Research Article

A Mixed-Method Study Exploring the Effectiveness of Acceptance and Commitment Therapy Based Group Psychoeducation Program on Psychological Flexibility

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Abstract

This study aims to develop, implement, and test the effectiveness of an Acceptance and Commitment Therapy-based psychoeducation program for fostering psychological flexibility. The study employed a convergent mixed methods design. For the quantitative phase, the pre-test post-test control group experimental design was used, while in the qualitative phase, a thematic analysis was conducted. The study group consisted of 13 first-year students of the Department of Guidance and Counseling, and Psychology, aged between 18-22, 8 of whom are in the experiment group, and 5 in the control group. The students participated in 8 sessions of 90 minutes. Before and after the psychoeducation, the Acceptance and Action Questionnaire-II was administered to the students and they were also asked to answer the formerly specified open-ended questions in writing. Mann Whitney U and Wilcoxon Signed Ranks tests were used for statistical analysis; while thematic analysis was used for the qualitative component of the study. Quantitative findings showed that psychoeducation significantly increased psychological flexibility, but the change was not at a level to differ from the control group; while qualitative findings revealed that participants experienced changes in 10 themes after psychoeducation. These themes are Being Present, Self-Control, Value-Based Actions, Defusion and Coping with Feelings and Thoughts, Knowledge of Self and Others, Acceptance, Non-Avoidance, Conflict and Crisis Management, Authenticity, and Anxiety. The quantitative and qualitative findings are discussed in light of the relevant literature.

Keywords:

Acceptance and Commitment Therapy, Psychological flexibility, Mindfulness, Group psychoeducation

Kabul ve Kararlılık Terapisi Temelli Psikolojik Esneklik Grup Psikoeğitim Programının Etkililiğini Ölçmeye Yönelik Karma Bir Çalışma

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Öz

Bu araştırmada psikolojik esnekliği geliştirmek üzere Kabul ve Kararlılık Terapisi temelli bir psikoeğitim programının geliştirilmesi, uygulanması ve etkililiğinin sınanması amaçlanmıştır. Çalışmada yakınsak karma yöntem kullanılmıştır. Nicel kısımda ön test son test kontrol gruplu deneysel desen, nitel kısımda ise tematik analiz kullanılmıştır. Çalışma grubu, yaşları 18-22 arasında değişen, 8'i deney 5'i kontrol grubunda olmak üzere 13 Rehberlik ve Psikolojik Danışmanlık ve Psikoloji Bölümü birinci sınıf öğrencisinden oluşmuştur. Öğrencilerle 90 dakikalık 8 oturum gerçekleştirilmiştir. Öncesi ve sonrasında öğrencilere Kabul ve Eylem Formu II uygulanmış, ayrıca belirlenmiş açık uçlu sorulara yazılı olarak cevap vermeleri istenmiştir. Nicel veriler, Mann Whitney U ve Wilcoxon İşaretli Sıralar testi ile; nitel veriler ise tematik analiz yöntemiyle incelenmiştir. Nicel bulgular, psikoeğitimin psikolojik esnekliği anlamlı şekilde arttırdığını fakat değişimin kontrol grubundan farklılaşacak düzeyde olmadığını göstermiştir. Nitel bulgular ise psikoeğitim sonrası 10 temada katılımcıların değişim yaşadığını ortaya koymuştur. Bu temalar Anda Kalma, Öz-Kontrol, Değer Odaklı Eylemler, Duygu ve Düşüncelerle Ayrışma ve Baş Etme, Kendini ve İnsanları Tanıma, Kabul, Kaçınmama, Çatışma ve Kriz Yönetme, Otantik Olma ve Kaygıdır. Nicel ve nitel bulgular ilgili literatür eşliğinde tartışılmıştır.

Anahtar Kelimeler:

Kabul ve Kararlılık Terapisi, Psikolojik esneklik, Bilinçli farkındalık, Grup psikoeğitimi

edam

Acceptance and Commitment Therapy (ACT) was developed in 1986 by Steven Hayes (Hayes & Wilson, 1994). It falls under the umbrella of the third wave of cognitive-behavioral therapies, which emphasize cognitive context and coping strategies (Hayes & Smith, 2005). ACT is an intervention based on mindfulness that is "the awareness that arises from paying attention, on purpose, in the present moment, and non-judgmentally." (Kabat-Zinn, 2005). ACT consists of six basic therapeutic elements aiming at gaining psychological flexibility. These elements are Being Present, Cognitive Defusion, Acceptance, Self-as-Context, Values, and Value-Based Actions. These six basic elements are like the six faces of a prism, and the prism itself is psychological flexibility. In other words, psychological flexibility is the main element ACT aims to gain (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). At this point, it will be convenient to look at why psychological flexibility is significant for mental health.

Psychological flexibility is basically defined as being in harmony with one's own values, even in the case of unwanted, difficult internal experiences. These internal experiences consist of disturbing emotions or critical thoughts about oneself (Hayes, Villatte, Levin, & Hildebrandt, 2011). On the other hand, psychological inflexibility is the narrowing of a person's behavioral repertoire and a decrease in sensitivity to adapt to the requirements of life, due to the dominance of fusion with cognitions and avoiding internal experiences (Hayes, Strosahl, & Wilson, 1999). Briefly, in ACT, psychological flexibility is the foundation of mental health. (Kashdan & Rottenberg, 2010).

In ACT's philosophical framework, a basic acknowledgment for mental health is that life contains inevitable suffering. Everyone is exposed to painful experiences in some way and could carry any pain from the past or possible future to the present moment via the mind that makes comparisons and judgments (Hayes, Strosahl, & Wilson, 1999). Considering that, attention is generally nonconsciousness, automatic, habitual, and reactive (Teasdale & Chaskalson, 2011), it is relevant for the normal functioning of the mind to be accompanied by memories brought from the past, feeding suffering while paying attention to the situations. The mind is compared to a sword that could harm a person if not known how to use it. For this reason, the main purpose of therapy in ACT is to ensure that people identify what they live for in life, their values that add meaning to life, accept those outside of personal control, and be determined to continue life-enriching behaviors (Harris, 2017). Trying to change, suppress, eliminate and control distressing internal events such as undesirable and unpleasant emotions, thoughts, memories, and bodily symptoms, turns the person into a rigid and inefficient problem solver that, contrary to expectations, makes the person unable to meet their primary needs in life. Instead, the aim is to give the client a new perspective by simply observing and accepting the aforementioned experiences as they are, and thus to realize that feelings are only feelings, thoughts are only thoughts, and memories are only memories (Strosahl, Robinson, & Gustavsson,

2017). In short, the aim of ACT is to accept feelings and thoughts and be in the moment, transform the relationship with the feelings and thoughts to change their functions, choose value-based actions, and take action (Harris, 2017).

ACT-based interventions show that psychological flexibility is related to psychological resilience (Kashdan & Rottenberg, 2010); and that change in psychological flexibility levels is a significant predictor of distress and recovery (Brandon, Pallotti, & Jog, 2020). It affects many markers of quality of life such as general mental health and job satisfaction, and is effective in reducing the symptoms of various psychological disorders such as depression, anxiety, somatic health problems, suicide and substance use (A-Tjak et al., 2015; Ducasse et al., 2018; Hayes, Luoma, Bond, Masuda and Lillis, 2006). It also appears to play a mediating role in other coping mechanisms such as cognitive reappraisal (Kashdan, Barrios, Forsyth, & Steger, 2006), and the effectiveness of psychological treatment (Masuda, Hayes, Fletcher, Seignourel, Bunting, Herbst, Twohig, & Lillis, 2007). On the other hand, psychological inflexibility is associated with depression and anxiety symptoms, distress, and mental health issues (Bond et al., 2011).

Especially in studies conducted with young people, ACT-based interventions were found to reduce impulsivity and increase self-control in at-risk youth (Soriano, Salas, Martinez, Ruiz, & Blarrina, 2009) and effective in health behaviors and in supporting their well-being (Dindo et al., 2018). Those interventions increased positive affect and decreased sadness in young people through the acceptance variable (Ciarrochi, Kashdan, Leeson, Heaven, & Jordan, 2011); reduced mental distress in young people with cancer and chronic pain (Patterson & McDonald 2015; Pielech, Vowles, & Wicksell, 2017); and were found to be relevant to be applied to young people with depression, post-traumatic stress disorder, chronic illness or chronic pain (Ernst & Mellon, 2016; Halliburton & Cooper, 2015).

With their cognitive development adolescents meet the subjectivity and ambiguity of meaning. This can be accompanied by either dogmatic thinking or the abandonment of the pursuit of meaning. As a result, two types of behavior emerge: determining actions based on feelings or acting completely unaware of emotions (Chandler, 1994). Besides, in this period adolescents' emotions become complex, intense, and unstable. For this period to reach adulthood healthily, young people must learn to understand and manage their emotions and cope with uncertainties (Buchanan, Eccles, & Becker, 1992; Rosenblum & Lewis, 2003). Considering these characteristics of the period and the fact that the adolescents begin to shape their lives with their own will and preferences in this period, it is of great importance to bringing in some abilities. Those abilities are distancing from feelings and thoughts, carrying the mind wandering in the past and future back to the present moment, determining the principles and values that one wants to realize in his life, and the awareness that it is normal to have difficulties and pains in life, and

acting in a value-oriented manner despite internal and external challenging experiences. The longitudinal study of Ciarrochi et al. (2011) reveals that role of awareness and acceptance in young people's positive development.

Reviewing the literature, we saw that there are many ACT-based group studies, but there are few conducted with the mixed-methods design. The number of ACT-based group studies in Turkey is limited and the number of the ones conducted with the mixed method are almost negligible. For this reason, in this study, the aim is to develop, implement, and test the effectiveness of an ACT-based group psychoeducation program to improve psychological flexibility. Accordingly, the research questions are as follows: (i) Does the developed ACT-based group psychoeducation increase psychological flexibility? (ii) What kind of changes do participants experience during and after the psychoeducation process?

Method

Research Design
This study was conducted using a convergent mixed methods design to develop and investigate the effectiveness of an ACT-based group psychoeducation program to improve psychological flexibility. In the convergent mixed-methods design, data are collected and combined simultaneously. The design makes it possible to obtain a holistic understanding by balancing the strengths of one data type with the weaknesses of the other (Creswell, 2002). The quantitative part of the study was carried out by the experimental model with a pre-test post-test control group. In this part, the independent variable was group psychoeducation and the dependent variable was the psychological flexibility level. In the qualitative part of the study, the thematic analysis method was used for analyzing the data.

Study Group
Firstly, the psycho-education announcement was made to first-year students of the Department of Guidance and Counseling, and Psychology. Afterwards, the Acceptance and Action Questionnaire II (Yavuz et. al., 2016) was administered to 21 female students who applied to the psychoeducation program to measure the psychological flexibility levels. The students were ranked according to their scores and the odd-numbered ones were assigned to the experimental group, while the even-numbered ones were assigned to the control group (waiting list group). The groups were formed as 11 students in the experimental group and 10 in the control group. Students' ages ranged from 18-22. Three students from the experimental group did not participate in the process, including the first session, so the psycho-education started and was completed with 8 members. 5 out of 10 students in the waiting list group

were included in the analysis since they were the only ones who participated in the post-test process. Psychoeducation was carried out with a 92% participation rate. The flow chart of the research process is presented in Figure 1.

Figure 1.
The Flow chart of the research process
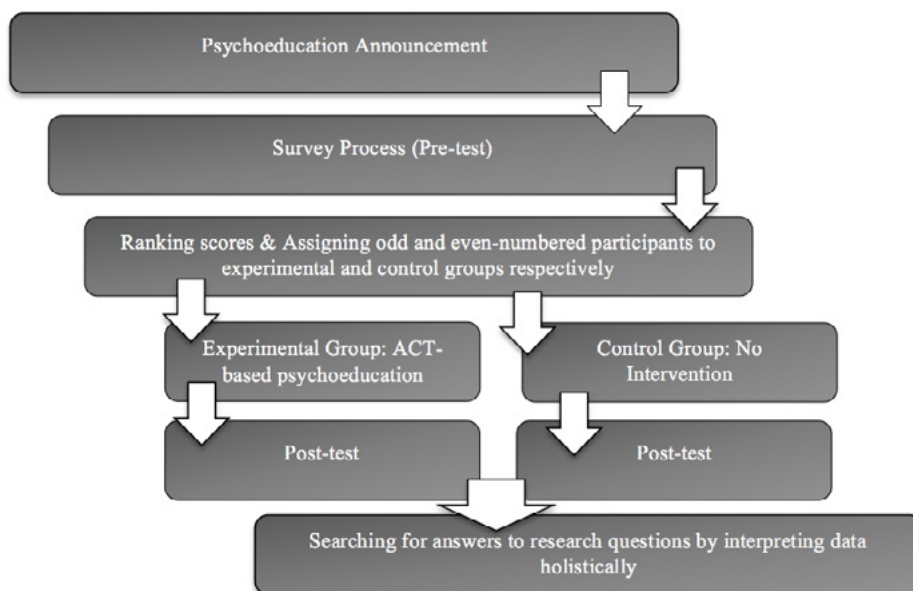
Data Collection Tools

The Acceptance and Action Questionnaire II and structured questions were utilized in the quantitative and qualitative parts of the study respectively. In the first session of the psychoeducation, the participants were asked to answer the following questions in writing: "Are there times and situations that you have difficulty understanding and managing yourself? If so, what are these? What are the things in yourself that you want to understand and discover?". The questions posed in the last session are as follows: "When you take into account the points you stated in the first session, what changes and awareness did you experience during and after the psychoeducation process, if there is any?". An option was also given to the participants to answer the questions by writing a letter to themselves.

The Acceptance and Action Questionnaire II. The scale was developed by Bond et al. (2011); and it was adapted to Turkish by Yavuz et al. (2016). Confirmatory factor analysis reportedly had a good fit. The Turkish form consists of 7 items and one dimension. High scores on the scale indicate low psychological flexibility. The Cronbach

alpha value was .84, and the Pearson correlation coefficient measured for test-retest reliability was .85. In the present study, the Cronbach alpha value was calculated as .82.

Procedure

While preparing the content of the psycho-education program, apart from the original contents created by the authors, the works of Harris (2017), Hayes, Strosahl and Wilson (1999), Strosahl, Robinson and Gustavsson (2017), and Wolf and Serpa (2015) were used directly or by adaption. An academic expert in the field of Guidance and Psychological Counseling examined the content, and rearrangements were made according to the expert opinion. The psychoeducation program consisted of 8 sessions of 90 minutes. Sessions were held once a week in a quiet interior in the university building. The scales were administered to the participants during the survey process and in the last session. The psychoeducaton has the following aims: (i) To gain participants psychological flexibility skills (ii) To motivate the participants to get to know and understand themselves and to gain self-observation skills (iii) To promote value-oriented living with acceptance and commitment skills by ensuring that participants have knowledge and awareness of being in the moment, acceptance, cognitive defusion, self-as-context, values and value-oriented actions. Mindfulness meditation exercises were done in each session. Besides, the relevant audio recordings were shared with the participants, they were encouraged to do exercises throughout the week.

As seen in Table 1, in the first session, the participants were informed about the group process, and ground rules were established. An icebreaker exercise was done to familiarize the participants with each other. The participants shared what they expect from the psycho-education and what they aim to change in their lives in writing. The concept of self-knowledge, resources in observing and understanding ourselves, filtering those resources, and using metacognition were discussed and relevant information was shared. In the second session, the aim was to gain information about the functions of the mind and awareness of the mechanisms of the mind that cause difficult experiences and emotions, and to gain knowledge and experience about the self-as-context and self-observation. The third session included the concepts of acceptance and experiential avoidance, difficult emotions, and experiencing acceptance as a method of coping with difficult emotions. In the fourth session, the aims were to gain knowledge and awareness of the concepts of cognitive fusion and defusion, to experience distancing from thoughts, and to learn how to look at thoughts in terms of their functional roles. The fifth session included knowledge and awareness of being in the moment, mind's wandering in the past and future and the autopilot state, and experiencing being in the moment. In the sixth session, the members learned the difference between values and goals; they have determined their own values and short, medium, and long term value-oriented goals, and also learned the concept of "dead person's goal" and changed

their goals to functional ones. The seventh session aimed to learn about value-based actions, to recognize the psychological barriers in front of the value-based actions, and to identify alternative feelings and thoughts to overcome these barriers. Finally, in the eighth session, a general summary of the psychoeducation was made and participants' experiences, their realizations, and the changes they experienced were shared and discussed. The goals and expectations that they had written in the first session were shared with them and they were asked to put their experiences in writing considering these notes. The summary of the psychoeducation content is presented in Table 1.

Table 1.
The summary of the psychoeducation content

Sessions	Session content
Week 1	Introductions, setting group rules, self-knowledge, self-observation, metacognition concepts
Week 2	Functions of the mind, difficult internal events, self-as-context
Week 3	Acceptance, avoidance, difficult internal events
Week 4	Cognitive fusion and defusion, approaching thoughts in the context of their functional roles
Week 5	Being present, wandering mind, automatic pilot
Week 6	The difference between values and goals, determining values, dead person's goals, determining value-based goals
Week 7	Values-based actions, barriers in front of values-based actions, solutions to overcome barriers
Week 8	Summary, sharing experiences

Data Analysis

Statistical analysis was performed using IBM SPSS 25 statistical program. Since the experimental and control groups consisted of 8 and 5 people, the data were analyzed by non-parametric methods (Tabachnick & Fidell, 2007). Comparisons between the experimental and control groups were made using the Mann-Whitney U test, and within-group differences in repeated measures were analyzed using the Wilcoxon Signed Ranks Test. In this direction, firstly, differences between the experimental and control groups' pre-test scores, afterwards, the within-group changes and finally differences between the experimental and control groups' posttest results were examined. Qualitative data gathered through writings were analyzed using thematic analysis with Nvivo 11 software. Following the procedure proposed by Creswell (2007), the texts were first divided into pieces of information. Then these pieces were coded, overlapping and unnecessary codes were eliminated, and finally, the codes were narrowed down to reach the themes for the answers to the research questions.

Results

In this section, firstly quantitative and then the qualitative analysis results will be presented. In the quantitative part, the experimental and control groups pre-test posttest mean scores and standard deviations, and between- and within-group differences are presented. Table 2 shows the pre-test post-test mean scores and standard deviations of the experimental and control groups.

Table 2.
The Acceptance and Action Questionnaire II pre-test and post-test scores of the experimental and control groups

| | Experimental Group N=8 | | | | Control Group N=5 | | | |
| | Pre-test | | Post-test | | Pre-test | | Post-test | |
	X	Sd	X	Sd	X	Sd	X	Ss
Psychological Flexibility	3,12	1,283	2,38	1,096	3,06	,540	2,71	,756

The results obtained from the comparison of the pre-test scores of the experimental and control groups are presented in Table 3.

Table 3.
The results of the Mann-Whitney U Test for pre-test scores of psychological flexibility levels of experimental and control groups

	Group	N	Mean Rank	Sum of Ranks	U	Z
Psychological Flexibility	Experimental	8	6,69	53,50	17,50	-,68
	Control	5	7,50	37,50		
	Total	21				

As shown in Table 3, no significant difference was found between the two groups on psychological flexibility levels (U=50.00, Z=-.145, *p*>.05).

Table 4 shows the results of the Wilcoxon Signed Ranks Tests performed to determine whether the psychological flexibility levels of the experimental and control groups differ between pre-test and post-test measures.

Table 4.
The results of The Wilcoxon Signed Rank Tests for pretest-posttest scores of psychological flexibility of experimental and control groups

		N	Mean Rank	Sum of Ranks	Z
Experimental Group	Negative Rank	5	4,00	20,00	-1,992
	Positive Rank	1	1,00	1,00	
	Ties	2			
	Total	8			
Control Group	Negative Rank	4	2,63	10,50	-,813
	Positive Rank	1	4,50	4,50	
	Ties	0			
	Total	5			

As Table 4 shows, there is a significant difference between the pre-test and post-test scores of the experimental group (Z = -. 1.992, *p* <.05). It is seen that the psychological flexibility level obtained from the post-test is higher than the pre-test. In other words, the psychological flexibility levels of the experimental group increased significantly after the group psychoeducation program. On the other side, there is no statistically significant difference between the pre-test and post-test scores of the control group on psychological flexibility levels (Z=-.813, *p*>.05).

The results obtained from the comparison of the post-test scores of the experimental and control groups are presented in Table 5.

Table 5.
The results of the Mann-Whitney U Test for post-test scores of psychological flexibility levels of experimental and control groups

	Group	N	Mean Rank	Sum of Ranks	U	Z
Psychological Flexibity	Experimental	8	6,06	48,50	12,500	-1,107
	Control	5	8,50	42,50		
	Toplam	13				

As shown in Table 5, no significant difference was found between the two groups on psychological flexibility levels (U=12.50 Z=-1.107, *p*>.05).

Overall, these results indicate that while there is a significant increase in the psychological flexibility levels of the experimental group after the group psychoeducation program, this increase is not enough to differ from the control group. The psychological flexibility levels of the groups before and after the psychoeducation program are presented in Figure 2.

Figure 2.
The psychological flexibility levels of the groups before and after the psychoeducation program
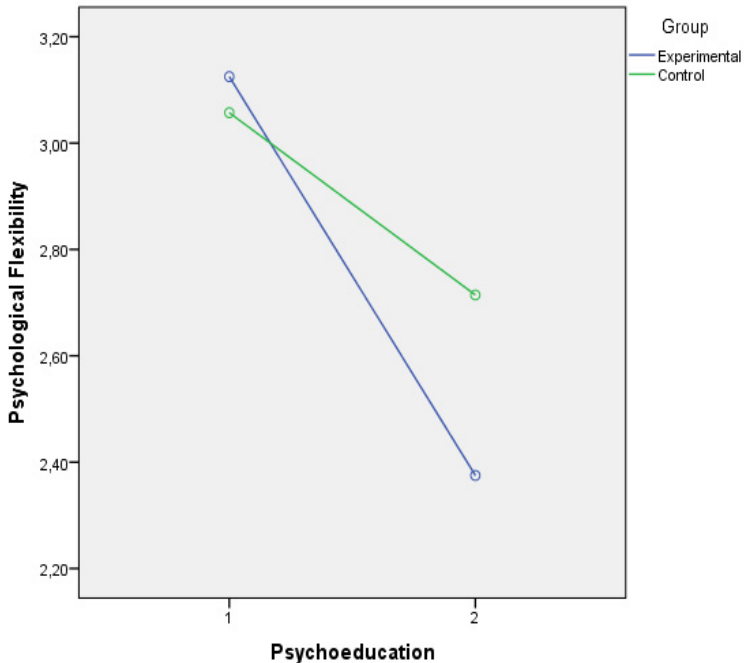
After this point, the findings of the thematic analysis are presented. Before the psychoeducation, the participants were asked about the times and situations they had difficulties to understand and manage, and the things they wanted to understand better in themselves. After the psychoeducation, they were again questioned about the chang-

Table 8.
Themes and direct quotes from the pre-psychoeducational phase

Themes	Direct Quotes
Self-Control	"Sometimes I wonder why I'm so impatient and aggressive." Participant 3 "...I am an overly impulsive person." Participant 1 "In my communication with children, I always try to be gentle with them, to be soft even when I warn them, but I realized while covering the values topic in the psycho-education that I cannot do it when I have a bad mood." Participant 5
Conflict and Crisis Management	"When I am broken, it would be much better to talk calmly and civilly, and come to terms with others, and take care of my inner troubles rather than bottling them up." Participant 3 "When I have a problem, it is not just what I feel at that moment. Whoever I have a problem with, all the former problems with him revive at that time. For this reason, while it is a small problem, it turns into a big one." Participant 5 "Sometimes I have to stop going against people who are going against me and restrain stubbornness a little bit." Participant 7 "Especially as a person who panics quickly, I would like to be cooler and more calm in any troubling event I see, hear, or experience." Participant 7
Thoughts and Emotions	"I wish I could overcome the issues more easily; that are not so important, that I worry about from time to time." Participant 7 "I would like to handle some of my obsessions. Sometimes I am lost in thoughts. There are times when I can never get out. When I can't get those thoughts out of my mind, I can't focus on what I can do." Participant 4
Avoidance	"And in the surroundings that I am entering for the first time, I cannot feel comfortable, I cannot speak. I give up some of the things because I worry about peoples' thoughts. I can't be myself." Participant 2 "Because of this obsession and thoughts in my mind, I was avoiding expressing myself." Participant 4
Anxiety	"I fear not being able to express myself." Participant 4 "I think a lot before entering a new environment for the first time. I wonder what will happen, what we will do, whether I say something or act wrong. And in the surroundings that I am entering for the first time, I cannot feel comfortable, I cannot speak." Participant 2 "Especially as a person who panics quickly,..." Participant 7
Not Being Authentic	"Do not give so much attention to what people say and do. Don't stop being yourself and looking the way you are. Say what you feel. Don't keep it to yourself. You constantly compromise yourself because others would be hurt and broken." Participant 6 "You don't have to be very affectionate, loved by everyone and one who always rush to help others. This is very tiring for you. (...) Know what personality you want to be, adapt to it. (...) You can be fragile and touchy; you can show it. You don't always have to be strong. You don't have to fulfill every behavior and personality that people expect of you. If you are unhappy be unhappy and sad" Participant 8 "I give up some of the things because I worry about peoples' thoughts. I can't be myself. (...) I don't care about myself. I always think about the good of the other person. But I don't really think if I will be happy when I do that." Participant 2 "In daily life, I am a very compassionate and understanding person, sometimes even foolishly, who do not exaggerate problems and who is forgiving." Participant 1 "When I am broken, it would be much better to talk calmly and civilly, and come to terms with others, and take care of my inner troubles rather than bottling them up" Participant 3

es and awareness they experienced, if any. The data obtained were analyzed using thematic analysis. The qualitative data collected from the participants were examined under two headings: the pre-psychoeducation phase and the psychoeducation phase. Six themes were identified in the pre-psychoeducation phase. These are Self-Control,

Conflict and Crisis Management, Thoughts and Emotions, Avoidance, Anxiety and Not Being Authentic. Table 8 provides a sample of quotations illustrating the themes.

As Table 8 shows, participants stated that they had trouble with aggression, impulsiveness, and impatience under the self-control theme. In the theme of conflict and crisis management, they stated that they had problems in conflict management, that they tried to manage or fend off the conflict either by not expressing themselves or with a stubbornness that undermines healthy communication; they could not approach the conflict and crisis calmly; they carried past experiences to the current conflict; and they could not survive the effects of what happened for a long time. The theme of thoughts and emotions shows that due to the fusion with the feelings and thoughts, the participants magnify them in their minds and have difficulty in managing them, and being captured by their feelings and thoughts lowers their life efficiency. In the theme of avoidance, the participants stated that they avoid some actions and being themselves, especially due to social concerns. The anxiety theme shows that the participants experienced mostly social anxiety and also general anxiety, future anxiety, and perfectionist anxiety. In the theme of not being authentic, it is seen that while demonstrating their behaviors and reactions, instead of doing what they think and feel is right, the participants act in a way that will meet people's expectations, attract their good thoughts and not their reactions. But this situation bothers them and they become alienated from themselves.

When we examined the during-and-after-psychoeducation-phase, ten themes have been identified that includes the changes and awareness experienced by the participants. These are, Being Present, Self-Control, Value-Based Actions, Defusion and Coping with Feelings and Thoughts, Knowledge of Self and Others, Acceptance, Non-Avoidance, Conflict and Crisis Management, Authenticity, and Anxiety. Table 9 shows a sample of quotations illustrating the themes.

As seen in Table 9, the participants reported an increase in the ability to stay in the moment after psychoeducation, an awareness of the function of this skill, and its positive effect on the quality of life. In the self-control theme, the participants stated that they became more moderate and "less impulsive" compared to their previous levels and made progress, especially about anger management. In the value-based actions theme, the participants reported discovering their values and developing sensitivity to value-oriented behavior. The theme of defusion and coping with feelings and thoughts shows that the participants learned and developed to recognize, accept, and distance themselves from difficult internal experiences, that are disturbing emotions and thoughts, and to look at these feelings and thoughts in the context of their functional roles and thus to cope with them. In the theme of knowing self and others, the participants reported getting to know themselves and beginning to approach oth-

Table 9.
Themes and direct quotes from the post-psychoeducational phase

Themes	Direct Quotes
Being Present	"Most importantly, and what comforts me most is being able to stay in the moment, think less about the past and the future, and let it take my happy moment less abducted." Participant 1 "I mentioned that I had trouble focusing on my work. In fact, I realized that those thoughts in my mind were not mine, I was in control. I can stop those thoughts while doing my chores. (...) I do not allow my thoughts to affect me at that moment. Of course, I can achieve this by staying in the moment." Participant 4 "Earlier, I wasn't able to stay in the moment. I wasn't able to live my feelings. (...) But after psychoeducation, I realized that I should also experience sadness, pain, and sorrow." Participant 2 "I learned not to be too attached to the past and the future; I realized that staying in the moment is a more peaceful and correct action." Participant 7
Self-Control	"I can be less impulsive and clap back less." Participant 1 "After that week of education, I started to pay more attention to this situation. In fact, she came the same week while I was trying to do my homework and wanted to play very persistently. That was when I thought about it and I softly convinced her that we should play later." Participant 5
Value-Based Actions	"I learned to accept different thoughts and to be more questioning and inquisitive in line with my values." Participant 7 "In my communication with children, I always try to be gentle with them, to be soft even when I warn them, but I realized while covering the values topic in psychoeducation that I cannot do it when I have a bad mood. After that week of education, I started to pay more attention to this situation." Participant 5
Defusion and Coping with Feelings and Thoughts	"I learned how to deal with my own thoughts and actions." Participant 2 "By saying 'I am tired, tired, tired' I can neither get better nor grow up. I will quit saying this." Participant 8 "After a long process, I realized that I am not at a bad level as I mentioned above. At that time, I was having problems and troubles in my inner world a little more, but I have been aware that these negative thoughts = not me. It's just a thought and I don't have to be that. This has been good for me. (...) I tried to embrace some of my feelings and thoughts that I was imprisoned in, and I think I accepted most of them." Participant 3 "I wasn't able to live my feelings. I was thinking as if I should always be happy. But after psychoeducation, I realized that I should also experience sadness, pain, and sorrow." Participant 2 "You are better today than yesterday. You will get better every day. Because now you are aware that negative emotions can and will bring you somewhere. Good for you." Participant 6
Knowledge of Self and Others	"I am glad I attended the psychoeducation because I started getting to know myself. I'm no longer molding myself." Participant 2 "..and most importantly, instead of approaching other people with "why", you started to accept and understand them too." Participant 6 "I have seen that my obsessions are not actually a determining and influencing situation in my life." Participant 4 "After a long process, I realized that I am not at a bad level as I mentioned above." Participant 3

Table 9.
Themes and direct quotes from the post-psychoeducational phase

Themes	Direct Quotes
Acceptance	"I tried to embrace some of my feelings and thoughts that I was imprisoned in, and I think I accepted most of them." Participant 3 "As the program ended, I had my acceptance and solutions left." Participant 6 "Life no longer feels cruel to you." Participant 6 "Everything may not go great in life, it used to frighten me a lot, but now I am not afraid of it, everything may not always go well, but I have to be content with what I have." Participant 1 "And now I think I accept the personalities of my father and brother." Participant 8 "You realize you've come a long way, don't you? You accepted yourself, accepted your feelings and most importantly, instead of approaching other people with "why", you started to accept and understand them too." Participant 6 "I learned to accept all my moods." Participant 7 "And I said 'yes, I don't have to be perfect. I can make mistakes in new things I do.' I guess I can accept that now. For example, I was going to make a presentation in the lesson the other day, but it was such excitement and stress that I cannot explain ... Then I said 'Okay, shame, don't I do this homework here today to learn this? Isn't this homework for this?' the thought made me comfortable" Participant 8
Non-Avoidance	"I was in a little bit of an avoidance state I do not allow my thoughts to affect me at that moment. Of course, I can achieve this by staying in the moment (...)I am no longer afraid of expressing myself. It's like this: I used to avoid expressing myself because of my obsession and thoughts in my mind. Now I am not afraid of expressing myself even if their attitudes and thoughts would be bad." Participant 4 "I have not made much progress in choosing a profession. My ideas are still not clear, but at least I decided not to give up my department until I got an internship." Participant 1 "You express your feelings more easily." Participant 6
Conflict and Crisis Management	"Thanks to the training, I got rid of the situation I mentioned above to some extent. If it hurts me when I have a problem with someone, I immediately tell the other person and I don't let that feeling of sadness grow any longer. Because these situations may have been caused by my misunderstanding or my thinking too much, in this way I can compensate for them." Participant 5 "By accepting some minor issues I realized that this is a period. I realized that any event that happened could happen to everyone at a certain time, not just to me." Participant 7
Authenticity	"If it hurts me when I have a problem with someone, I immediately tell the other person..." Participant 5 "...Now I am not afraid of expressing myself even if their attitudes and thoughts would be bad." Participant 4 "You express your feelings more easily. You don't get too caught up in what people think of you anymore. You accept them and go on your way without compromising yourself." Participant 6 "I am glad I attended the psychoeducation because I started getting to know myself. I'm no longer molding myself." Participant 2
Anxiety	"I mentioned that I had trouble focusing on my work. In fact, I realized that those thoughts in my mind were not mine, I was in control. I can stop those thoughts while doing my chores. I was in a little bit of an avoidance state I do not allow my thoughts to affect me at that moment. Of course, I can achieve this by staying in the moment." Participant 4 "My ideas are still not clear, but at least I decided not to give up my department until I got an internship. Everything may not go great in life, it used to frighten me a lot, but now I am not afraid of it" Participant 1 "And I said 'yes, I don't have to be perfect. I can make mistakes in new things I do.' I guess I can accept that now. For example, I was going to make a presentation in the lesson the other day, but it was such excitement and stress that I cannot explain ... Then I said 'Okay, shame, don't I do this homework here today to learn this? Isn't this homework for this?' the thought made me comfortable" Participant 8

er people with the motivation of getting to know them instead of criticizing. They also stated that they started to have a balanced image of themselves with realizing that they used to magnify their problematic aspects in their minds. In the theme of acceptance, the participants expressed that they accept their feelings and thoughts and therefore themselves as they are. Besides, they acknowledged accepting people in their lives, inevitable difficulties in life, difficult feelings, and situations while heading towards the goals they want to achieve. The theme of non-avoidance shows that rather than avoiding expressing oneself and tending to avoid actions due to uncertainty and indecision, the participants started heading towards the actions they see right and appropriate. In the theme of conflict and crisis management, the participants stated that they started to manage conflicts and crises more healthily and easily. In the theme of authenticity, the participants reported being able to be more like themselves, reflecting this in their reactions, and acting by listening to their feelings. Finally, the theme of anxiety shows that the participants reported improvement in their complaints like social anxiety, perfectionist anxiety, and future anxiety.

Discussion

This study aimed to develop, implement, and test the effectiveness of an 8-session ACT-based group psychoeducation for fostering psychological flexibility. In the quantitative phase, the pre-test post-test control group experimental design was used, while in the qualitative phase, a thematic analysis was conducted. In the first measurement made before the psychoeducation, no difference was found between the experimental and control groups. After the psychoeducation, the analyzes conducted to examine the change within the groups showed a positive significant change in the psychological flexibility levels of the experimental group and no change in the control group. Finally, the difference between groups after psychoeducation was examined and no significant difference was found. These findings showed that psychoeducation increased psychological flexibility levels in the experimental group, but the change was not at a level to differ from the control group.

In the convergent mixed model, examining the qualitative findings of the research together with the quantitative findings makes it possible to obtain a more comprehensive understanding (Creswell, 2002). Quantitative findings showed the change in the psychological flexibility levels of the participants. Qualitative findings, on the other hand, help us to understand the problems experienced by the participants before the psychoeducation and what they experienced during and after this process with the increase in their psychological flexibility levels.

Participants stated that they had problems in self-control, conflict and crisis management, thoughts and emotions, avoidance, and anxiety before the psychoeducation program and were hoping to change in these areas. When asked about the changes

and awareness they experienced during and after the psychoeducation program, 10 themes were obtained. These themes are being present, self-control, value-based actions, defusion and coping with feelings and thoughts, knowledge of self and others, acceptance, non-avoidance, conflict and crisis management, authenticity, and anxiety. Being present, value-based actions, defusion, acceptance and non-avoidance are ACT's therapeutic processes that enable psychological flexibility. In ACT-based interventions, changes are primarily experienced in these areas (Arch, et al., 2012; Arch & Craske, 2008; Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Niles, et al., 2014). In addition to these, the areas in which the participants expressed experiencing change are self-control, knowing self and others, conflict and crisis management, authenticity, and anxiety.

In the theme of self-control, participants reported a decrease in the problems they experienced, especially regarding anger management, after the psychoeducation program. This finding is in parallel with studies on self-control. It has been reported that ACT-based interventions are effective in anger management (Donahue, Santanello, Marsiglio, & Van Male, 2017), result in decreased impulsivity and increased self-control in at-risk youth (Soriano, Salas, Martinez, Ruiz, & Blarrina, 2009).

Another issue the participants stated as a pre-psychoeducation problem is conflict and crisis management. In this context, they reported situations such as avoiding self-expression, bottling things up, going against others, not being able to get out of the mood caused by the troubles experienced, and not being able to act calmly. After the psychoeducation, the participants reported experiences such as expressing themselves more comfortably, not merging with feelings and thoughts, and getting out of the mood of the conflict quicker, awareness and acceptance that life contains difficulties, and coping with problems and crises more easily. Prior studies show that developing and expressing emotions flexibly instead of suppression and avoidance after stimuli that trigger emotions makes it possible to adapt better and has a negative relationship with psychopathology (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Aldao, Sheppes, & Gross, 2015; Westphal, Seivert, & Bonanno, 2010). Also, it is known that acceptance-based interventions increase positive affect and reduce sadness in young people, increase the level of coping with stress factors and well-being even in serious situations such as chronic diseases (Carlson, 2012; Ciarrochi et al., 2011; Speca, Carlson, Goodey & Angen, 2000).

Another important finding is that after the psychoeducation, participants stated starting to know themselves better and also having the awareness and acceptance of their feelings and thoughts. In addition, they stated that approaching other people with acceptance triggers the motivation to understand instead of criticizing. Previous studies have noted the importance of self-acceptance. It is an important factor in mental health, and its lack may lead to emotional difficulties such as depression and

anger management problems. Besides, one of the easiest and most effective methods that make self-acceptance possible is mindfulness (Carlson & Langer, 2006; Langer, 1989). Throughout the process, the participants have developed an awareness of getting to know themselves, recognizing and accepting their feelings and thoughts, and focusing on their values, and heading towards value-based actions. This awareness is thought to enable them to act authentically and to behave and react in a way that they consider right instead of meeting expectations.

One other problem area participants complained about before the psychoeducation program included experiences such as social anxiety, general anxiety, future anxiety, and perfectionist anxiety. The findings revealed that after the psychoeducation program, they experienced a decrease in their problems in this area by operating the mechanisms of acceptance, non-avoidance, healthy conflict and crisis management, staying in the moment, self-knowledge, and being authentic. Several previous reports have also shown that ACT-based interventions are effective in dealing with anxiety (A-Tjak et al., 2015; Arch, Wolitzky-Taylor, Eifert & Craske, 2012; Khorammia et al., 2020; Swain, Hancock, Hainsworth & Bowmanb, 2013).

The scope of this study was limited in terms of gender. The study group did not include male students, since all who demanded participation were female students. It is also unfortunate that the study did not include a follow up measurement. During the psychoeducation, mindfulness meditations outside the sessions were encouraged but not obliged. In future studies, promoting these experiential exercises more effectively are expected to yield an increasing effect on psychological flexibility.

Taken together, these results suggest that the psychoeducation program has increased psychological flexibility levels of the participants. They stated that they experienced improvements in the basic elements of psychological flexibility such as staying in the moment, value-based actions, acceptance, non-avoidance, distancing from feelings and thoughts, and coping with them, as well as self-control, knowing oneself and others, conflict and crisis management, authenticity, and anxiety. Considering the scarcity of studies in the field that examine ACT-based interventions with a mixed method, it is hoped that this study, in which the experiences of the participants are examined in-depth, will make an important contribution to the field.

References

A-tjak, J. G., Davis, M. L., Morina, N., Powers, M. B., Smits, J. A., & Emmelkamp, P. M. (2015). A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems. *Psychotherapy and psychosomatics*, *84*(1), 30-36.

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotionregulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*, 217–237. https://doi.org/10.1016/j.cpr.2009.11.004.

Aldao, A., Sheppes, G., & Gross, J. J. (2015). Emotion regulation flexibility. *Cognitive Therapy and Research, 39*(3), 263–278. https://doi.org/10.1007/s10608-014-9662-4.

Arch, J. J., Eifert, G. H., Davies, C., Vilardaga, J. C. P., Rose, R. D., & Craske, M. G. (2012). Randomized clinical trial of cognitive behavioral therapy (CBT) versus acceptance and commitment therapy (ACT) for mixed anxiety disorders. *Journal of consulting and clinical psychology*, *80*(5), 750.

Arch, J. J., & Craske, M. G. (2008). Acceptance and commitment therapy and cognitive behavioral therapy for anxiety disorders: Different treatments, similar mechanisms?. *Clinical psychology: Science and practice*, *15*(4), 263-279.

Arch, J. J., Wolitzky-Taylor, K. B., Eifert, G. H., & Craske, M. G. (2012). Longitudinal treatment mediation of traditional cognitive behavioral therapy and acceptance and commitment therapy for anxiety disorders. *Behaviour research and therapy*, *50*(7-8), 469-478.

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., ... & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire–II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior therapy*, *42*(4), 676-688.

Brandon, S., Pallotti, C., & Jog, M. (2020). Exploratory Study of Common Changes in Client Behaviors Following Routine Psychotherapy: Does Psychological Flexibility Typically Change and Predict Outcomes?. *Journal of Contemporary Psychotherapy*, 1-8.

Buchanan, CM, Eccles, JS, & Becker, JB (1992). Are adolescents the victims of raging hormones: Evidence for activational effects of hormones on moods and behavior at adolescence. *Psychological Bulletin*, *111*(1), 62-107.

Carlson, L. E. (2012). Mindfulness-based interventions for physical conditions: a narrative review evaluating levels of evidence. *International Scholarly Research Notices*, *2012*.

Carson, S.H., & Langer, E.J., (2006). Mindfulness and self-acceptance. *Journal of Rational-Emotive and Cognitive-Behavior Ther*apy, *24,* 29–43. https://doi-org.libproxy.unm.edu/10.1007/s10942-006-0022-5

Chandler, M. (1994). *Self-continuity in suicidal and nonsuicidal adolescents.* In G. G. Noam & S. Borst (Eds.), *New directions for child development, No. 64. Children, youth, and suicide: Developmental perspectives* (p. 55–70). Jossey-Bass.

Ciarrochi, J., Kashdan, T. B., Leeson, P., Heaven, P., & Jordan, C. (2011). On being aware and accepting: A one-year longitudinal study into adolescent well-being. *Journal of Adolescence*, *34*(4), 695-703.

Cosio, D. (2019). A group-based, acceptance & commitment therapy intervention for chronic pain. Social Work with Groups: *A Journal of Community and Clinical Practice.* https://doi-org.libproxy.unm.edu/10.1080/01609513.2019.1604290

Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative* (pp. 146-166). Upper Saddle River, NJ: Prentice Hall.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage

Dindo, L., Zimmerman, M. B., Hadlandsmyth, K., StMarie, B., Embree, J., Marchman, J., ... & Rakel, B. (2018). Acceptance and commitment therapy for prevention of chronic postsurgical pain and opioid use in at-risk veterans: a pilot randomized controlled study. *The Journal of Pain*, *19*(10), 1211-1221.

Donahue, J. J., Santanello, A., Marsiglio, M. C., & Van Male, L. M. (2017). Acceptance and commitment therapy for anger dysregulation with military veterans: A pilot study. *Journal of Contemporary Psychotherapy*, *47*(4), 233-241.

Ducasse, D., Jaussent, I., Arpon-Brand, V., Vienot, M., Laglaoui, C., Béziat, S., ... & Olié, E. (2018). Acceptance and commitment therapy for the management of suicidal patients: a randomized controlled trial. *Psychotherapy and Psychosomatics*, *87*(4), 211-222.

Ernst, M. M., & Mellon, M. W. (2016). Acceptance and commitment therapy (ACT) to foster resilience in pediatric chronic illness. In *Child and Adolescent Resilience Within Medical Contexts* (pp. 193-207). Springer, Cham.

Halliburton, A. E., & Cooper, L. D. (2015). Applications and adaptations of Acceptance and Commitment Therapy (ACT) for adolescents. *Journal of Contextual Behavioral Science*, *4*(1), 1-11.

Harris, R. (2017). *ACT'i kolay* öğrenmek. Litera.

Hayes, S. C. (Ed.). 1989. *Rule-governed behavior: Cognition, contingencies, and instructional control*. New York: Plenum.

Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior therapy*, *35*(4), 639-665.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition*. Springer Science & Business Media.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour research and therapy*, *44*(1), 1-25.

Hayes, S. C., & Smith, S. (2005). *Get out of your mind and into your life: The new acceptance and commitment therapy*. New Harbinger Publications.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and Commitment Therapy: An experiential approach to behavior change.* New York: Guilford Press.

Hayes, S. C., Villatte, M., Levin, M., & Hildebrandt, M. (2011). Open, aware, and active: Contextual approaches as an emerging trend in the behavioral and cognitive therapies. *Annual review of clinical psychology*, *7*.

Hayes, S. C., & Wilson, K. G. (1994). Acceptance and commitment therapy: Altering the verbal support for experiential avoidance. *The Behavior Analyst*, *17*(2), 289-303.

Kabat-Zinn, J. (2005). *Coming to our senses.* New York: Hyperion

Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour research and therapy*, *44*(9), 1301-1320.

Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical psychology review*, *30*(7), 865-878.

Khorammia S, Bavafa A, Jaberghaderi N, Parvizifard A, Foroughi A, Ahmadi M, et al. (2020). The effectiveness of acceptance and commitment therapy for social anxiety disorder: a randomized clinical trial. *Trends in Psychiatry and Psychotherapy*, *42*(1):30-38. http://dx.doi.org/10.1590/2237-6089-2019-0003

Langer, E. (1989). *Mindfulness*. Reading, MA: Addison-Wesley.

Masuda, A., Hayes, S. C., Fletcher, L. B., Seignourel, P. J., Bunting, K., Herbst, S. A., ... & Lillis, J. (2007). Impact of acceptance and commitment therapy versus education on stigma toward people with psychological disorders. *Behaviour research and therapy*, *45*(11), 2764-2772.

Niles, A. N., Burklund, L. J., Arch, J. J., Lieberman, M. D., Saxbe, D., & Craske, M. G. (2014). Cognitive mediators of treatment for social anxiety disorder: Comparing acceptance and commitment therapy and cognitive-behavioral therapy. *Behavior therapy*, *45*(5), 664-677.

Patterson, P., & McDonald, F. E. (2015). "Being Mindful" Does it Help Adolescents and Young Adults Who Have Completed Cancer Treatment?. *Journal of Pediatric Oncology Nursing*, *32*(4), 189-194.

Pielech, M., Vowles, K. E., & Wicksell, R. (2017). Acceptance and commitment therapy for pediatric chronic pain: Theory and application. *Children*, *4*(2), 10.

Rosenblum, G. D., & Lewis, M. (2003). *Emotional development in adolescence.* In G. R. Adams & M. D. Berzonsky (Eds.), *Blackwell handbooks of developmental psychology. Blackwell handbook of adolescence* (p. 269–289). Blackwell Publishing.

Ruiz, F. J. (2010). A review of Acceptance and Commitment Therapy (ACT) empirical evidence: Correlational, experimental psychopathology, component and outcome studies. *International Journal of Psychology and Psychological Therapy*, *10*(1).

Siegel, R. D., Germer, C. K., & Olendzki, A. (2009). Mindfulness: What is it? Where did it come from?. In *Clinical handbook of mindfulness* (pp. 17-35). New York: Springer

Soriano, M. C. L., Salas, S. V., Martínez, O. G., Jiménez, F. J. R., & Blarrina, M. B. P. (2009). Brief acceptance-based protocols applied to the work with adolescents. *International Journal of Psychology and Psychological Therapy*, *9*(2), 237-257.

Speca, M., Carlson, L. E., Goodey, E., & Angen, M. (2000). A randomized, wait-list controlled clinical trial: the effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients. *Psychosomatic medicine*, *62*(5), 613-622.

Strosahl, K., Robinson, P. ve Gustavsson, T. (2017). *Radikal değişimler için kısa müdahaleler.* Litera.

Swain, J., Hancock, K., Hainsworth, C., & Bowmanb, J. (2013). Acceptance and commitment therapy in the treatment of anxiety: a systematic review. Clinical Psychology Review, 33, 965–978.

Tabachnick, B. G., & Fidell, L. S. (2007). Using multivariate statistics (Fifth ed.). Boston

Teasdale, J. D., & Chaskalson, M. (2011). How does mindfulness transform suffering? I: the nature and origins of dukkha. *Contemporary Buddhism*, *12*(01), 89-102.

Westphal, M., Seivert, N. H., & Bonanno, G. A. (2010). Expressive flexibility. *Emotion*, *10*(1), 92.

Wolf, C., & Serpa, J. G. (2015). *A Clinician's Guide to Teaching Mindfulness: The Comprehensive Session-by-Session Program for Mental Health Professionals and Health Care Providers.* New Harbinger Publications.

Yavuz, F., Ulusoy, S., Iskin, M., Esen, F. B., Burhan, H. S., Karadere, M. E., & Yavuz, N. (2016). Turkish version of Acceptance and Action Questionnaire-II (AAQ-II): A reliability and validity analysis in clinical and non-clinical samples. *Klinik Psikofarmakoloji Bülteni-Bulletin of Clinical Psychopharmacology*, *26*(4), 397-408.