



The effects of cognitive behavioral psychological group counseling program on the psychological resilience and emotional flexibility of adolescents

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Abstract

The study aims to examine the effects of cognitive behavioral psychological group counseling program on the psychological resilience and emotional flexibility of adolescents. Twenty-eight adolescents were randomly assigned to the experiment group and control group. The Adolescent Psychological Resilience Scale and Emotional Flexibility Scale were administered as data collection tools. In the research, 12 sessions of a cognitive behavioral psychological group counseling program were practiced with the experiment group once a week. As for the control group, no practice was undergone. A 2×3 experimental design was used in the research. After the research was finalized, the posttest was performed, and follow-up measurements were carried out two months later. Adolescents in the experiment group demonstrated significant improvements in psychological resilience and emotional flexibility and these improvements were maintained at follow-up compared to those in the control group. This study highlights the effectiveness of the cognitive behavioral psychological group counseling program in improving psychological resilience and emotional flexibility among adolescents.

Keywords Psychological resilience · Emotional flexibility · Cognitive behavioral · Psychological group counseling · Adolescents

Introduction

Adolescents can come face to face with trauma, distress, and other stress factors in life. Nonetheless, adolescents can adapt well to life-changing situations over time, in part to their psychological resilience (Yuan, 2021). Psychological resilience is defined as a general capacity to be successful in challenging conditions or a dynamic psychosocial process in which individuals exposed to potentially traumatic events experience positive psychological adjustment over time (Denckla et al., 2020). However, having psychological

resilience does not mean that an individual will never experience hardships or distress. People who have experienced great grievances or traumas in life also naturally go through emotional pain and stress (de Terte & Stephens, 2014). Therefore, psychological resilience is an important concept for adolescents when situations such as natural disasters, terrorism, and epidemic diseases are considered. For this reason, researchers point out not only a protective role against negative experiences of adolescents but also the importance of studies to regulate emotions and to develop psychological resilience that contributes to their social-emotional development (Sanders et al., 2020). Thus, interventions aimed at improving the psychological resilience and emotion regulation skills of adolescents are seen significant in terms of their mental health.

Psychological resilience helps individuals confront positive and negative experiences. Resilient individuals keep fighting in the face of obstacles and accept unchangeable conditions if needed (Ang et al., 2022). Increasing the levels of psychological resilience has many contributions to adolescents. For example, individuals with high levels of

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resilience can manage positive and negative events. Individuals with high levels of psychological resilience are persistent in the face of obstacles. When it is necessary, they can accept these obstacles and understand that they cannot change these situations (Masten & Motti-Stefanidi, 2020). Psychological resilience acts as a shield against physical and psychological effects faced during difficult times (Garros et al., 2021). As such, psychological resilience is a trait every individual might want to possess since it can act as a shield against situations that cause stress and anxiety.

Importantly, one of the components of maintaining psychological resilience is the ability to manage emotions when confronted with these changing situations. Psychological resilience is positively related to emotional flexibility (İme & Ümmet, 2022). On the other hand, lower psychological resilience and changing emotional flexibility might be related to, neurobiological dysfunctions, particularly to immune-inflammatory abnormalities (Serafini et al., 2020). The concept of emotional flexibility is the capability to come up with related emotional responses to emerging positive or negative experiences (Vaughn et al., 2011; Westphal et al., 2010). Individuals with better emotion regulation skills go through less distress and depression symptoms after disasters and negative experiences (Coifman & Bonanno, 2010). Adolescents with emotional flexibility do not get stuck with negative emotions and overcome them faster. Difficulties in emotion regulation might prevent individuals from adapting to new situations when faced with hardships. Individuals experiencing problems with emotion regulation face intense physiological arousal and distress, and resort to maladaptive coping strategies in response to stressors (Cisler et al., 2010). All this information imply that the concept of psychological resilience is an important concept associated with the psychological well-being of adolescent.

Cognitive behavioral approaches are short-term, goal-oriented approaches aimed at solving problems. Researchers argue that a change in thoughts will bring about a behavior change (Dobson & Dozois, 2019). Applying cognitive behavioral approaches for adolescents has started to increase, especially since the beginning of the twenty-first century. Cognitive behavioral approaches were at first generally employed effectively in problems such as depression, anxiety, anger, and eating disorders (Beck, 2020). However, new strategies are needed for those who do not respond to treatment for disorders such as depression. For example, buprenorphine might be an effective, well-tolerated, and safe option in reducing addictive behaviors, depressive symptoms, and severe suicidal thoughts, even in patients who suffer treatment-resistant depression related to immune-inflammatory dysfunctions (Serafini et al., 2018).

As clinicians and researchers conducted cognitive behavioral therapy sessions with adolescents, they focused on

alternative ways. Freeman et al. (2004) suggested practicing cognitive behavioral group sessions with adolescents to both save time and to reach to as many individual as possible at the same time. As well as individual sessions, in the cognitive behavioral group, the main objective of the psychological counselor is to draw the attention of the client to cognitive distortions; schemas; dysfunctional beliefs; and to increase the awareness and wellbeing of the client by reconstructing these components (Beck, 2020). Moreover, group counseling might be beneficial in terms of cooperation, active participation, and being a role model to the client.

Cognitive behavioral approaches are successful in the treatment of various difficulties ranging from depression and anxiety disorders to chronic pains and sleep disorders (Mirchandaney et al., 2022). The success of cognitive behavioral approaches in treating such a wide range of difficulties indicates that these approach models can be employed to help individuals develop positive qualities (Neenan, 2017). Padesky and Mooney (2012) stated that besides being a therapy model treating problems such as depression, anxiety, and anger; cognitive behavioral approaches can be effective in increasing psychological resilience and developing positive qualities. Cognitive behavioral interventions in adolescents are generally effective in problem-solving, the development of cognitive and social skills, and the regulation of emotions (Ma et al., 2020). This implies that being flexible while coping with these difficult situations might support psychological resilience (Galatzer-Levy et al., 2012). Indeed, emotional flexibility and psychological resilience are two concepts in effectively in struggle with changing situations (İme & Ümmet, 2022). Thus, individuals with high levels of psychological resilience can demonstrate different emotions and countenances in the face of emerging positive and negative situations (Low et al., 2021).

Adolescents might especially be exposed to intense stress and trauma from time to time in high school due to both personal and environmental factors. Adolescents exposed to these situations are more likely to develop a stress-focused disorder (Ross et al., 2020). This research was conducted during a period when the effects of the Covid-19 pandemic period continued. The Covid-19 pandemic period was a serious and difficult experience for adolescents. Besides the significant negative effects of the virus on health; indirect effects such as quarantine processes, being away from school, social isolation, and distance education also caused significant difficulties for adolescents (Liu et al., 2020). Therefore, increasing the emotional flexibility and psychological resilience of adolescents will contribute to overcoming the effects of pandemic period. Psychological resilience and emotional flexibility are two important qualities for adolescents in coping with many difficulties in daily life. High levels of psychological resilience and emotional

flexibility will benefit adolescents' mental health. Moreover, the results of the research will be an important reference point for the studies that psychological counselors working in schools. Also, this study is considered an important step towards filling the gap in the application of cognitive behavioral interventions and drawing attention to improving psychological resilience and emotional flexibility. What is more, the increase in the psychological resilience and emotional flexibility levels of adolescents will contribute to their development of a positive perspective on life. There are studies examining the effect of cognitive behavioral approaches on resilience and emotion regulation (Akeman et al., 2020). However, it is considered that the current study will reveal important results regarding the development of psychological resilience and emotional flexibility of all adolescents, notably those at risk at a critical time such as the post-Covid-19 pandemic period. Because the COVID-19 pandemic period has had negative effects on the mental health of many adolescents and affected their psychological resilience. (Kuhlman et al., 2021). Therefore, the aim of this study is to examine the effects of cognitive behavioral psychological group counseling program on the psychological resilience and emotional flexibility of adolescents. For this purpose, the following hypotheses will be tested. First, there will be a statistically significant difference between the levels of psychological resilience of adolescents who participated in the cognitive behavioral psychological group counseling program and the psychological resilience of the control group who were not included in the program. Second, there will be a statistically significant difference between the levels of emotional flexibility of adolescents who participated in the cognitive behavioral psychological group counseling program and the emotional flexibility of the control group who were not included in the program. Third, observed differences between the levels of psychological resilience and emotional flexibility of adolescents who participated in the cognitive behavioral psychological group counseling program will continue over the two-month follow up period.

Method

Design

This research uses an experimental design to examine the effects of the cognitive behavioral psychological group counseling program on psychological resilience and emotional flexibility. The research used a 2×3 mixed design consisting of pre-test, post-test, and follow-up measurements with experimental and control groups. Participants were randomly assigned to groups. In this method, both groups are considered equal except for the intervention methods.

While the experimental group is exposed to an intervention, the control group does not receive any intervention (Creswell, 2017). The independent variable of the research is the cognitive behavioral psychological group counseling program. The dependent variables of the research, on the other hand, are psychological resilience and emotional flexibility.

Participants

This study was conducted with 28 adolescents selected from 400 high school students continuing their education at a Ministry of National Education high school in Istanbul, Turkey. The experiment and control groups each consisted of 14 adolescents with 7 girls and 7 boys. The inclusion criteria for the research are to volunteer to participate and to have no psychological disorder. The exclusion criteria for the research required to be getting psychological help.

Measures

Adolescent psychological resilience scale

Bulut et al. (2013) developed the scale with adolescents. The scale consists of 6 factors: family support, peer support, school support, adaptation, determination to strive, and empathy. The scale consists of 29 items in total. The factor loads for the scale range between 0.59 and 0.81. The Cronbach alpha coefficient in the reliability analysis was found to be 0.81.

Emotional flexibility scale

Fu et al. (2018) developed the emotional flexibility scale with adolescents. İme and Ümmet (2022) adapted to Turkish. The scale consists of 10 items and 3 subscales. It was found that the factor loads for the scale range between 0.65 and 0.92. The Cronbach alpha coefficient in the reliability analysis was found to be 0.74.

Treatments

Creating the cognitive behavioral psychological group counseling program

A 12-session program was prepared to examine the effects of the cognitive behavioral psychological group counseling program on the emotional flexibility and psychological resilience of adolescents. In the program, the aim was to increase the levels of emotional flexibility and psychological resilience of adolescents, and special attention was given to adhering to the techniques of the cognitive and behavioral approach theoretically. The sessions for the cognitive

behavioral psychological group counseling program were prepared by the researcher by analyzing the studies of Beck (2011), Burns (1980), McCallie et al. (2006), Braniecka et al. (2014), Munoz and Miranda (2000), and Padesky and Mooney (2012). To develop the psychological resilience and emotional flexibility of adolescents, attention was given to these studies in the program session by considering the necessity of restructuring, recognizing, and regulating emotions. Thus, the aim is to let adolescents realize the relationships between emotion-thought-behavior by applying cognitive behavioral strategies.

While preparing the sessions, the items and sub-dimensions of the psychological resilience and emotional flexibility scales were also taken into consideration. Activities related to family support, peer support, school support, adaptation, determination to strive, and empathy skills were included in the sessions related to resilience. On the other hand, activities related to emotional flexibility were based on recognizing, expressing, and regulating emotions. Moreover, expert opinions were taken while preparing the program. The pilot study of sessions for the cognitive behavioral psychological group counseling program was conducted with adolescents before the research started. As a result of the observations of the participants and the group leader during the application, the sessions were revised and finalized. To prevent the participants from getting distracted during the group process, it was necessary to ensure the active participation of each member, and attention was given to this issue during the sessions. What's more, the members might get bored, it was decided that the sessions were to be finalized in 65 min with the suggestions of the second writer.

Additionally, since the group consisted of adolescents, the sessions were prepared considering the developmental characteristics of the group. Methods such as introduction activities, games, and love bombardment were used as an extra in the sessions. The program sessions presented in Table 1 were applied to the experimental group.

The control condition

To examine the effects of the independent variable in the current study, adolescents assigned to the control group served as comparisons for adolescents in the experiment group. Assuming that the groups were equivalent before the intervention, the researchers were received warranty by the participants, their schools, and their parents that the participants in the experiment and control groups would not receive any psychological help throughout the process. In this way, the researchers tried to evaluate the effects of the independent variable by comparing the results of the participants in the experiment and control group.

Procedure

The Psychological Resilience Scale and Emotional Flexibility Scale were applied to 400 students continuing their education in high school to randomly select participants for the experimental research. Among 400 students participating in the survey, 72 students who volunteered for the experimental study and scored below average on the scales were identified as potential participants (see Fig. 1). After individual interviews with 72 adolescents, 28 students who volunteered to participate in the study were selected. A number was given to each participant and the numbers were placed in a bag. Then, participants were randomly assigned to the experimental and control groups. Individual interviews were conducted with the adolescents selected for the experiment group to determine their willingness to participate in group counseling sessions. Moreover, informed consent was taken from their families. During the interviews, the participants were informed about the duration of the program, where the session would take place, the number of sessions, and the program in general. After that, the Psychological Resilience Scale and Emotional Flexibility Scale were applied to the participants in the experiment and control group. The cognitive behavioral psychological group counseling program was administered by the primary writer to the experiment and control group for 12 weeks (April 2022, August 2022). On the other hand, no treatment was applied to the control group. At the end of the 12-week period in which the experiment group was subjected to the program, the scales were re-administered to the groups as a post-test application. Follow-up measurements were made in the experiment and control groups 2 months after the experimental procedure (August 2022).

Therapists

The primary writer of the research has been working with adolescents as a psychological counselor for 13 years. After his undergraduate study, he received cognitive behavioral therapy training. He has conducted group guidance and psychological counseling sessions on various subjects. Within the scope of his postgraduate studies, he took courses in the field of “cognitive and behavioral counseling practices” and performed individual and group counseling practices under the supervision of his advisor. The second writer of the research completed his undergraduate, graduate, postgraduate, and associate professorship in the field of psychological counseling. The second writer of the research provided supervision to the primary writer during the application process.

Table 1 Cognitive Behavioral Psychological Group Counseling Program Sessions

1st session meeting and setting goals	Introducing group members, Determining the rules with group members, Setting general goals for the group, Ensuring that personal goals are expressed.
2nd session ABC model	Learning about the main idea behind the ABC model, Learning that adverse events do not cause (A) emotions, but rather those beliefs (B), especially irrational beliefs cause emotions (C).
3rd session to recognize cognitive distortions	Make sure that the group members recognize their preconceived viewpoints about themselves and the world around them, Supporting their learning of cognitive distortions.
4th session identifying emotions	Ensuring that the group members can identify their emotions. Identifying primary and secondary emotions Learning about the difference between primary and secondary emotions Learning about the effects of beliefs on secondary emotions
5th session understanding emotions and developing empathy skills	Increasing the group members' awareness of other people's emotions Creating awareness toward developing empathy skills Supporting them in establishing social connections with others,
6th session realizing the connection between emotion, thought, and behavior	Ensuring that the group members realize how interacting with other people affect their emotions, Ensuring that they realize the contribution of thoughts, expectations, behaviors, and emotions in communication.
7th session awareness of successful events	Increasing the group members' awareness for creating successful event action plans. Understanding this success with questions such as how, with whom, and how often and raising awareness to understand the challenges and what has helped
8th session preparing the psychological resilience action plan	Ensuring that the group members prepare a 'psychological resilience action plan' and raising their awareness.
9th session realizing the effects of activities on emotions.	Helping group members understand how activities affect their emotional states, Supporting them while they create their own life plans to cope with and overcome difficulties.
10th session emotion regulation skills	Contributing to the group member's development of emotion regulation skills, Raising awareness of the fact that positive events develop positive emotions in daily life.
11th session relaxation exercises	Helping them manage the physical effects of difficulties in life with relaxed breathing and muscle relaxation exercises
12th session general evaluation and closure	Determining the level at which group members achieved their personal goals, Evaluating the uses of new thinking strategies to increase psychological resilience, Evaluation of awareness obtained in terms of emotional flexibility, Evaluation of the next steps of the research, General evaluation of the group process and closure.

Data analysis

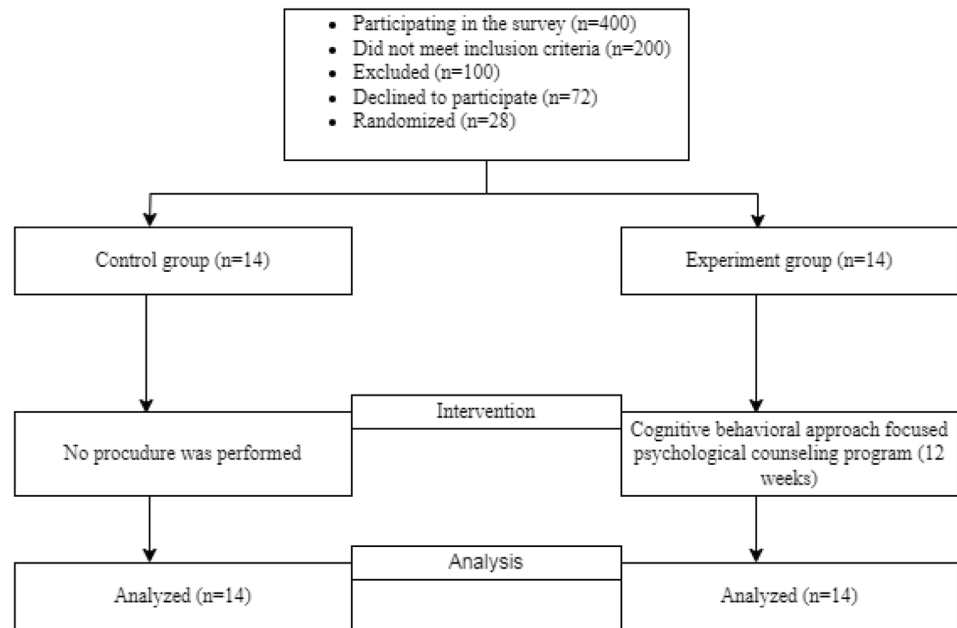
The normality test of the data for the experiment and control group was analyzed during the process by using the Shapiro-Wilk test. Table 2 shows the results of the normality test. To examine whether the variances of the data for the experiment and control group were homogeneous within the scope of the study, the Levene test was applied before the analysis. Table 3 shows the results of the Levene test for each dependent variable. As can be seen in Table 2, the normality assumption was met for the Psychological Resilience and Emotional Flexibility Scales.

To determine whether there is a statistically significant difference between the dependent variable scores of the experiment and control groups, an analysis of covariance (ANCOVA) was performed. To compare repeated measures of the groups, a one-way analysis of variance (ANOVA) was used for repeated measures. In addition to

the statistical significance, eta-square (η^2) was calculated to evaluate the significance of the differences. Eta-square signifies the proportion of the total variance attributed to an effect (independent factor). 0.01–0.03, 0.06–0.09, and >0.14 η^2 values respectively indicate small, medium, and large effects (Cohen, 2016).

Results

The aim of this study is to examine the effects of cognitive behavioral psychological group counseling program on the psychological resilience and emotional flexibility of adolescents. Before beginning the analysis, the hypothesis that the error variance of the dependent variables was equal between the groups was tested. Levene test results demonstrate that the variances are homogeneous ($p > .001$). The results are presented in Table 3.

Fig. 1 Research flow chart**Table 2** Shapiro-Wilk Normality Test Results for all Scales

Scales	Measures	Shapiro-Wilk		
		Statistic	df	p
Psychological Resilience Scale	Pre-test	0.877	28	0.203
	Post-test	0.717	28	0.201
Emotional Flexibility Scale	Pre-test	0.909	28	0.319
	Post-test	0.702	28	0.141

Table 3 Levene Test Results for all Scales

	Levene	SD1	SD2	p
Psychological Resilience Scale	0.009	1	26	0.926
Emotional Flexibility Scale	0.772	1	26	0.338

Table 4 shows the ANCOVA results about the first hypothesis of the study regarding whether there was a statistically significant change in the Psychological Resilience Scale scores of the experiment and control groups. As can be seen in Table 4, a statistically significant difference was observed between the psychological resilience scores of

the adolescents in the experiment and control group when the pretest scores were fixed ($F_{(1, 28)} = 5476.375$, $p < .001$, $\eta^2 = 0.995$). As a result, it was seen that there is a statistically significant difference between the psychological resilience scores of the control group and the psychological resilience scores of the experiment group who participated in the cognitive behavioral psychological group counseling program.

ANCOVA results for the second hypothesis of the research, about whether the Emotional Flexibility Scale scores of the experiment and control group change at a statistically significant level or not, are given in Table 5. As can be seen in Table 5, when the pre-test result is fixed, it was observed that there is a statistically significant difference between the emotional flexibility scores of the adolescents in the experiment and control groups ($F_{(1, 28)} = 2479.857$, $p < .001$, $\eta^2 = 0.990$). Consequently, it was determined that there is a statistically significant difference between the emotional flexibility scores of the control group and the

Table 4 The ANCOVA Results for the Experiment and Control Groups' Scores in the Psychological Resilience Scale

Source	Sum of square	df	Mean Square	$F(1, 28)$	p	η^2
Pre-test	0.008	1	0.008	1.877	0.183	
Group	23.224	1	23.224	5476.375	0.000	0.995
Error	0.106	25	0.004			
Total	373.161	28				

Table 5 The ANCOVA Results for the Experiment and Control Groups' Scores in the Emotional Flexibility Scale

Source	Sum of square	df	Mean Square	$F(1, 28)$	p	η^2
Pre-test	0.014	1	0.014	0.880	0.880	
Group	38.77	1	38.77	2479.857	0.000	0.990
Error	0.392	25	0.016			
Total	463.620	28				

experiment group who participated in the cognitive behavioral psychological group counseling program.

For the third hypothesis of the research, a repeated ANOVA test was employed for each dependent variable. A statistically significant difference was found between pre-test, post-test, and follow-up test scores for the Psychological Resilience Scale ($F_{(1, 27)} = 682.534, p < .001, \eta^2 = 0.962$). While the difference between the pretest-posttest and pretest-follow-up test scores was statistically significant, the difference between the posttest-follow-up test scores was not found to be statistically significant. This finding shows that the psychological resilience levels of the adolescents participating in the experiment group increased on a statistically significant level after the program that their psychological resilience levels were not different from the findings obtained in the follow-up studies performed two months later. Similarly, a statistically significant difference was also found between pre-test, post-test, and follow-up test scores for the Emotional Flexibility Scale ($F_{(1, 27)} = 522.320, p < .001, \eta^2 = 0.951$). According to this, while the difference between the pretest-posttest and pretest-follow-up test scores was statistically significant, the difference between the posttest-follow-up test scores was not found to be statistically significant. This finding shows that the emotional flexibility levels of the adolescents participating in the experiment group increased on a statistically significant level after the program that their emotional flexibility levels were not different from the findings obtained in the follow-up studies performed two months later.

Discussion

In this research, the effects of the cognitive behavioral psychological group counseling program on the psychological resilience and emotional flexibility levels of adolescents were examined. In the study, a 2×3 experimental design was used; participants were randomly assigned to the experiment and control groups. Pre-test, post-test, and follow-up measurements were performed; a 12-week cognitive behavioral psychological group counseling program was applied to the experiment group, and the control group was not subjected to any intervention. Research findings show that the psychological resilience and emotional flexibility levels of adolescents participating in the cognitive behavioral psychological group counseling program increased. Emotion regulation is a crucial part of the features supporting psychological resilience (Mak et al., 2011). As such, the potential goal of cognitive behavioral approaches is also to increase psychological resilience (Akeman et al., 2020). Cognitive behavioral group studies among adolescents provide positive contributions to psychological resilience, regulation of

emotions and behaviors, connections, and development of abilities (Alvord et al., 2011). Therefore, the current study makes important contributions to the literature by examining the effectiveness of the cognitive behavioral group counseling program on the psychological resilience and emotional resilience levels of adolescents, especially after the Covid-19 pandemic period.

Accordingly, there is a statistically significant increase in the psychological resilience levels of adolescents who participated in the cognitive behavioral psychological group counseling program. When the literature is examined, there are studies that support this finding. Dray et al. (2015) researched the effects of psychological resilience interventions applied in school environments. The findings imply that intervention programs are effective in decreasing children's and adolescents' mental health problems. Similarly, Sankaranarayanan and Cycil (2014) conducted research examining the effects of the resilience program on Indian children. The findings from this research demonstrate that the pessimistic style used by the children participating in this training to describe themselves decreased, while their optimistic style increased. In their study with adolescents in an experimental design, Şahin and Türk (2021) found that cognitive behavioral psychological group counseling program increased psychological resilience. Cutili et al. (2013) conducted research demonstrating that the psychological resilience program in which the families are also involved in the process, decreases the symptoms of internalization in adolescents. Another research by O'Connor et al. (2022) about group counseling effect on psychological resilience showed that group counseling increases the psychological resilience of adolescents. Yamamoto et al. (2017) found a statistically significant increase in students' emotional resilience levels in a study on the effects of a cognitive behavioral psycho-education program on emotional resilience in elementary school students. To sum up, cognitive behavioral psychological resilience programs are effective in increasing the psychological resilience levels of adolescents.

Adolescence is a period characterized by multiple transitions such as physiological, environmental, physical, cognitive, and socio-emotional growth, often leading to both challenges and opportunities (Bluth et al., 2018). The process of psychological resilience in adolescence is defined as positively adapting to negative experiences (Masten, 2007). According to this opinion, psychological resilience is a process that takes time and can change with developmental expectations. Moreover, the findings show that adolescents with high levels of psychological resilience exhibit behavior that promotes their health, avoid risks such as substance use (Barger et al., 2017), and show less anxiety and depression symptoms (Skrove et al., 2013). As such, increasing psychological resilience in adolescence might help adolescents

make their perceptions of themselves, their environment, and the world, in general more realistic and positive. Additionally, strengthening psychological resilience in adolescence, being open to new experiences, and developing coping strategies to overcome difficulties might potentially make it easier to go through this developmental process.

As a result of the research, there is a statistically significant increase in the emotional flexibility levels of the adolescents who participated in the cognitive behavioral psychological group counseling program. Erden (2017) stated that the cognitive behavioral psychological group counseling program increases emotion regulation skills, interpersonal relations, and psychological resilience. Suveg et al. (2009), investigated the effectiveness of cognitive behavioral techniques in the development of emotion regulation skills in adolescents experiencing anxiety. It was determined that there is a decrease in anxiety and an increase in self-efficiency and emotional mindfulness, that they can cope with anxiety better and show more improved emotion regulation skills. In addition, cognitive behavioral therapy was effective in reducing emotion regulation difficulties (Strauss et al., 2019). Again, the cognitive behavioral therapy-assisted psycho-education program reduces depression and anxiety symptoms and contributes to the development of emotion regulation skills among adolescents (Wisman et al., 2023). When evaluated in terms of the cognitive behavioral approach, it is important to recognize and transform dysfunctional thoughts, to understand the effect of thoughts on emotions, and to reach a more flexible emotion recognition skill as they create the basis of the theory. In line with all these findings, cognitive behavioral programs are effective in increasing the emotional flexibility levels of adolescents.

Cognitive behavioral approaches generally focus on making the client realize the relationship between emotion, thought and behavior, changing dysfunctional thoughts, and changing behaviors with behavioral techniques (Beck, 2020). Meta-analysis research has found that cognitive-behavioral-based interventions are effective for improving adolescent mental health, including the development of resilience. (Ma et al., 2020). Individuals with high psychological resilience are those who can empathize, able to manage emotions, express their thoughts and feelings, and control their behavior (Liu et al., 2021). The current research findings support the findings in the theoretical background. The cognitive behavioral psychological group counseling program is effective in increasing the psychological resilience and emotional flexibility levels of adolescents. This study was carried out in 2022, in which despite the end of the period, the effects of the Covid-19 pandemic continued. Therefore, psychological resilience and emotional flexibility might act as two prominent protective mechanisms against psychological traumas. As such, developing these two

protective mechanisms is thought to be essential for adolescents' mental health. The current research findings have important outcomes for school counselors. School counselors have high potential in terms of providing care and support that can contribute to the positive development of adolescents. Therefore, cognitive behavioral development programs for psychological resilience and emotional flexibility might make an important contribution to adolescents' ability to cope effectively with difficulties and promote healthy development. The programs to be implemented are important within the aim of developmental and preventive guidance, which is especially emphasized in terms of psychological counseling and guidance services. As such, it is recommended for school counseling and guidance services to implement such intervention programs toward improving psychological resilience and emotional flexibility of adolescents.

In summary, psychological counseling programs with cognitive behavioral-based groups in adolescents after the COVID-19 pandemic period contribute to the development of their psychological resilience and emotional resilience levels. Psychological resilience in adolescents can be a shield against negative situations as well as contributing positively to their mental health. Similarly, emotional flexibility is significant for maintaining a healthy adolescence period, where emotional development is rapid, emotional reactions are stronger, and negative and complex emotions are experienced. The current study points to the importance of the development of the concepts of psychological resilience and emotional resilience in maintaining the adolescence period and the subsequent process in a healthy way.

Limitations and suggestions

In this study, a new program was developed to increase psychological resilience and emotional flexibility, and its effects were analyzed. This study was carried out in a state high school with a low socio-economic level in Turkey. The results can be generalized by conducting the study with a larger and different sample. Additionally, the effects of the current program on other positive qualities such as happiness, well-being, life satisfaction, emotion regulation, and peer relations can also be examined. The study was conducted with a small sample group and a placebo group was not included. As such, the findings should be evaluated carefully. Another limitation is the relatively short duration of the intervention and the lack of long-term follow-up measurement for the participants. This may lead to the inability to fully understand and explain the impact of an intervention. Lastly, the data were collected based on the responses of the participants to the questionnaires. It may not be possible to avoid social desirability and prejudices. Despite

these limitations, the findings of the study conducted after the Covid-19 pandemic period indicate that cognitive behavioral group counseling programs will contribute to the development of psychological resilience and emotional resilience in adolescents. Therefore, it is recommended to apply cognitive behavioral psychological group counseling programs to improve the psychological resilience and emotional flexibility levels of adolescents after epidemics, natural disasters, or similar situations. The development of protective factors such as psychological resilience and emotional flexibility of adolescents will contribute positively to their mental health.

Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Declarations

Ethical approval All procedures in the study are in accordance with the ethical standards of the responsible human experiments committee and the 1975 Declaration of Helsinki, which was revised in 2000. Informed consent was obtained from all the participants and their families included in the research. Additionally, research compliance approval was obtained from the Ethics Committee of Marmara University Institute of Educational Sciences.

Conflict of interest The authors declare that there is no conflict of interest. This research derives from the primary writer's PhD thesis.

Informed consent Informed consent was obtained from all participants and their parents.

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