Research

Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry 2022; 14(Suppl 1):293-307

DOI: 10.18863/pgy.1188941

Adaptation of Adolescent Behavioral Activation Program and Investigation of Its Effectiveness by Mixed Method

Ergen Davranışsal Aktivasyon Programının Uyarlanması ve Etkililiğinin Karma Yöntem ile İncelenmesi

Yavuz Koşan[1], İsmail Seçer[2]

[1]Muş Alparslan University, Muş, Turkey
[2]Atatürk University, Erzurum, Turkey

ABSTRACT

In this study, the Adolescent Behavioral Activation Program (A-BAP) based on behavioral activation (BA) therapy to reduce depressive symptoms in adolescents was adapted to Turkish culture, and its effectiveness was tested with intervention design, one of the mixed method designs. In this direction, experimental and control groups were formed with 20 students studying in three different high schools in Turkey and with highly elevated depressive symptoms. The study group was determined by nested sampling from mixed-method sampling strategies. The starting point of this study is the absence of any BA-based practice to reduce adolescent depression in Turkey. In this direction, experimental and control groups were formed with 20 students studying in three different high schools in Turkey and with highly elevated depressive symptoms. The adapted A-BAP was applied individually to the students in the experimental group for 12 weeks. Three sessions were also held with the parents of the students in the experimental group. In the quantitative phase of the study, pre-test and post-test control groups paired patterns from semi-experimental designs, and a case study was used in the qualitative stage. The qualitative data of the study were collected from adolescents and their parents through semi-structured interviews and session evaluation forms. It was determined that the adapted BA-based A-BAP was an effective intervention in reducing depressive symptoms in the Turkish adolescent sample and provided a significant decrease in the depression scores of the participants in the experimental group . The qualitative findings show that adolescents perceive the A-BAP process as a factor contributing to making them feel better. Adolescents have reported that A-BAP is effective in reducing avoidance behavior, achieving anger control, and increasing self-esteem and social interaction. Parents consider A-BAP as a developer, educator, and practice that reduces depressive symptoms in their children. In addition, it was determined that the qualitative findings obtained supported the quantitative results. Since the study is the first application of BA therapy in Turkey, it is thought that it will contribute to new studies in Turkey and intercultural studies at the international level.

Keywords: Behavioral activation, adolescent depression, parent involvement, depressive symptoms, adolescent behavioral activation program, behavioral activation therapy

ÖZ

Bu çalışmada ergenlerde depresif belirtileri azaltmaya yönelik, davranışsal aktivasyon (DA) terapisi temelli Ergen Davranışsal Aktivasyon Programı (E-DAP) Türk kültürüne uyarlanmış ve karma yöntem desenlerinden müdahale deseni ile etkililiği test edilmiştir. Türkiye'de ergen depresyonunu azaltmaya yönelik DA temelli herhangi bir uygulamanın olmaması bu çalışmanın çıkış noktasıdır. Çalışma grubu, karma yöntem örnekleme stratejilerinden iç içe örnekleme yöntemiyle belirlenmiştir. Bu doğrultuda Türkiye'de farklı üç lisede öğrenim gören ve depresif belirtileri yüksek olan 20 öğrenci ile deney ve kontrol grupları oluşturulmuştur. Uyarlanan E-DAP, deney grubundaki öğrencilere, 12 hafta boyunca bireysel olarak uygulanmıştır. Deney grubundaki öğrencilerin ebeveynleriyle de üç oturum gerçekleştirilmiştir. Çalışmanın nicel aşamasında yarı deneysel desenlerden ön test son test kontrol gruplu eşleştirilmiş desen, nitel aşamasında ise durum çalışması kullanılmıştır. Çalışmanın nitel verileri, ergenler ve ebeveynlerinden yarı yapılandırılmış görüşme ve oturum değerlendirme formlarıyla toplanmıştır. Uyarlanan DA temelli E-DAP Türk ergen örnekleminde depresif belirtileri azaltmada etkili bir uygulama olduğu ve deney grubundaki katılımcıların depresyon puanları üzerinde anlamlı düzeyde bir düşüş sağladığı belirlenmiştir. Elde edilen nitel bulgular ergenlerin, E-DAP sürecini kendilerini daha iyi hissetmelerine katkı sunan bir faktör olarak algıladıklarını göstermektedir. Ergenler, E-DAP'ın kaçınma davranışını azaltmada, öfke kontrolünü sağlamada, benlik saygısı ve sosyal etkileşimi arttırmada etkili olduğuna dair ifadelerde bulunmuşlardır. Ebeveynler ise E-DAP'ı geliştirici, eğitici ve çocuklarındaki depresif belirtilerin azaltan bir uygulama olarak değerlendirmişlerdir. Ayrıca, elde edilen nitel bulguların nicel bulguları desteklediği belirlenmiştir. Çalışmanın DA terapisinin Türkiye'deki ilk uygulaması olması bakımından, Türkiye'deki yeni çalışmalara ve uluslararası düzeyde kültürlerarası çalışmalara katkı sunacağı düşünülmektedir.

Anahtar sözcükler: Davranışsal aktivasyon, ergen depresyonu, ebeveyn katılımı, depresif belirtiler, ergen davranışsal aktivasyon programı, davranışsal aktivasyon terapisi

Address for Correspondence: Yavuz Koşan, Muş Alparslan University, Faculty of Arts and Sciences, Department of Psychology, Muş, Turkey
E-mail: y.kosan@alparslan.edu.tr **Received:** 13.10.2022 **Accepted:** 24.11.2022
ORCID ID: 0000-0003-4118-4777

Introduction

According to the World Health Organization (WHO), depression, which affects approximately 280 million people every year and has increased by 18% in the last 15 years, ranks the first among mental health problems (World Health Organization [WHO] 2021). Depression has been reported as the most critical mental health problem resulting in disability worldwide, and is reported to increase in prevalence in the coming years (Tacchi ve Scott 2017) and replace death and disability from infectious diseases (Murray ve Lopez 1996, WHO 2021).With various outcomes such as somatic symptoms, hopelessness, malaise, lethargy, and social withdrawal (Schacter ve Romano, 2016), adolescents are the most affected group by depression (Kessler et al. 2005, Eskin et al. 2008, Paul ve Usha 2008, Dwekat et al. 2023). Global data show that depression is the most common mental health problem among adolescents (Copeland et al. 2009, WHO 2022). Physiological, psycho-social, and cognitive changes during adolescence period leave adolescents vulnerable to depression (Copeland et al. 2009, Guarin 2016, Shorey et al. 2022). As a result of this change, approximately 34% of adolescents experience depressive symptoms (Shorey et al. 2022).

Adolescent depression is usually considered a temporary condition specific to this period. It is often unidentified and untreatable (WHO 2022). Unidentified and untreated adolescent depression is among the most critical causes of adult panic disorder (Kim-Cohen et al. 2003, Burke et al. 2005, Copeland et al. 2009), generalized anxiety disorder (Copeland et al. 2009), and major depressive disorders (Pine et al. 1999). Depression leaves adolescents vulnerable to social exclusion, discrimination, stigma, educational difficulties, physical health problems, and risky behaviors (WHO 2022).The most devastating consequence of adolescent depression (Seth et al. 2013),which is closely related to substance abuse, is that it increases the risk of suicide (Copeland et al. 2009, Thapar et al. 2012, WHO 2022). These listed effects and outcomes of adolescent depression affect adolescents in low - and middle -income countries the most (Copeland et al. 2009, Thapar et al. 2012). These listed effects and outcomes suggest that adolescents are vulnerable to depression, and adolescent depression begins at an early age and leads to negative consequences in adulthood. Therefore, early interventions for adolescents at high risk of depression are essential (Shorey et al. 2022).

Recent studies show that adolescents leave without completing Cognitive Behavioral Therapy (CBT) sessions, which is the most common intervention for depression (Goodyer et al. 2017). This disadvantageous situation led to the development of alternative models to CBT, and Jacobson et al. (1996) determined that CBT could be divided into three main components. These three main components are; 1) Behavioral activation, 2) Cognitive restructuring involving behavioral activation and restructuring of automatic thoughts 3) It is a complete Cognitive Therapy (CT) intervention that includes behavioral activation, cognitive restructuring, and essential belief modification. The results have shown that if the behavioral component containing only activation is used, results that are at least as effective as the cognitive component are achieved (Weisz et al. 2006). The most current therapy model that uses these behavioral components is Behavioral Activation (BA) therapy. BA's roots go back to the early work of Skinner (2005). Skinner's Radical Behaviorist Approach has led scientists and clinicians to focus on how people are sensitive to and respond to their environment (Kanter et al. 2010). Ferster (1974) thought that "individuals with depressive symptoms have a decrease in pleasurable life activities and some activities that adversely affect mood has increased, and as a result, individuals enjoy the activities they have done less" which played an essential role in the development of BA. Lewinsohn (1974) conceptualized BA with a model revealing that individuals with depressive symptoms lack positive reinforcement resources and that a lack of positive reinforcement causes depression. Later, Lewinsohn (1974) was the first researcher to use BA in the intervention of depressive symptoms and to incorporate activity planning in the behavioral model.

The fact that BA, which theoretically focuses on increasing positive support resources, is an independent intervention for depression is based on the work of Beck et al. (1979). Beck et al. (1979) incorporated activity-planning strategies into the cognitive intervention of depression. After these years, behavioral elements began to be involved in cognitive intervention (Jacobson et al. 2001, Kanter et al. 2010). In the early 1970s, leading behaviorists such as Ferster (1974) and Lewinsohn (1974) developed the model of behavioral depression by following Skinner's footsteps. These pioneers of Behavioral Theory claimed that people were sensitive to receiving support and that depression arose when fixed sources of support were lost (Kanter et al. 2009). In line with this model of behavioral depression, the active components of CBT were tested against each other, and all components were found to be equally effective (Zeiss et al. 1979, Jacobson et al. 1996, Kanter et al. 2009). After it was revealed that BA could be used alone to treat depression (Jacobson et al. 1996, Lejuez et al. 2001) and that BA is better than cognitive intervention in preventing relapse as a result of biennial follow-up reports (Jacobson et al. 1996)interest in BA began to grow. Jacobson et al. (1996) claimed that these results could prove that cognitive theory and interventions are unnecessary. Lewinsohn et al. (1976) interpreted this result as the need to combine interventions. In later years, Jacobson et al. (1996) argued that if all of the interventions are equally effective, the most straightforward and accessible set of interventions should be promoted. They also suggested that additional components that did not provide experimental improvement in the depression intervention redundant complicate the intervention (Jacobson et al. 1996, Kanter et al. 2010, Turner and Leach 2012). The application of BA alone in the treatment of depression has been accepted over the years, and BA has become an independent therapy model. With this transformation, two BA models have developed: Short Behavioral Activation for Depression (Lejuez et al. 2001) and Behavioral Activation (Martell et al. 2001)

BA focuses on the causes and maintenance of depressive feelings, the triggers of depressive behavior, and ineffective coping

strategies (Martell et al. 2010). From a similar perspective to traditional behavioral therapy, BA has been conceptualized as a strategy for coping with depressive behaviors with low levels of positive reinforcement or avoidance of environmental conditions that are cited as a deterrent factor (Jacobson et al. 2001). In therapy, the individual's relationship with the positive reinforcement sources around the individual has been defined as activation, and the withdrawal from the positive reinforcement sources has been defined as avoidance (Lewinsohn 1974, Sturmey 2009, Mazzucchelli et al. 2010). In BA therapy, it is emphasized that depressed individuals move away from pleasurable activities; therefore, individuals' activation levels decrease while avoidance behaviors increase (Ferster 1974). The decrease in the activation level of the individual shows that the positive sources of reinforcement are also moved away (Lewinsohn 1974, Martell et al. 2022). Thus, individuals' sensitivity to receiving rewards decreases, resulting in various symptoms and behaviors classified as depression (Kanter et al. 2009b, Martell et al. 2010). Therefore, behavioral avoidance is at the center of the intervention in BA therapy. The most important goal of the cooperation established between the client and the therapist is to develop an awareness of the avoidance cycle (Hopko et al. 2003b). As a result of increased client awareness, clients are taught to act with a philosophy based on coping with avoidance. With functional analysis, it is ensured that the clients make conscious choices and engage in behaviors that will improve mental health and integrate them into their lives never giving up and taking action, even if it is difficult to do (Martell et al. 2001, McCauley et al. 2016). As a result of increased awareness and activation, depressive symptoms are expected to decrease (Hopko et al. 2003b).

In many studies, BA processes have been discussed, and how long they will last and the general structure of the sessions have been revealed (McCauley et al. 2016). Although the duration of intervention in BA therapy varies, it is generally planned as 11-24 sessions (Hopko et al. 2003b). Interventions for adolescents generally vary between 8 to 14 sessions (McCauley et al. 2016). Interventions for adolescent depression are mainly carried out in the axis of (Pass et al. 2018b) Cognitive Behavioral Therapy (CBT) (Ros and Brannigan. 2008), Interpersonal Relationship Therapy (Santor and Kusumakar 2001), Family Therapy (Waraan 2008), and Psychodynamic Therapy (Jones et al. 2020). Implementing these therapy models requires appropriately trained mental health professionals, but a limited number of therapists have received such training and have the necessary qualifications (Pass et al. 2018a). This is both an obstacle to access to treatment and insufficient to meet the needs of adolescents (Pass et al. 2018a). Although there are opinions about increasing the number of qualified consultants (Layard and Clark 2014), high education costs and employment issues are seen as a limitation (Pass et al. 2018a). In particular, 75% of individuals in low- and middle-income countries who deal with mental problems such as depression do not receive any treatments. An important reason of this is the insufficient number of mental health professionals (WHO 2022b). In the intervention of adolescent depression, it is crucial to increase the availability and access to the intervention. The way to increase this is to develop an intervention method that can be easily applied by a large group of mental health professionals. Since this large group cannot be only expert psychological counselors, the intervention to be developed should be simpler and easier to train and reach (Pass et al. 2018b). The essential therapy model that eliminates the disadvantages listed above is BA therapy (Orchard et al. 2017, Pass et al. 2018a).

One of the essential advantages of BA therapy is the lack of complex skills that counselors can acquire and the ease of application (Lejuez et al. 2001, Martell et al. 2022). The fact that BA, an evidence-based intervention method in depression intervention, can be applied in a short time and does not require lengthy training distinguishes BA from other therapy models. In addition, the fact that it is highly structured becomes an advantage for practitioners. BA can eliminate disadvantages such as depression being quite common among adolescents, the lack of specialists to implement intervention methods, and the length and cost of therapy training (Pass et al. 2018a). The previously listed advantages of BA are thought to be great hope in intervening in depression, which is an essential burden on public health (Manos et al. 2011). In this context, BA offers mental health professionals a model that they can apply quite quickly by minimizing the duration and costs of training and eliminating some of the limitations of other models in accessing the treatment (Lejuez et al. 2001, Martel et al. 2022). Furthermore, the fact that BA can also be executed with internet-based applications increases the likelihood of it evolving into a more widespread model (Nyström et al. 2017, Huguet et al. 2018).

The prevalence of adolescent depression and almost one in five young people experiencing these problems (Soni 2009), reveal the necessity of intervention programs. It is noticeable that the studies carried out in Turkey on adolescent depression are generally based on group psychological counseling (Demir 2014, Kartol 2018) and relational screening (Alpaslan 2009, Hamîdî 2012). In the studies conducted on adolescent depression in Turkey, it is also noticeable that there are no individual and parent-participation programs. The fact that BA therapy, which is increasingly used, has no implementation and adaptation in Turkey shows that there is a gap in BA therapy with proven effectiveness. In this direction, the primary purpose of the research is to test the effect of A-BAP, which is an intervention program to reduce depressive symptoms of adolescents with depressive symptoms, by adapting it to Turkish culture, in this way to prevent depression in adolescents; to bring BA to the attention of the field personnel, scientists and to contribute to scientific accumulation. As a result of the adaptation of A-BAP, it is evaluated that a highly usable intervention implementation aimed at reducing the effects of depression in adolescents can be offered for the use of field personnel. The research is based on the following question and hypothesis for this primary purpose.

Method

This study used a paired pattern from semi-experimental designs with a pre-test and post-test control group to test the effects of

A-BAP on adolescent depressive symptoms. In accordance with the decision of the Atatürk University Institute of Educational Sciences, Ethics Committee dated 25.11.2019 and numbered 1900336114, the data collection procedures were initiated. An informed consent form was obtained from all participants.

Research Design

Since the current study aims to test the effects of A-BAP and to reveal the participants' experiences throughout the process, the intervention design, one of the mixed method designs, was used. The intervention design allows the problem to be studied by adding qualitative data to the research process while the experimental process is being carried out. When the researcher collects qualitative data during the intervention phase, researcher use the descriptive, sequential design to collect qualitative data after the intervention (Creswell 2021). Accordingly, in the present study, the combination and explanatory design were used together since the qualitative data were collected both at the quantitative stage and after the quantitative stage. In the quantitative phase of the study, the adapted A-BAP was tested on the experimental group, and the matched design (Büyüköztürk et al. 2022), one of the quasi-experimental designs, was used to determine whether the application affected the results.

In the qualitative stage, a case study (Saldaña 2011) was used to reveal a new and in-depth understanding of the 12-week A-BAP process and its aftermath (Lapan et al. 2012), to consider the factors related to the situation (environment, individuals, events, processes, etc.) from a holistic perspective, to determine how the participants affected the experimental process and how they were affected by the process (Yıldırım and Şimşek 2016). In this direction, at the end of each session in the experimental process, qualitative data were collected from adolescents with session evaluation forms. After the experimental process, semi-structured interviews obtained opinions on the A-BAP process from adolescents and their parents. The reason for choosing the mixed method in the research; is to obtain the solid and reliable results offered by quantitative data and to reveal rich and valid process data of qualitative research that examine the participants' perspectives in detail (Steckler et al. 1992). Combining these two methods with a pragmatic understanding allows us to understand the experiences of a small number of participants. On a larger scale, it provides numerical support to see the level of participant experiences (Shapiro et al. 2003). When quantitative and qualitative methods are used together, they complement each other's shortcomings, and the strengths of these two methods allow for a more robust inference (Creswell and Creswell 2017). In order to put this holistic perspective forward, Ivankova et al. (2016) propose that if the research involves two or more stages, these stages should be shown in a diagram. Accordingly, the diagram of the research is given in Figure 1.

Sample

There is no consensus on sampling strategies in mixed-method research. However, it is recommended to resort to various sampling strategies as concurrent, sequential, nested, identical, and multistage (Teddlie and Yu 2019, Creamer 2020). In the current research, the study participants were determined using the nested sampling method (Teddlie and Yu 2019). In this direction, firstly, high schools were divided into two strata as, Anatolian High Schools and Vocational High Schools, through stratified sampling (Büyüköztürk et al. 2022), one of the probability sampling methods. Then, three schools from these two strata were determined by simple random sampling (Mertens 2019). In this direction, research forms were applied to 705 students, and 157 (89 Female, 69 Male) students with high depression levels were determined. Then, by the criterion sampling, inclusion criteria (such as being disturbed by depressive symptoms and being willing to cope, not being diagnosed with any psychological disorder before, and being able to participate actively and continuously) and exclusion criteria (having a mental problem accompanying depressive symptoms, having a severe health problem that will affect the process, having received psychological support recently or still, receiving pharmacological support) 26 students were included in the pre-interview by using the information. In the final stage, experimental and control groups were formed with 20 students. Because A-BAP is a parent-attended intervention program, the necessary permissions were obtained from the parents of 10 participants in the experimental group. Afterwards, three sessions of counseling sessions were held with the parents at the beginning, middle, and end of the intervention. Demographic data for the experimental and control group are given in Table 1.

Validity and Reliability

To increase internal validity of the study, first, participant history was considered. To reduce this internal threat, the participants were previously determined in line with the criteria of "having received a psychological diagnosis and support" and "not having any biological and psychological disorders in their immediate environment and themselves". In the study, it was thought that since 12th grade students were preparing for the university entrance exams, their anxiety and depression levels might vary depending on the exam, so 12th grade students were not included in the study. To reduce the threat of maturation, participants in the same age group were assigned to the groups by matching their pre-test scores. Since the sessions covered a period of 12 weeks, it was assumed that the maturation effect would be limited. To reduce the testing effect, the data were shown to provide covariance conditions, and covariance analysis was used in the analyses. Individuals with extreme values were excluded from the scope of the research to reduce the statistical threat of regression. To ensure construct validity, the theoretical and practical framework of the notion to be intervened (depression symptoms) has been established in the A-BAP intervention program. To ensure external validity, the independent variable of A-BAP intervention was defined in detail in the research. To reduce the experimental impact from external validity threats, the research results were limited to generalization only to the participants participating in the experiment.

In order to ensure consistency in the qualitative phase, no changes were made to the A-BAP intervention program during the research process, and the whole process was recorded with voice recorders (Creswell 2016).Data and researcher triangulation were used to increase credibility (Denzin 2017, Mertens 2019). In line with the researcher triangulation, codifying consistency regarding codes and themes was tried to be ensured with five experts in the field of guidance and psychological counseling. Accordingly, Miles and Huberman's (1994) formula *"Reliability = Consensus / Consensus + Difference of Opinion"* was used. The value obtained from this formula above 0.70 has been determined as an acceptable level in terms of reliability. In this direction, this value was found as 26/30 = 0.81 for the themes and 23/28 = 0.82 for the codes. Another way to increase credibility is to express progressive subjectivity. In this context, all documents and data related to the entire process of the research were archived in an accessible way (Guba and Lincoln 1989). Within the scope of the research, a detailed intensive description was used to convey the findings. In this direction, while the research was conducted, detailed, intense description was used by giving detailed information while explaining a situation or writing about the theme. Participants were presented with a detailed explanation while defining the environment studied, the operations performed, the activities carried out, the measurement tools used, the data collection process, the analysis of the data, and the themes (Creswell 2016).

Measures

Revised Child Anxiety and Depression Scale-Child Version

The clinical sampling adaptation study of the scale, which was developed by Chorpita et al. (2005) and clinically adapted to Turkish by Gormez et al. (2017), non-clinical sampling adaptation study was carried out by Seçer and Ulaş (in writing). As a result of the validity and reliability studies conducted on the non-clinical sample, it was determined that the scale is a scale that can be used in the studies to be carried out on this sample group. The scale is in the type of 4-point Likert based on self-notification. The

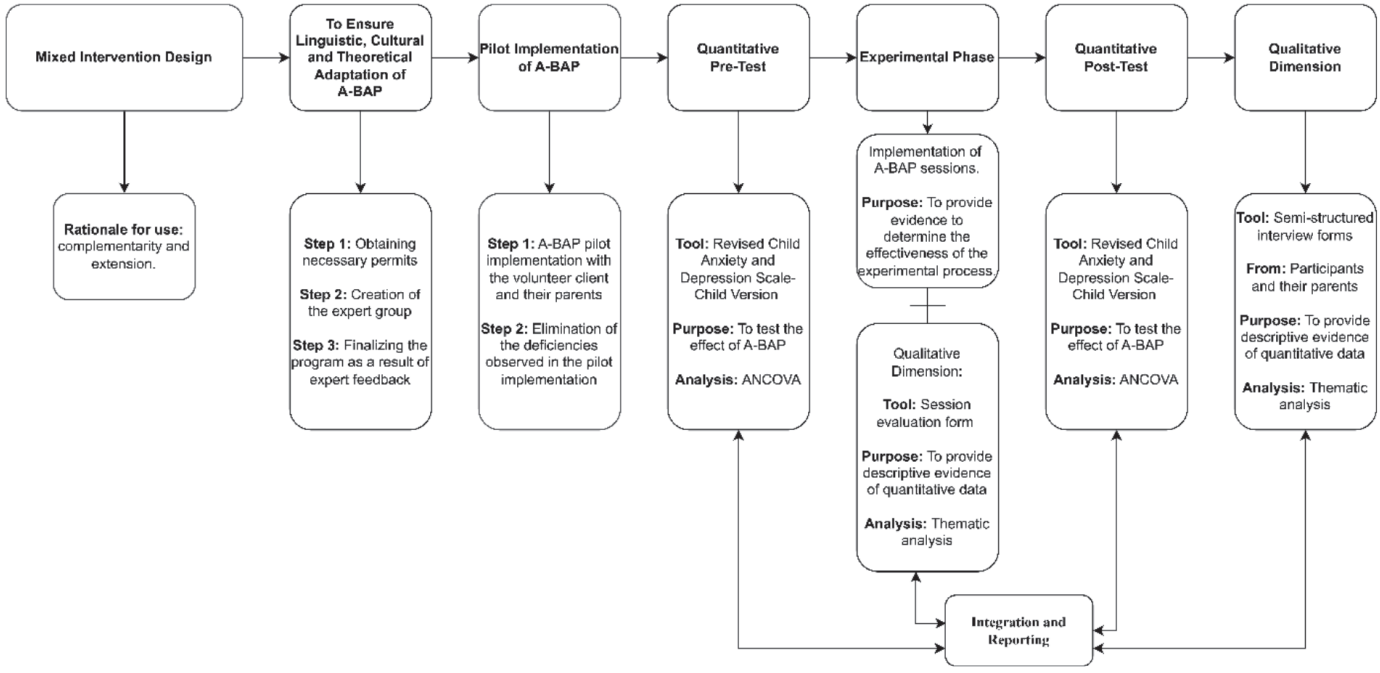

Figure 1. Demographic data of the participants

Table 1. Demographic data of the participants			
Variable	**Level**	**Experimental Group**	**Control Group**
Gender	Female	7	8
	Male	3	2
Age	16	1	1
	17	7	6
	18	2	3
Classroom	9	1	0
	10	6	7
	11	3	3

scale consisting of 47 items gives separate points for depression and anxiety in children and adolescents. It was determined that the item correlation value of each item in the scale was between 0.41 and 0.77, and the total internal consistency coefficient of the scale was 0.89. It was determined that the factor structure of the scale was confirmed in the non-clinical sample, and the compliance values were well-matched (RMSEA: 0.076, RMR: 0.071, SRMR: 0.074, NFI: 0.96, NNFI: 0.97, CFI: 0.98, IFI: 0.97, RFI: 0.96, GFI: 0.94, AGFI: 0.92).

Semi-Structured Interview Form

To obtain in-depth and detailed data on the A-BAP process, two different semi-structured interview forms were developed and applied by the researcher for adolescents and their parents. Interview forms were used to evaluate the A-BAP process and to explain the obtained quantitative data in more detail. The interview form contains eight open-ended questions prepared in line with expert opinions.

Session Evaluation Form

In the experimental process, it was aimed to collect qualitative data with session evaluation forms. In order to ensure data diversification, a session evaluation form consisting of three main questions and five probe questions was applied at the end of each session to obtain the adolescents' opinions and written evaluations about the sessions. While developing the session evaluation form, the opinions of field experts were taken to determine which questions were more suitable for the evaluation of the sessions.

Adaptation and Implementation of A-BAP

DA depression interventions for adolescents are adapted from models developed for adults. These adaptations are needed for effective interventions to address adolescents' symptoms of depression (Orchard et al. 2017). A-BAP for the intervention of adolescent depression was developed by McCauley et al. (2016) and is seen as a complementary element that supports adolescents with depressive symptoms. A-BAP is a structured, parent-involved, individual adolescent depression intervention program consisting of five modules and at least 11 sessions, which can be stretched up to 14 sessions if necessary. A-BAP sessions and some of their destinations are shown in Table 2.

Although A-BAP is structured, it has a very flexible structure. Parent sessions are held independently of adolescent sessions. Parent sessions can be completed in 15-30 minutes. Sessions can be conducted flexibly in line with the counselor's and client's needs. Sessions with adolescents last approximately 45-60 minutes.

In the process of adapting A-BAP to Turkish, firstly, two field experts with English proficiency translated the program into Turkish. Then, two academicians from Turkish Education evaluated the appropriateness of Turkish expressions in Turkish. In addition, two academicians in English Language Education reviewed the translations in terms of language and expression. At the last stage, two academicians in the Department of Guidance and Psychological Counseling evaluated whether the translations were theoretically appropriate. At the end of the translation process, as a result of the feedback given by the experts, the program was finalized and made ready for implementation. A pilot was conducted with an adolescent to determine the extent to which the adapted A-BAP achieved the program objectives and to assess whether the session durations were sufficient. The pilot was conducted between August and October 2019 with a volunteer adolescent participant and their parents who received high scores from the EAP-Y. In the pilot application, the appropriateness of the session durations was calculated, and it was determined that the sessions were appropriate in terms of time. Various translation errors in some activities in the A-BAP program have been identified, and necessary corrections have been made. In addition, it was found that it took much work for parents to attend all the parental sessions (7 sessions). Combining the parental sessions in the primary practice was decided to make three sessions. Finally, the Short Mood and Feelings Questionnaire (SMFQ), which reflects the participants' moods, was not used in the primary practice, considering that it would not be a significant deficiency not to use.

In the study, to carry out the experimental process, 20 adolescents in the experimental and control group were first matched according to their depression pre-test scores. Afterwards, ten students were assigned to the experimental group and ten to the control group. The control group was informed that the program would be applied to them after the sessions. Opinions of the participants in the experimental group about which days are suitable were taken. In line with these opinions, care has been taken not to ensure that the A-BAP application, which lasts approximately 12 weeks, does not continuously coincide with the same courses. In addition, planning was done by taking the parents' opinions on which days and at what times they could be available. After the planning, a separate room was allocated in a school with the approval of the school administration, and the sessions were held in this room. In the other two schools, appropriate days were planned in the guidance service, taking into account the times when the teachers entered the classes in the classrooms, and sessions were carried out in the guidance services in this way. Before the start of the process, anamnesis sessions were held on the problems experienced by the participants. The participants were informed about how to carry out the counseling process, and the suitability and motivation of the clients for consultation were determined. Parents were also present at the schools during the meeting with the participants. After the interview was carried out, the parents were taken to the preliminary interview. In the preliminary meeting, the necessary information was given about the sessions and their structures, and the sessions were started. At this stage, approximately seven sessions were planned with parental participation. However, as a result of feedback from parents during the pilot implementation phase and before the experimental implementation, it was determined that it took more work for parents to participate in all seven sessions. Accordingly, the seven-session parental sessions were combined to allow parents to participate in the

Tablo 2. A-BAP Program Content Summary		
Module	**Session**	**Selected Sample Objectives**
	Pre-Interview	Informing about A-BAP and determining whether the participants are suitable for the psychological counseling program
Module 1 Getting Started	Session 1: Introduction to the Adolescent Behavioral Activation Program	Review the structure of therapy Introduce the BA model of depression and treatment, integrating psychoeducation about depression
	Session 2: Situation-Activity-Mood Cycle	Gain a better understanding of the adolescent's relationships and activities Expand the adolescent's understanding of the relation between activity and mood
Module 2 Getting Active	Session 3: Goal-Directed Behavior versus Mood-Directed Behavior	Introducing mood-directed behavior versus goal-directed behavior Provide psychoeducational information to the parent(s) about adolescent depression
	Session 4: Introducing Consequences of Behavior	Helping them realize that some activities will make them feel better and others bad. Teaching behavioral inquiry
Module 3 Skill Building	Session 5: Problem Solving	Review the role of stress as a trigger for depression Teaching parents how to support them with forms of communication, including active listening skills
	Session 6: Goal Setting	Introduce adolescents to SMART goals Practice identifying and setting SMART goals Educate the parent(s) on how to support their adolescent better and how to monitor that support
	Session 7: Identifying Barriers	Help the adolescent identify and overcome his or her barriers to accomplishing goals. Help the parent(s) support their adolescent.
	Session 8: Overcoming Avoidance	Teaching them to recognize avoidance behaviors Teaching the concept of using alternative coping strategies
Module 4 Practice	Session 9: Putting It All together	Making connections between situations, activities and mood. Help the adolescent identify what he or she wants to focus on for the remaining treatment sessions.
	Session 10-11: Practicing Skills	Identify areas of greatest need and challenge. Support the adolescent as he or she uses the skills presented in earlier sessions to move toward his or her goal(s) and overcome barriers in goal achievement
Module 5 Moving Forward	Session 12: Relapse Prevention and Saying Good-Bye	Developing a relapse prevention plan using the skills presented in the treatment process

first session, a mid-term session, and the last session of the experimental process. The process, which continued this way, was carried out in 12 sessions with ten experimental group participants and their parents.

Statistical Analysis

The data obtained in the study were analyzed in two formats: quantitative and qualitative.

Quantitative analysis

The quantitative data of the research were analyzed with the SPSS 22.0 package program. In the first step of the data analysis, homogeneity, normality, and extreme data analysis were performed to determine whether the available data fulfilled the parametric test conditions. After the parametric conditions were met and the experimental application was made, Single Factor Analysis of Covariance (ANCOVA) was applied to determine whether there was a significant difference between the post-test scores of the experimental and control groups. The ANCOVA test considerably reduces the likelihood of type II errors in the research. Since the continuous variables that may affect the dependent variable are kept constant with the ANCOVA test, it provides a robust statistical analysis opportunity for experimental research (Büyüköztürk 2016). Accordingly, preliminary test scores were taken as a standard variable, and ANCOVA analysis was applied. Tabachnick ve Fidell (2015) state that ANCOVA gives strong results in adjusting the differences between groups when it is impossible to assign unbiased groups. It is also recommended to use ANCOVA in groups under 15 participants after the normality condition is met (Tabachnick and Fidell 2015, Kılıç 2017).

Qualitative analysis

In the study, qualitative data obtained by session evaluation forms during the experimental procedure and semi-structured

interview forms after the experimental procedure were examined using thematic analysis. In the data analysis process, six stages mentioned by Crreswell and Plano-Clark (2015) were taken into account. The qualitative data obtained first were transcribed. In the second stage, a general perspective is gained by repeatedly reading the transcripts. In the third stage, expressions and sentences directly related to the participants' experiences are determined. In the fourth stage, themes are grouped to express the meanings common in the participants' transcripts clearly. In the fifth stage, the findings are integrated into the profound depiction of the phenomenon. In the sixth and final stage, the validity study of the findings was expressed together with the opinions of the participants and the participants in their statements.

Results

In mixed-method research, data are evaluated and analyzed according to the order of emergence. The findings obtained in this section were analyzed according to the order of emergence in line with the paradigm of mixed-method research, and the results were reported accordingly.

Quantitative results

In this mixed-method research on the effect of BA-based A-BAP application on depression symptoms in adolescents, the A-BAP process was tested with the findings obtained from two methods: experimental method and case study. In line with the mixed method question of the research, *"How do the qualitative results obtained from session evaluation forms and interview data on depression symptoms in adolescents help to adapt an intervention program for depression symptoms and test the effects of program outcomes?"* The quantitative hypothesis of the study, *"The depressive symptoms of the adolescents who participated in the BA-based A-BAP application, differ significantly from the group that did not."* Single factor covariance analysis was carried out to examine the differences in the A-BAP application carried out in line with it. Before the analysis, homogeneity of variances was ensured, and the rule of uniformity of regression trends, an essential assumption of covariance analysis, was tested. Accordingly, the congruence of regression trends, which is the prerequisite of covariance analysis ($F_{(1,19)}$=.385, p=.543), was provided. Post-test mean scores were adjusted to determine whether the experimental group showed a significant decrease in depressive symptoms compared to the control group. It was determined that the change obtained from the relevant corrections was significant in favor of the experimental group. The findings regarding the corrected post-test mean scores of the experimental and control groups are given in Table 3.

Following the findings in Table 3, the analysis continued by keeping the preliminary test scores under control among the adjusted average values. As a result of the relevant analysis, it was concluded that the BA-based A-BAP application applied to adolescents significantly decreased the depression symptom scores of the participants in the experimental group. The results of the analysis of depression total scores are given in Table 4.

According to Table 4, when the pre-test scores were kept under control, it was determined that the A-BAP application significantly decreased the depression scores of the participants ($F_{(1,19)}$=.32, p=.000, η^2=65). Bonferroni test was applied to determine the source of the difference between the groups, and it was determined that the difference was in favor of the experimental group.

Qualitative results

The qualitative data obtained through session evaluation forms during the experimental process and semi-structured interviews at the experimental end were analyzed by the thematic analysis method proposed by Creswell (2021). The findings have been reported. The perspectives and experiences of adolescents and their parents regarding implementing A-BAP are given in Figure 2.

The participants' thoughts about the sessions were evaluated under two themes, Adolescent and Parental Opinions, as seen in Figure 2. The first sub-theme of the adolescent view theme is "program activities." Under this theme, participants stated that the activities in the A-BAP application contributed to their feeling better. C represents the clients.

C3: *I was amazed at the COPE event for anger management. I had an anger problem. For example, although I did not show it much here, there was a lot of it in the house, and I was constantly exploding at someone at home. That is why we were always arguing at home. I am currently using the COPE technique, and I am very comfortable.*

In the Negativities sub-theme of the program, the participants emphasized the situations and activities they perceived as unfavorable in the program.

C6: *The long duration of the sessions was sometimes dull. Otherwise, there was no negative situation.*

C4: *Some session evaluation forms bored me.*

In the sub-theme of *Developing Constructive Behaviors,* the participants expressed the new behaviors they had developed and the effects of their behaviors on their lives.

C5: *This is my life. I will spend my life on my happiness instead of on others.*

Table 3. Post-test Corrected score averages of the experimental and control groups

		Group	N	Mean	Corrected Mean
Post-test		Experimental	10	9.0	9.039
		Control	10	21.200	21.161

C3: *Instead of suddenly getting angry and deciding, I stop first. Then I think. Then I adjust what I say and do accordingly.*

In the sub-theme of *Parental Involvement,* participants referred to the changes in feeling, thinking, and behavior that parental participation had created in them.

C6: *When I started the sessions, I thought that the people around me did not value me and that I was a worthless person in their eyes. However, then with my mom attending the sessions, I started to feel like most people valued me so much.*

C2: *As much as I became more conscious of my family, they also became more aware of me in this program. In other words, I think their parents were mindful of these issues and how they should treat or understand young people.*

In the sub-theme of *Therapeutic Contribution*, participants expressed the therapeutic contributions of A-BAP. The opinions of some participants are as follows;

C3: *The sessions were good. I felt relaxed because I needed to breathe.*

C9: *With each session, I face myself more often, which is good for me. It made me feel bad that my decisions were slapped in the face and that I was not always correct.*

C1: *I had the opportunity to talk about a situation that made me seriously sad and angry, which I had been very obsessed with for a long time.*

The Parent Insights theme reflects parents' thoughts on the three parent sessions and the A-BAP process their children attended. This theme's first sub-theme is "their views on themselves". In this sub-theme, parents evaluated the three parent sessions they attended and expressed their views on the program. P, represents parents.

P1: *I have improved myself in this regard. Since I have four children, I am a mother of four. I have children, with the oldest being 22 years old and the youngest being 10 years old. When I was pregnant with my first child, I started reading such books and programs, and I still try to read and improve myself. No matter how much I knew, I saw that I had shortcomings. I knew that every child was different, but how could I explain it? I realized that what I thought I was doing enough for my child was not enough.*

Parents evaluated the A-BAP application's content in the sub-theme *Parental Opinions* on the program.

P1: *I liked that my child was thought of without asking for it. That others take care of my child other than me. I liked the feedback in the program and the information given about the causes and consequences of the behavior.*

Within the sub-theme of *Parental Opinions Regarding Their Children*, parents conveyed their observations about the changes the A-BAP application has brought about in their children.

P3: *Let me evaluate my child. My child did not think very consciously about the effects his behavior would have. The behavioral activation program made him aware of the consequences of what he did and the reactions on the other side. He saw and understood what happens due to his behavior: how he is affected and how the people around him are affected.*

P4: *He started to think from his point of view, from the point of questioning life itself. He created awareness for the future. And that is very nice because maybe it's a regular cycle of youth, children do not*

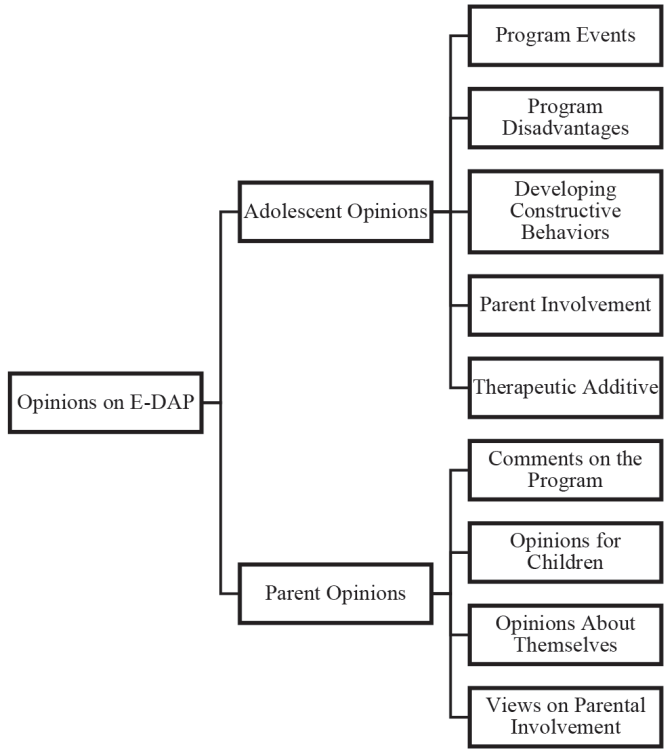

Figure 2. Opinions of adolescents and their parents on A-BAP

Table 4. Covariance analysis of depression level

Source	Sum of Squares	Sd	Squares Average	F	p	η2
Model	802.215	2	401.107	17.684	.000	.675
Intercept	30.014	1	30.014	1.323	.266	.072
Depression Pretest	58.015	1	58.015	2.558	.128	.131
Group	**734.401**	**1**	**734.401**	**32.379**	**.000**	**.656**
Error	385.585	17	22.681			
Sum	5748.000	20				
Sum Error	1187.800	19				

do much questioning, but this program questioned both the past and the future, and the thought of what I am doing may have created a question mark.

In the sub-theme of *Opinions on Parental Participation*, participants made evaluations for parental participation in the A-BAP application.

P5: *I was very impressed by our first meeting with you. Since then, I have come to know my child better. How could it be that we both wrote the same event without realizing the forms you gave, and this was a charming determination? It was perfect to see how much the reactions of his thoughts were reconciled with my thoughts and reactions, and if there were aspects that did not match, why they did not.*

The thoughts of adolescents participating in the A-BAP application regarding the changes that the application causes to their depressive symptoms are shown in Figure 3.

Figure 3 shows adolescents' views on the changes in depressive symptoms were evaluated in nine sub-themes: *Anger Control, Avoidance, Social Interaction, Unresponsiveness, Intrinsic Motivation, Self-Esteem, Crying, Hopelessness,* and *Perceived Control*. The opinions of some participants are given below.

C2: *In my relationships with family, I have learned to understand that you cannot get anywhere by constantly yelling at them and communicating well so that they can understand me. From now on, I learned how to say that instead of throwing everything out of it and blaming someone else, I can show healthier behaviors by sitting and thinking about myself.* (Anger Management sub-theme)

C6: *Now, at least I can address things instead of avoiding things. When someone says something to me, I can respond, and I have the right to do so.* (Avoidance sub-theme)

C3: *You know, I told you about a problem with my father. You know, I could not speak. I was always waiting for my first step from my father. This time I changed it, and took the first step, and I am glad I did. We can talk like that more.* (Social Interaction sub-theme)

C9: *I can explain myself to other people. When the other person upset me, I could not tell them, and I kept them inside me. However, when I feel sad and broken, I can go and tell him that I am broken, and if the other person can understand his mistake, he can apologize and relieve my sadness. I have stopped throwing it in.* (Unresponsiveness sub-theme)

C3: *The semester is over. I almost did nothing in my classes. So, there is nothing there. I am just starting to work. For example, while filling out the forms, I turned to my goals, created new goals, bought myself new books, and started reading.* (Intrinsic Motivation sub-theme)

C9: *I thought that the people around me didn't value me, that I was a worthless person in their eyes. Nevertheless, when I thought about it later, I realized that most, if not all, people around me value me very much, and they are sad and not laughing when I am sad.* (Self-Esteem sub-theme)

C6: *When I first arrived, I was unfortunate and introverted. I was crying all the time about everything. Now I can laugh. People can cry, but not all the time, because crying is a regular thing.* (Crying sub-theme)

C6: *I was depressed, and very uncomfortable. It was as if I could not do anything. I learned that there is a way against everything and that we should never break away, so I opened and started to have hope for everything.* (Despair sub-theme)

C6: *I used to have difficulty controlling my emotions, but now I can control them more.* (Perceived Control sub-theme)

The qualitative findings suggest that adolescents and their parents perceive A-BAP as a practice that reduces depressive symptoms and contributes to various positive behavioral changes. In this research conducted with the intervention pattern, the data obtained in qualitative and quantitative stages were presented sequentially. An essential stage in mixed-method research studies is integrating the data obtained. In Table 5 below, integration is performed for the findings obtained in quantitative and qualitative stages.

Discussion

The current research aimed to adapt the application of A-BAP to Turkish culture to reduce depressive symptoms and to test its effectiveness through mixed-method research. Quantitative and qualitative data collection processes were carried out to test the effectiveness of the adapted program. Data triangulation was used in the adaptation process of the A-BAP application. Finally, the findings were interpreted and integrated into line with the mixed method paradigm.

In the experimental phase of the research, it was concluded that BA-based A-BAP administration effectively reduced depressive symptoms in adolescents. This conclusion coincides with the finding that BA-based interventions to reduce depression in adolescents show effective results in various cultures (Hopko et al. 2003a Dimidjian et al. 2006, Cuijpers et al. 2007, Chu et al. 2009, Collado et al. 2014, McCauley et al. 2016, Nyström et al. 2017, Bolinski et al. 2018, Pass et al. 2018b). While the effectiveness of BA-based interventions for adolescent and adult depression is known, it has recently been proven to be an effective model in

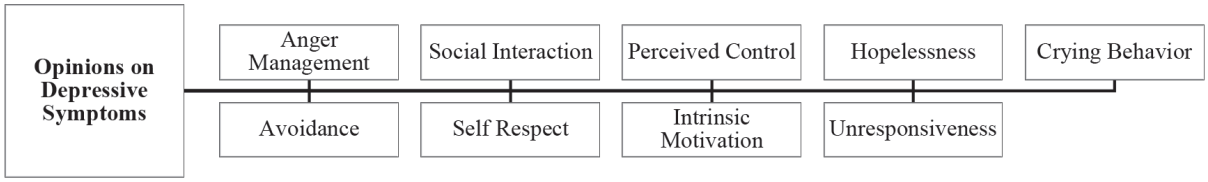

Figure 3. Adolescents' opinions on depressive symptoms

geriatric depression (Hershenberg and Glass 2022), depression comorbid with diabetes and cancer (Wang and Feng 2022), and post-traumatic stress disorder (Etherton and Farley 2022). BA-based intervention practices are an effective and relatively easy method for implementing and disseminating intercultural intervention options (Aschar et al. 2021). In addition, there are question marks about the effectiveness of BA-based practices in determining their effectiveness in treating depression. As the reasons for these question marks and uncertainty, The low number of studies (Pott et al. 2022)is expressed as study bias, and the fact that some of the studies carried out does not provide the methodologically necessary qualifications (Meshesha et al. 2021, Pott et al. 2022).This study is expected to contribute to the literature and the intercultural studies of BA in terms of revealing the effectiveness of a BA-based intervention program and being the first implementation of a BA-based intervention program in Turkey.

The results obtained at the qualitative stage of the research show that like the quantitative findings, BA-based A-BAP administration is effective in reducing the depressive symptoms of adolescents. A-BAP intervention is an application that increases adolescents' hope levels, subjective well-being, intrinsic motivation, self-esteem, anger control, and social interactions and decreases avoidance behavior. BA contributes to the acquisition of various skills and reduction of depressive symptoms through various activities such as activity and mood cycle, goal-oriented and mood-oriented behavior, support of the adolescent by the parents, discussion of the consequences of the behaviors, problem-solving, goal setting, identifying obstacles, coping with avoidance (McCauley et al. 2016). Several studies have also shown that BA-based adolescent intervention programs reduce depressive symptoms (Chu et al. 2009, McCauley et al. 2015, Pass et al. 2018b). It has also been shown that BA-based interventions are equivalent to many models used to intervene in depressive symptoms, such as CBT and Interpersonal therapy (Pass et al. 2018a). Based on the participants' opinions, it can be stated that the A-BAP application reduces depressive symptoms. A-BAP application is estimated to reduce depressive symptoms by helping clients solve their problems and increase their activation levels with various activities such as coping with avoidance, mood-oriented behaviors, anger control, coping with stress, and determining goals and obstacles.

The findings obtained at the qualitative stage show that both adolescents and parents positively evaluate parental participation. Parental involvement in terms of adolescents; has been evaluated as a factor that increases interaction, contributes to the awareness of their parents, and allows them to feel good, happy, and valuable. For parents, it was evaluated as an element that provides an opportunity to define their children better and increases their interactions with their children and their children's awareness. The source of these outcomes is that parent-participatory BA practices reinforce appropriate behaviors between adolescents and their parents, providing an opportunity to support therapeutic strategies and outcomes (Ritschel et al. 2011). In addition to these opportunities offered, BA with parental participation can also be effective as a balancing factor in fun and social success by focusing on stimulating activities (Pass et al. 2018a). In many types of research, parental participation has been identified as an essential source of support for adolescents. The parental support that adolescents perceive is a factor that increases their well-being and reduces their depressive symptoms. Therefore, it becomes a healing element for parents who are important figures for adolescents to support them through parental participation. In particular, the fact that family disagreements are a significant predictor of adolescent depression requires a different evaluation of parental involvement in depressed adolescents (Paul and Usha 2021). In addition to the listed positive aspects of parental participation, it should not be ignored that if it is excessive, it can weaken adolescents' feelings of autonomy and problem-solving independently (Ritschel et al. 2011). Therefore, it can be stated

Table 5. Integration of data

Quantitative Findings on Experimental Practice	Qualitative Findings Regarding Documents Obtained During Experimental Application	Qualitative Findings Regarding the Interviews with the Clients After the Experimental Application	Qualitative Findings Regarding Interviews with Parents After Experimental Application
It was determined by the Single Factor ANCOVA analysis that the behavioral activation therapy-based A-BAP application to reduce depressive symptoms was an effective application in reducing the depressive symptoms of the participants in the experimental group. ($F_{(1,19)}$=.32, p=.000, η2=65).	In the document analysis made through session evaluation forms during the A-BAP application sessions; It was determined that the participants started to develop constructive behaviors and started to learn the outcomes of the program to reduce depressive symptoms.	The findings obtained from the interviews with the clients on the effectiveness of the behavioral activation therapy-based A-BAP application showed that the results obtained at the quantitative stage were supported and explained. In this direction, it was determined that the participants in the experimental group stated that the application was an effective approach in reducing depressive symptoms. These findings seem to support the quantitative results.	It was observed that the findings obtained from the interviews with the parents participating in the A-BAP application overlapped with the findings obtained at the other stages. Accordingly, it was determined that the parents who participated in the program stated that their children's depressive symptoms decreased. In addition, it is understood that parents have positive views about the program process.
As a result of the findings obtained from pre-test-post-test analyzes, session evaluation document analyzes and interviews to evaluate the application, it can be said that the behavioral activation-based A-BAP application is an effective program in reducing the depressive symptoms of adolescents.			

that adolescents who participate in the A-BAP application with parental participation perceive this situation as a positive social support.

The development of various models to develop and maximize evidence-based practices in depression intervention is an important requirement considering the prevalence of depression (May et al. 2022). BA, which was developed for depression intervention, has now turned into an independent psychotherapy model (Wang and Feng 2022). Besides adolescent depression (McCauley et al. 2016, Pass et al. 2018b), adulthood (Lejuez et al. 2001), old age (Hershenberg and Glass 2022), and severe depression during pregnancy (O'Mahen et al. 2013) are models with proven effectiveness (Spates et al. 2012). BA effectively promotes healthy behaviors in substance use, drug addiction, and occupational and social areas (May et al.2022). BA offers a model that can also be used in online environments (May et al. 2022, Wang and Feng 2022), virtual reality (Colombo et al. 2022), and mobile and web-based applications (Wang and Feng 2022) Therefore, BA is also recognized as a therapy model prone to developing e-mental health models (Wang and Feng 2022). BA is a therapy model that has proven effective in self-help guidelines developed for the elderly and people in care at home (Ekers et al. 2008, Weitzel et al. 2022) and in telephone assistance interventions (Pellas et al. 2022). This is a very flexible and widespread structure of BA because it can be applied to a wide variety of groups and helps clients in many ways. It can be said to be. BA offers a model that can be used in online environments, virtual reality (Colombo et al. 2022), and mobile and web-based applications (Wang and Feng 2022) (May et al. 2022, Wang and Feng 2022). Therefore, BA is also accepted as a therapy model prone to the development of e-mental health models (Wang and Feng 2022). There are various barriers to the access of the elderly population to the Internet and mobile applications. BA is a therapy model that has proven to be effective in self-help guidelines (Ekers et al. 2008, Weitzel et al. 2022) and telephone assistance interventions (Pellas et al. 2022) developed for the elderly and home caregivers. It can be said that BA has a very flexible and widespread structure since it offers help to clients in a very flexible way.

Based on the deep tradition of behaviorism theory and research, BA is an easy model to understand and implement, alongside the above advantages. It has comparable efficacy to traditional CIS (Wang and Feng 2022). These features of the BA make the BA more advantageous than other models. Although there are a variety of effective interventions for adolescent depression, therapists need to have a significant amount of training and experience to be effective in these models. While the BA provides a reasonably simple model in this respect, training more therapists may also be effective. The increasing number of trained therapists quickly increases the likelihood that individuals with depression and PTSD will have access to treatment (Etherton and Farley 2022). Due to the results of this study, the listed advantages of BA, and its suitability to Turkish culture, it can be said that BA offers an alternative model for intervention in mental problems such as depression and PTSD. Especially the ease of use in different age groups and various environments shows that it has the potential to turn into a standard model.

Conclusion

This study has several limitations. No application was made regarding confounding variables in the study. Since the effect of confounding variables is uncertain, this can be expressed as a limitation. The control group was informed that the same application would be made after the application for the experimental group, but after a short time in Turkey, full closure was made because of Covid-19 and no application could be made to the control group. In addition, no follow-up study was conducted in the study and there is no data on how long these developments lasted. Finally, the participants of the research are mostly girls (15 girls-5 and boys). Since the participants were chosen voluntarily, a more homogeneous group could not be selected in terms of gender variables.

The prevalence of depression among adolescents and the various barriers to access to treatment increase the need for models that can be implemented quickly and easily. A-BAP, adapted in this direction, allows field experts to apply a straightforward and practical intervention for adolescents with depressive symptoms due to its structure that does not require lengthy training and structured content to be followed step by step. In the current research, the effectiveness of BA-based A-BAP application in reducing depressive symptoms was demonstrated, and it was determined that the qualitative data obtained from the participants supported the result. In addition, since the research is the first study in Turkey in the field of BA therapy, it is thought that it will be a source for BA-based studies to be carried out in Turkey from now on and will contribute to the intercultural studies of BA at the international level.

In a way, this study is a program adaptation work. After that, experts working on this subject may be recommended to develop BA-based intervention programs. The study's sample group is a group of adolescents consisting of high school students in a province. Application in different sample groups will contribute to the generalization of the results. Another limitation of the research is conducting a program aimed exclusively at adolescents. BA-based interventions have begun primarily for adults. In this direction, the application of BA-based interventions for different age groups can make significant contributions to the literature. Although there was a finding that depression decreased in the study, the activation levels of individuals were not measured. Measuring activation levels in future studies may yield more comprehensive results. Participants with depressive symptoms who participated in this study were not selected based on DSM-5 diagnostic criteria or from a clinical group. So, the research does not show an effect on individuals diagnosed with depression. Its application to clinical samples in future studies may allow for a broader evaluation of BA. The study did not receive any data from parents on their child's depressive symptoms. In the studies to be carried out in the future, the collection of data from parents and teachers on the depressive symptoms of adolescents will allow

comparative analyzes and evaluations to be made by revealing similarities and differences.

Acknowledgement

This study is derived from the first author's PhD dissertation entitled "Investigation of the Effect of Behavioral Activation Therapy with Parental Participation in Reducing Depression Symptoms in Adolescents through a Mixed Method Research", completed in 2020 at Atatürk University, Institute of Educational Sciences, Department of Guidance and Psychological Counseling under the supervision of Prof. Dr. İsmail Seçer.

References

Alpaslan AH (2009) Ergen yaştaki lisanslı sporcularda anksiyete ve depresyon düzeyleri ile yaşam kalitesinin araştırılması (Uzmanlık tezi). Bursa, Uludağ Üniversitesi.

Aschar SCAL, Claro HG, Fernandes IFDAL, Daley K, Castro HCM, dos Santos DVCet al (2021) Cultural adaptation and psychometric properties of Brazilian and Peruvian versions of the behavioral activation for depression scale short form (BADS-SF). Research Square, doi: 10.21203/rs.3.rs-243905/v1 .

Beck AT, Rush AJ, Shaw BF, Emery G. (1979) Cognitive Therapy of Depression. New York, Guilford Press.

Bolinski F, Hendriks GJ, Bardoel S, Hollon SD, Martell C, Huibers MJH (2018) Cognitive therapy or behavioral activation for major depressive disorder in dutch mental health care: Pilot effectiveness and process trial. Int J Cogn Ther, 11:343–358.

Burke JD, Loeber R, Lahey BB, Rathouz PJ (2005) Developmental transitions among affective and behavioral disorders in adolescent boys. J Child Psychol Psychiatry, 46:1200–1210.

Büyüköztürk Ş, Kılıç-Çakmak E, Akgün ÖE, Karadeniz Ş, Demirel F (2022) Eğitimde Bilimsel Araştırma Yöntemleri 32. baskı. Ankara, Pegem Akademi.

Chorpita BF, Moffitt CE, Gray J (2005) Psychometric properties of the revised child anxiety and depression scale in a clinical sample. Behav Res Ther, 43:309–322.

Chu BC, Colognori D, Weissman AS, Bannon K (2009) An initial description and pilot of group behavioral activation therapy for anxious and depressed youth. Cog Behav Pract, 16:408–419.

Collado A, Castillo SD, Maero F, Lejuez CW, MacPherson L (2014) Pilot of the brief behavioral activation treatment for depression in Latinos with limited English proficiency: preliminary evaluation of efficacy and acceptability. Behav Ther, 45:102–115.

Colombo D, Suso-Ribera C, Ortigosa-Beltrán I, Fernández-álvarez J, García-Palacios A, Botella C (2022) Behavioral activation through virtual reality for depression: A single case experimental design with multiple baselines. J Clin Med, 11:1262- 1275.

Copeland WE, Shanahan L, Costello EJ, Angold A (2009) Childhood and adolescent psychiatric disorders as predictors of young adult disorders. Arch Gen Psychiatry, 66:764-772.

Creamer EG (2020) Tamamen Bütünleştirilmiş Karma Yöntem Araştırmalarına Giriş (Çeviri Ed. İ Seçer, S. Ulaş). Ankara, Vizetek Yayıncılık.

Creswell JW (2016) Nitel Araştırma Yöntemleri: Beş Yaklaşıma Göre Nitel Araştırma ve Araştırma Deseni (Çeviri Ed. M Bütün, SB Beşir). Ankara, Siyasal Kitabevi.

Creswell JW, Creswell JD (2017) Research design: Qualitative, Quantitative, and Mixed Methods Approaches. Thousand Oaks, CA, Sage.

Creswell JW (2021) Karma Yöntem Araştırmalarına Giriş (Çeviri Ed. M. Sözbilir). Ankara, Pegem Akademi.

Crreswell JW, Plano Clark V L (2015) Karma Yöntem Araştırmaları: Tasarımı ve Yürütülmesi (Çev. Ed. Y Dede, SB Demir). Ankara, Anı Yayıncılık.

Cuijpers P, van Straten A, Warmerdam L (2007) Behavioral activation treatments of depression: A meta-analysis. Clin Psychol Rev, 27:318–326.

Demir V (2014) Bilinçli farkındalık temelli hazırlanan eğitim programının bireylerin depresyon ve stres düzeyleri üzerine etkisi (Yüksek lisans tezi). İstanbul, İstanbul Arel Üniversitesi.

Denzin NK (2017) The Research Act. New York, Routledge.

Dimidjian S, Hollon SD, Dobson KS, Schmaling KB, Kohlenberg RJ, Addis ME et al (2006) Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. J Consult Clin Psychol, 74:658–670.

Dwekat E, Al-amer RM, Al-Daraawi H, Saleh MYN (2023) Prevalence and correlates of depression and anxiety among jordanian adolescents: A cross-sectional study. Youth Society 55:103–121.

Eskin M, Ertekin K, Harlak H, Dereboy Ç (2008) Lise öğrencisi ergenlerde depresyonun yaygınlığı ve ilişkili olduğu etmenler. Turk Psikiyatri Derg, 19:382-389.

Etherton JL, Farley R (2022) Behavioral activation for PTSD: A meta-analysis. Psychol Trauma, 14:894-901.

Ferster CB (1974) A functional analysis of depression: Reply. Am Psychol, 29:361–362.

Flouri E, Buchanan A (2003) The role of father involvement and mother involvement in adolescents' psychological well-being. Br J Soc Work, 33:399–406.

Gilbody S, Brabyn S, Mitchell A, Ekers D, McMillan D, Bailey D et al (2022) Can we prevent depression in at-risk older adults using self-help? The UK shard trial of behavioral activation. Am J Geriatr Psychiatry, 30:197–207.

Goodyer IM, Reynolds S, Barrett B, Byford S, Dubicka B, Hill J et al(2017) Cognitive behavioural therapy and short-term psychoanalytical psychotherapy versus a brief psychosocial intervention in adolescents with unipolar major depressive disorder (IMPACT): a multicentre, pragmatic, observer-blind, randomised controlled superiority trial. Lancet Psychiatry, 4:109–119.

Gormez V, Kılınçaslan A, Orengul AC, Ebesutani C, Kaya I, Ceri V et al (2017) Psychometric properties of the Turkish version of the revised child anxiety and depression scale–Child version in a clinical sample. Psychiatry and Clinical Psychopharmacology, 27:84–92.

Guarin A (2016) Cognitive and Behavioral Theories of Depression. In Depression in Children and Adolescents (Eds HS Koplewicz, K Emily):15-31. New York, Routledge.

Guba EG, Lincoln YS (1989) Fourth Generation Evaluation.Thousanad Oaks, CA, Sage.

Hamidi F (2012) Ergen-ebeveyn ilişkisinin doğası, depresyon ve psikososyal işlevsellik üzerindeki etkisi (Uzmanlık tezi). İzmir, Ege Üniversitesi.

Hershenberg R, Glass OM (2022) Implementing behavioral activation in geriatric depression: A primer. Klin Spec Psihol, 11:81–96.

Hopko DR, Lejuez CW, Lepage JP, HopkoSD, McNeil DW (2003) A brief behavioral activation treatment for depression. Behav Modif, 27:458–469.

Hopko D R, Lejuez CW, Ruggiero KJ, Eifert GH (2003) Contemporary behavioral activation treatments for depression: Procedures, principles, and progress. Clin Psychol Rev, 23:699–717.

Huguet A, Miller A, Kisely S, Rao S, Saadat N, McGrath PJ (2018) A systematic review and meta-analysis on the efficacy of Internet-delivered behavioral activation. J Affect Disord, 235:27–38.

Ivankova NV, Creswell JW, Stick SL (2006) Using mixed-methods sequential explanatory design: from theory to practice. Field Methods, 18:3–20.

Jacobson NS, Dobson KS, Truax PA, Addis ME, Koerner K, Gollan JK et al (1996) A component analysis of cognitive-Behavioral treatment for

depression. J Consult Clin Psychol, 64:295–304.

Jacobson NS, Martell CR, Dimidjian S (2001) Behavioral activation treatment for depression: returning to contextual roots. Clin Psychol, 8:255–270.

Jenness JL, DeLong K, Lewandowski R, Spiro C, Crowe K, Martell CR et al (2022) Behavioral activation as a principle-based treatment: Developments from a multi-site collaboration to advance adolescent depression treatment. Evid Based Pract Child Adolesc Ment Health, doi: 10.1080/23794925.2022.2042871 .

Jones M, Råbu M, Røssberg JI, Ulberg R (2020) Therapists' experiences of psychodynamic therapy with and without transference interventions for adolescents with depression. Int J Environ Res Public Health, 17:4628.

Kanter JW, Busch AM, Rusch LC (2010) Behavioral Activation. New York, Routledge.

Kartol A (2018) Akılcı duygusal davranışçı terapi temelli grupla psikolojik danışma uygulamasının ergenlerin depresyon ve anksiyete belirtileri üzerine etkisinin incelenmesi (Doktora tezi). Erzurum, Atatürk Üniversitesi.

Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE (2005) Lifetime prevalence and age-of-onset distributions of dsm-ıv disorders in the national comorbidity survey replication. Arch Gen Psychiatry, 62:593-602.

Kılıç S (2017) Kovaryans analizi. Journal of Mood Disorders, 7:73-78.

Kim-Cohen J, Caspi A, Moffitt TE, Harrington HL, Milne BJ, Poulton R (2003) Prior juvenile diagnoses in adults with mental disorder: Developmental follow-back of a prospective-longitudinal cohort. Arch Gen Psychiatry, 60:709–717.

King V, Sobolewski JM (2006) Nonresident fathers' contributions to adolescent well-being. J Marriage Fam, 68:537–557.

Kuzucu Y, Özdemir Y, Menderes A, Öz Ü (2013) Ergen ruh sağlığının anne ve baba katılımı açısından yordanması. Eğitim ve Bilim, 38:96-112.

Lapan SD, Quartaroli MT, Riemer FJ (2012) Introduction to Qualitatice Research. In Qualitative Research: An Introduction to Methods and Designs. (Eds SD Lapan, MT Quartaroli, FJ Riemer):3-18. San Francisco, Jossey-Bass.

Layard R, Clark D (2014) Thrive: The Power of Psychological Therapies. London, Penguin.

Lejuez CW, Hopko DR, Hopko SD (2001) A brief behavioral activation treatment for depression: Treatment manual. Behav Modif, 25:255–286.

Lewinsohn PM (1974) A Behavioral Approach to Depression. In Essential Papers in Psychoanalysis. (Eds Coyne JC):150-181. New York, New York University Press.

Lewinsohn PM, Biglan A, Zeiss AM (1976) Behavioral Treatment of Depression. In The Behavioral Management of Anxiety, Depression and Pain. (Eds PO Davidson):91-146. New York Brunner/Mazel.

Manos RC, Kanter JW, Luo W (2011) The behavioral activation for depression scale–short form: development and validation. Behav Ther, 42:726–739.

Martell CR, Addis ME, Jacobson NS (2001) Depression in Context: Strategies for Guided Action.New York, WW Norton Co.

Martell CR, Dimidjian S, Herman-Dunn, R. (2010) Behavioral activation for depression. In clinical handbook of psychological disorders (Eds Barlow DH):328-365. New York, The Guilford Press.

May D, Litvin B, Allegrante J (2022) Behavioral activation, depression, and promotion of health behaviors: a scoping review. Health Educ Behavior, doi: 10.1177/10901981221090157.

Mazzucchelli TG, Kane RT, Rees CS (2010) Behavioral activation interventions for well-being: A meta-analysis. J Posit Psychol, 55:105–121.

McCauley E, Schloredt KA, Gudmundsen G, Martell CR, Dimidjian S (2016) Behavioral Activation with Adolescents: A Clinician's Guide. New York, Guilford Press.

McCauley E, Gudmundsen G, Schloredt K, Martell C, Rhew I, Hubley S et al (2015) The adolescent behavioral activation program: Adapting behavioral activation as a treatment for depression in adolescence. J Clin Child Adolesc Psychol, 45:291–304.

Mertens DM (2019) Eğitim ve Psikolojide Araştırma ve Değerlendirme (Çeviri Ed. İ. Seçer, S. Ulaş). Ankara, Anı Yayıncılık.

Meshesha LZ, Emery NN, Blevins CE, Battle CL, Sillice MA, Marsh E et al (2021) Behavioral activation, affect, and self-efficacy in the context of alcohol treatment for women with elevated depressive symptoms. Exp Clin Psychopharmacol, 30:494-499.

Miles MB, Huberman AM (1994) Qualitative Data Analysis: An Expanded Sourcebook. Los Angeles, Sage.

Miller GA, Chapman JP (2001) Misunderstanding analysis of covariance. J Abnorm Psychol, 110:40–48.

Murray CJ, Lopez AD (1996) The Global Burden of Disease and Injury Series The Global Burden Of Disease. Boston, Harvard University Press.

Nyström MBT, Stenling A, Sjöström E, Neely G, Lindner P, Hassmén P (2017) Behavioral activation versus physical activity via the internet: A randomized controlled trial. J Affect Disord, 215:85–93.

O'Mahen HA, Woodford J, McGinley J, Warren FC, Richards DA, Lynch TR et al (2013) Internet-based behavioral activation—Treatment for postnatal depression (Netmums): A randomized controlled trial. J Affect Disord, 150:814–822.

Orchard F, Pass L, Marshall T, Reynolds S (2017) Clinical characteristics of adolescents referred for treatment of depressive disorders. Child Adolesc Ment Health, 22:61–68.

Pass L, Hodgson E, Whitney H, Reynolds S (2018a) Brief behavioral activation treatment for depressed adolescents delivered by nonspecialist clinicians: A case ıllustration. Cogn Behav Pract, 25:208–224.

Pass L, Lejuez CW, Reynolds S (2018b) Brief behavioural activation (brief ba) for adolescent depression: A pilot study. Behav Cogn Psychother, 46:182–194.

Pellas J, Renner F, Ji J L, Damberg M (2022) Telephone-based behavioral activation with mental imagery for depression: A pilot randomized clinical trial in isolated older adults during the Covid-19 pandemic. Int J Geriatr Psychiatry, 37:1-11.

Paul B, Usha, VK (2008) Prevalence and predictors of depression among adolescents. Indian J Pediatr, 88:441-444.

Pine DS, Cohen E, Cohen P, Brook J (1999) Adolescent depressive symptoms as predictors of adult depression: Moodiness or mood disorder? Am J Psychiatry, 156:133–135.

Pott SL, Delgadillo J, Kellett S (2022) Is behavioral activation an effective and acceptable treatment for co-occurring depression and substance use disorders? A meta-analysis of randomized controlled trials. J Subst Abuse Treat, 132:1-13.

Rigby K (2000) Effects of peer victimization in schools and perceived social support on adolescent well-being. J Adolesc, 23:57–68.

Ritschel LA, Ramirez CL, Jones M, Craighead WE (2011) Behavioral activation for depressed teens: A pilot study. Cogn Behav Pract, 18:281–299.

Ross G, Brannigan C (2008) Are depressed adolescents routinely offered CBT? A brief review of current practice. Behav Cogn Psychother, 36:113-117.

Saldaña, J (2011) Fundamentals of Qualitative Research. New York, Oxford University Press.

Santor DA, Kusumakar V (2001) Open trial of interpersonal therapy in adolescents with moderate to severe major depression: Effectiveness of novice IPT therapists. J Am Acad Child Adolesc Psychiatry, 40:236-240.

Seçer İ, Ulaş S (Basım aşamasında). Çocuklar için anksiyete ve depresyon ölçeği revize edilmiş formunun klinik olmayan örneklemde psikometrik özelliklerinin incelenmesi.

Seth P, Murray CC, Braxton ND, Diclemente RJ (2013) The concrete jungle: City stress and substance abuse among young adult African American men. J Urban Health, 90:307–313.

Schacter JE, Romano BA (2016) Developmental issues in childhood and adolescent depression. In Depression in Children and Adolescents. (Eds HS Koplewicz, K Emily):1-13. New York, Routledge.

Shapiro M, Setterlund D, Cragg C (2003) Capturing the complexity of women's experiences: A Mixed-method approach to studying ıncontinence in older women. Affilia, 18:21–33.

Shorey S, Ng ED, Wong CHJ (2022) Global prevalence of depression and elevated depressive symptoms among adolescents: A systematic review and meta-analysis. Br J Clin Psychol, 61:287–305.

Skinner BF (2005) Science and Human Behavior. Massachusetts, Pearson Education.

Soni A (2009) The Five Most Costly Conditions, 1996 and 2006: Estimates for the U.S. Civilian Noninstitutionalized Population. Rockville, MD, Agency for Healthcare Research and Quality.

Spates CR, Kalata AH, Ozeki S, Stanton CE, Peters S (2012) Initial open trial of a computerized behavioral activation treatment for depression. Behavior Modif, 37:259–297.

Steckler A, Mcleroy KR, Goodman RM, Bird ST, Mccormick L (1992) Toward integrating qualitative and quantitative methods: An introduction. Health Educ Behav, 19:1–8.

Sturmey P (2009) Behavioral activation is an evidence-based treatment for depression. Behav Modif, 33:818–829.

Tabachnick BG, Fidell LS (2015) Çok Değişkenli İstatistiklerin Kullanımı (Çeviri Ed. M Baloğlu). Ankara, Nobel Akademik Yayıncılık.

Tacchi M, Scott J (2017) Depression: A Very Short İntroduction. New York, Oxford Universit Press.

Tashakkori A, Teddlie C (1998). Mixed Methodology: Combining Qualitative and Quantitative Approaches. California, Sage.

Teddlie C, Yu F. (2007) Mixed methods sampling a typology with examples. J Mix Methods Res, 1:77-100.

Thapar A, Collishaw S, Pine DS, Thapar AK (2012) Depression in adolescence. Lancet, 379:1056–1067.

Turner JS, Leach DJ (2012) Behavioural activation therapy: Philosophy, concepts, and techniques. Behaviour Change, 29:77–96.

Wang X, Feng Z (2022) A Narrative review of empirical literature of behavioral activation treatment for depression. Front Psychiatry, 25:845138.

Weisz JR, McCarty, CA, ValeriSM (2006) Effects of psychotherapy for depression in children and adolescents: A meta-analysis. Psychol Bull, 132:132–149.

Waraan L, Siqveland J, Hanssen-Bauer K, Czjakowski NO, Axelsdóttir B, Mehlum L et al (2022). Family therapy for adolescents with depression and suicidal ideation: A systematic review and meta–analysis. Clin Child Psychol Psychiatry, 0:1-19.

Weitzel E, Pabst A, Luppa M, Kersting A, König HH, Löbner M et al (2022) Are self-managed online interventions for depression effective in improving behavioral activation? A secondary analysis of a cluster-randomized controlled trial. J Affect Disord, 308:413–420.

WHO (2021) Adolescent mental health. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health (Accessed 9.10.2022).

WHO (2022) Depression. https://www.who.int/health-topics/depression#tab=tab_1 (Accessed 9.10.2022).

Yıldırım A, Şimşek H (2016) Sosyal Bilimlerde Nitel Araştırma Yöntemleri. Ankara, Seçkin Yayıncılık.

Zeiss AM, Lewinsohn PM, Muñoz RF (1979) Nonspecific improvement effects in depression using interpersonal skills training, pleasant activity schedules, or cognitive training. J Consult Clin Psychol, 47:427–439.