p>3. Session</p> <p>Reflecting on automatic thoughts, noticing these thoughts.</p>	<p>Members were asked questions about the previous session. A discussion environment is provided about the assignment given. The "Walk as You Feel" event is being held. It is ensured that members establish a connection between their feelings and needs. Presentations are given to the members. The narration is supported by examples from the life of the members. Questions about automatic thoughts are answered. The "Emotion Thermometer" activity is held. The group leader supports students who are struggling. The session is summarized, homework is done, and the session is terminated.</p>
<p>4. Session</p> <p>Identifying automatic thoughts.</p>	<p>Assignment is discussed with the members. Discussions are held on the automatic thoughts they identify. The session is summarized and ended.</p>
<p>5. Session</p>	<p>The previous session is summarized, and members are asked to make an interim</p>

To learn the relationship between emotion, thought and behavior and to work on unhelpful thoughts.	assessment of the process. Then, the "Emotion-Thought-Behavior Analysis" activity is applied, and the "Thinking Errors" presentation is made. Members are asked to find errors of thought made in the examples on the paper of the previous activity. The session ends by giving them the "My Emotion-Thought-Behavior Cartoon" activity paper as homework and the "Socratic Inquiry" homework paper to help them evaluate their thoughts.
6. Session Recognizing the You Language and using the "I Language".	The previous session is summarized, and members are asked to share the cartoons given as homework in the previous session with other group members. Then the "The Creature Within" activity is applied. "I Language" is studied. The session ends.
7. Session Learning to react empathically.	Each member is expected to empathetically reflect on their feelings and reactions to an example given by the leader. The session ends with a summary.
8. Session Evaluate the group process and terminate the group.	The previous session is summarized, and members are asked to summarize previous sessions. Then, the "My Life and Feelings" activity is held. The "Training Evaluation Form" is filled out and shared. The leader concludes the process by giving feedback to each member.

Data Collection

At the beginning of the study, the participants (n=20) were administered Personal Information Form, Irrational Beliefs Test and Emotional Expression Scale. "Psychoeducation Program for Recognizing and Expressing Emotions" was applied to the experimental group (n=10) and no application was made to the control group (n=10). At the end of the last session, post-tests were applied to all participants again.

Analysis of Data

The data of the study were analyzed using the SPSS 22 program. Mixed design repeated measurements ANOVA test was used as the analysis method. In the study, ANOVA was preferred instead of t-test to give information about the sub-dimensions of the scales and to test the performance of two independent variables. In the study, .05 was determined as the significance level. Whether the data set was normally distributed in terms of dependent variables was determined by controlling the skewness and kurtosis values and the Shapiro-Wilk test. Shapiro-Wilk tests are not statistically significant. This statistic is used to determine

whether the data set is normally distributed in small groups (Demir, 2022). In Table 3 below, the relevant skewness and kurtosis values are included.

Table 3. Skewness and Kurtosis Coefficients of Dependent Variables

Variable	Skewness	Kurtosis
Pre-Test AOS	.324	-.621
Pre-Test DIEES	-.440	-.821
His AOİÖ test	.552	-.177
Its test DIEÖ	-.364	.439

When Table 3 above is examined, it is seen that the skewness and kurtosis coefficients are between -1 and 1. The fact that these coefficients are between the relevant values constitutes evidence for normality (Tabachnick vd., 2012).

Findings

In this part of the research, the findings of the analysis are presented for the research problems. First, descriptive statistics of the scores obtained from the pre-test and post-tests collected from the participants are presented, and then the findings of the mixed design repeated measurements and ANOVA test, in which the pre-test and post-tests are compared according to whether they are experimental and control groups, are included. In addition, tables and comments on the findings are presented.

Descriptive Findings of the Participants

In Table 4 below, the averages, standard deviations, and standard error levels of the pre-test and post-test irrational beliefs and emotion expression levels of the participants in the experimental and control groups are given. In the findings, it is seen that the average of the pre-test irrational belief levels of the participants in the experimental group was 146 points, while this average decreased to 137 points for the experimental group in the post-test. When the level of expressing emotions was examined, it was stated that the mean pre-test score of the experimental group was 80.1 and the post-test mean score was 80.7. While the mean pre-test irrational beliefs level of the control group was 133.4, the mean post-test irrational belief level was 137.8. In the variable of the level of expression of emotions, the mean score of the control group was 67.3 in the pre-test and the mean score of the post-test was 66.3. In addition, the pre-test mean was 26.0 and the post-test average was 27.3 in the experimental group for MIOS. The pre-test and post-test averages of the control group were also 23.8 and 25, respectively.

Table 4. Descriptive Statistics

Variable	Experiment/Control	N	X	SS	HERSELF
Your Test	Experiment	10	146.00	16.61	5.25
AOIS	Control	10	133.40	11.41	3.60

Your Test	Experiment	10	80.10	14.21	4.49
DIEÖ	Control	10	67.30	11.59	3.66
Your Test	Experiment	10	26.00	5.43	1.71
MIO	Control	10	23.80	5.15	1.63
His Test	Experiment	10	137.00	15.94	5.04
AOIS	Control	10	137.80	9.44	2.98
His Test	Experiment	10	80.70	11.47	3.62
DIEÖ	Control	10	66.30	13.58	4.29
His Test	Experiment	10	27.30	4.49	1.42
MIO	Control	10	25.00	6.30	1.99

Findings of Comparison of Participants' Irrational Belief Levels According to Pre-Test-Post-Test, Experimental and Control Group

In the analysis, mixed design repeated measurements of the pre-test and post-tests were added as an independent variable to the analysis of the participants in the experimental or control group with the ANOVA test. The analyzes were conducted primarily by using the total score obtained from the AOIT and then by analyzing the scores obtained from the sub-dimensions of the participants. The findings obtained because of the analysis show that the psychoeducation applied affects the level of irrational beliefs differently for the experimental and control groups ($F=5.202$; $p<.05$). As a result of the psychoeducation, the effect size of the differentiation between the experimental group and the control group was found to be .22 in the change in irrational belief levels. This effect suggests that the effect of differentiation is statistically low (Cohen, 1987). The relevant findings are presented in Table 5.

Table 5. Mixed Design Repeated Measurements for AOIT: ANOVA Findings

	Variable	F	p	Eta-Square
Psychoeducation*	AOIT	5.202	.035*	.224
Experiment/Control				

When Table 6 is examined, it is seen that there is a statistically significant difference in the sub-dimension of consent need ($F=7.406$, $p<.05$) and emotional irresponsibility sub-dimension ($F=14.017$; $p<.05$) of the participants compared the pre-test-post-test scores obtained from the sub-dimensions of AOIT according to the experimental and control groups. According to the findings, the effect size for the need for approval was .292 and for emotional irresponsibility was .438. These effect sizes indicate that the effect of differentiation is statistically low (Cohen, 1988). On the other hand, the participants; The pre-test-post-test scores obtained from the sub-dimensions of high expectations, blaming tendency, excessive anxiety, dependence, helplessness, and extreme perfectionism did not differ statistically significantly according to the experimental and control groups ($p>.05$).

Table 6. Mixed Design Repeated Measurements for Subdimensions of AOS: ANOVA Findings

Variable		F	p	Eta-Square	
Psychoeducation*	Need for Approval	Greenhouse-Geisser	7.406	.014*	.292
	High Expectations		.611	.445	
	Tendency to blame		1.468	.241	
Experiment/Control	Emotional Irresponsibility		14.017	.001*	.438
	Excessive Anxiety		.472	.501	
	Don't Be Addicted		1.969	.178	
	Desperation		1.196	.289	
	Perfectionism		.074	.788	

Findings of Comparison of Participants' Levels of Expressing Emotions According to Pre-Test-Post-Test, Experimental and Control Group

In the analysis, mixed design repeated measurements of the pre-test and post-tests were added as an independent variable to the analysis of the participants in the experimental or control group with the ANOVA test. The analysis was made primarily by using the total score obtained from DIEAS. The findings show that there is no statistically significant difference between the pre-test and post-tests of the total scores of the participants from the DIES compared to the experimental and control groups ($p > .05$). The relevant findings are presented in Table 7.

Table 7. Mixed Design Repeated Measurements for DIES ANOVA Findings

Variable	F	p
Psychoeducation* DIEÖ	.060	.810
Experiment/Control		

Findings of Comparison of Participants' Mental Well-Being Levels According to Pre-Test-Post-Test, Experimental and Control Group

In the analysis, mixed design repeated measurements of the pre-test and post-tests were added as an independent variable to the analysis of the participants in the experimental or control group with the ANOVA test. The analyses were performed using only the total score obtained from the MYOS. The findings show that there was no statistically significant difference between the pre-test and post-tests of the total scores of the participants from the MIAS compared to the experimental and control groups ($p > .05$). The relevant findings are presented in Table 8.

Table 8. Mixed Design Repeated Measurements for DIES ANOVA Findings

Variable	F	p
Psychoeducation* DIEÖ	.002	.962
Experiment/Control		

Conclusion and Discussion

In this part of the study, the results of the research are summarized. Then, these results were discussed in relation to the literature. Suggestions have been developed and presented as a guide for practitioners. In this study, it was aimed to examine the effectiveness of the psychoeducation program for noticing and expressing emotions applied to high school students with cognitive behavioral therapy techniques. For this purpose.

It was observed that the irrational belief levels of the high school students participating in the experimental group decreased statistically significantly more than the control group. It has been revealed that there is a statistically significant decrease in the dimensions of approval and emotional irresponsibility. The pre-test and post-test differences according to the level of expression of emotions of the participants in the experimental group do not show a statistically significant change compared to the control group. There was no statistically significant change in the pre-test and post-test differences in terms of mental well-being levels of the participants in the experimental group compared to the control group. In the study, it was observed that the irrational belief levels of the high school students in the experimental group decreased significantly more than the control group, and there was a statistically significant decrease, especially in the dimensions of approval and emotional irresponsibility. However, the differences between the pre-test and post-test results of the participants' emotion expression levels did not show a statistically significant change compared to the control group. Similarly, the mental well-being levels of the participants in the experimental group did not show a statistically significant difference between the pre-test and post-test results compared to the control group.

After the psychoeducation, the irrational belief levels of the participating students in the experimental group decreased more than the control group. Considering that the training applied in terms of content is semi-structured and applied with the principles and techniques of cognitive behavioral therapy, it is significant that the irrational belief levels of the participating students in the experimental group decreased more. In the literature, the effectiveness of group practices (Ulusoy & Duy, 2013) and psychoeducation programs created with cognitive-behavioral techniques (Kaval & Sütçü, 2016; Yılmaz & Duy, 2013). Ulusoy and Duy (2013) found that the learned optimism program they implemented reduced the irrational belief levels of secondary school students. Kaval and Sütçü (2016), on the other hand, revealed that group activities based on cognitive behavioral therapy reduced the social anxiety levels of adolescents in their research with adolescents. Yılmaz and Duy (2013) also revealed that psychoeducation applied to female university students increased students' self-esteem and decreased their irrational belief levels. However, in this study, the decline in irrational belief levels did not continue in the follow-up test. In addition, based on the results of their meta-analysis, Eadeh et al. (2021) stated that cognitive behavioral therapy practices are more effective in recognizing, regulating, and expressing emotions than teaching-based psychoeducation.

The differentiation in the level of irrational beliefs of the participating high school students in the experimental group was statistically significant in the sub-dimensions of approval and emotional irresponsibility. Participants' levels of approval and emotional irresponsibility decreased. This result: It can be explained by the fact that approval is associated with worthlessness, and emotional irresponsibility can be associated with core beliefs of inadequacy. Supportively, Modi et al. (2022) revealed that the need for consent in relation to cognitive regulation of socio-emotional stimuli in female adolescents has a regulatory effect. Considering that cognitive-behavioral therapy is effective in regulating and expressing feelings of worthlessness and inadequacy (Türkçapar & Sargın, 2012), it may be meaningful that the psychoeducation applied is effective in obtaining approval from the lower dimensions and emotional irresponsibility. In addition, the psychoeducation applied may have supported the participating students in the experimental group to cope with feelings of worthlessness and inadequacy by supporting them in regulating and expressing their emotions. Chahar-Mahali et al. (2020) state in their research that emotion regulation strategies are effective in reducing the effects of dysfunctional automatic thoughts. In this context, Chahar-Mahali et al. (2020) show that emotion regulation strategies are effective in reducing the impact of dysfunctional automatic thoughts. This situation supports the view that psychoeducation practices contribute to the development of participants' emotion regulation skills.

Before and after the psychoeducation, the level of expression of emotions of the participating students in the experimental group did not differ statistically significantly compared to the control group. In a similar study, Kuzucu (2006) applied psychoeducation to recognize and express emotions. In this research conducted with university students; It was determined that there was an improvement in favor of the experimental group in terms of emotional awareness, expression of emotions and well-being levels between the experimental, control and placebo groups. On the other hand, it is stated that this differentiation is statistically significant only in terms of noticing emotions. Therefore, the scores of the students in terms of expressing emotions and well-being levels do not differ statistically significantly. In addition, Suveg et al. (2006) applied cognitive behavioral therapy in their studies with individuals in pre-adolescence and found that the level of anxiety decreased, emotion regulation skills improved, but the level of expressing emotions did not differ in these children. They interpreted the findings to mean that the level of expressing emotions did not increase immediately after the applications, but that emotion regulation strategies developed first. Although emotional awareness has started to occur in this research, it can be thought that this awareness has not yet been reflected in the level of expressing emotions. At this point, it should be considered that there may be differences in the attitudes of individuals towards expressing emotions from culture to culture. Relevant research is available in the literature (Kuyumcu & Güven, 2012; Tsai & Clobert, 2019). In addition, the activeness of expressive schemas in individuals may have resulted in a decrease in irrational belief levels, although this decrease was reflected in expressing warmth (Türkçapar & Sargın, 2012). On the other hand, in a similar study, Vural

and Yaycı (2023) found that the levels of anger expression and coping with anger of the experimental group differed statistically significantly after the cognitive behavioral therapy-oriented group psychoeducation they applied to improve the expression styles of anger in high school students; On the other hand, they stated that this differentiation was not present in the control group. Your findings: It seems to contradict the results of this research. It is thought that the source of the contradiction may be related to the sample size.

As a result, the lack of statistically significant difference may be related to sample size and the difference between emotional awareness and expressing emotions. In addition, Kuyumcu and Güven (2012), in their research examining the relationship between emotional awareness, emotional expression levels, and well-being in Turkish and British university students, stated that, culturally, noticing emotions is a more important predictor for Turkish students, while expressing emotions is more important for British students. Therefore, in this study, high school students who participated in cultural influences may be reluctant to express their feelings.

In addition, the presence of negative core beliefs, that is, schemas, in participants can be considered as a hindering factor in expressing emotions.

There was no statistically significant difference in the mental well-being levels of the participating students in the experimental group before and after the psychoeducation compared to the control group. In a similar study, Bendit (2022) found that cognitive behavioral therapy did not affect social-emotional well-being in high school students. The researcher made this finding; sample size and paired groups discussed the importance of using experimental design. In this study, the fact that the study group was limited to 20 people and the study was carried out in an unmatched experimental design despite the control group being used may increase Type 1 error. On the other hand, positive psychology (Chaves et al., 2017; Geschwind et al., 2019) are also more effective in reducing symptoms of depression and increasing well-being in individuals. Öztürk (2023), in his research with nursing students, revealed that the mindfulness-based psychoeducation program increases psychological well-being and emotional intelligence and reduces stress. Therefore, the fact that psychoeducation was conducted with cognitive behavioral techniques may affect the findings obtained. As a result, it can be said that the research design, sample size, and therapy method used are effective in the results obtained regarding the level of mental well-being.

Suggestions

Considering that there is a statistically significant decrease in the levels of irrational beliefs because of the psychoeducation applied to high school students in the study, it can be recommended that practitioners use psychoeducation focused on cognitive behavioral therapy to recognize emotions. On the other hand, in future studies, the results should be supported by similar findings. In the study, it was found that the participants' levels of expressing emotions did not differ statistically significantly. In future studies, the research can be repeated by increasing the number of participants in the study group and using the paired

design. The mining model can be supported with monitoring tests. Cultural influences in expressing emotions can be studied by planning different research. In addition, the effect of other schools of psychological counseling on recognizing and expressing emotions can be examined comparatively. Atay (2018) states that the expression of emotion perceived from the family in adolescents is moderately related to psychosocial adjustment in a positive way. Therefore, different relationships, such as the level of expression of emotions by families and the effect of social support resources on expression, can be examined by including the relevant variables in the research. This variable can also be included in studies to investigate the effect of schemas on the participants' level of emotional expression.

Conflict of interest

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