



Experimental Studies on Acceptance and Commitment Therapy: A Systematic Review

Kabul ve Kararlılık Terapisi Odaklı Deneysel Araştırmalar: Sistemik Bir Gözden Geçirme

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ABSTRACT

This research aimed to provide a systematic review of postgraduate theses that investigate the effectiveness of group interventions prepared based on acceptance and commitment therapy. Following this purpose search was carried out in several databases to include articles and theses written in Turkish on acceptance and commitment therapy without any year restrictions. As a result of the screening, 907 theses and articles were evaluated according to the PRISMA guideline and the selection criteria for the current research 2 article and 7 doctoral theses meeting the criteria were included in the research. It is seen that the studies examined within the scope of the research were prepared in the form of a psychoeducational program to proceed with different variables such as “coping competence, the meaning of life, peer bullying, decision-making strategies, body image flexibility, social appearance anxiety, fear of negative evaluation and test anxiety” and carried out by the researcher themselves. The articles selected for the research were inspected in terms of research model, research group, research design, characteristics of group interventions, measurement tools used, and the effectiveness of group interventions. Acceptance and commitment therapy-based programs examined within the scope of the research seem to be effective on the dependent variable. In the results obtained, it is recommended to use acceptance and commitment therapy (ACT) in protecting and preventive mental health services to prepare adolescents and young adults.

Keywords: Acceptance and commitment therapy, psychoeducation, group intervention, systematic review, young adult, adolescent

ÖZ

Bu araştırmada, kabul ve kararlılık terapisi temelinde hazırlanan grup müdahalelerinin etkisini inceleyen lisansüstü tezlerin sistemli bir şekilde gözden geçirilmesi amaçlanmıştır. Bu amaç doğrultusunda; çeşitli veri tabanlarında, herhangi bir yıl kısıtlaması yapılmadan kabul ve kararlılık terapisi ile ilgili Türkçe yazılmış makale ve tezleri kapsayacak şekilde gerçekleştirilmiştir. Tarama sonucunda 907 tez ve makale PRISMA rehberi ve belirlenen seçim kriterleri doğrultusunda değerlendirilerek, kriterlere uygun olan 7 doktora tezi ve 2 makale araştırmaya dahil edilmiş ve araştırma modeli, deseni, grubu, müdahale özellikleri, ölçme araçları ve müdahale etkililiği açısından incelenmiştir. Müdahalelerin kabul ve kararlılık terapisi temelinde farklı değişkenler “başa çıkma yeterliği, yaşamın anlamı, akran zorbalığı, karar verme stratejileri, beden imgesi esnekliği, psikolojik esneklik sosyal görünüş kaygısı, olumsuz değerlendirilme korkusu ve sınav kaygısı” üzerindeki etkisini belirlemek amacıyla psikoeğitim programı şeklinde hazırlandığı ve araştırmacının kendisi tarafından gerçekleştirildiği görülmektedir. Araştırma kapsamında incelenen kabul ve kararlılık terapisi temelli programların bağımlı değişkeni üzerinde etkili olduğu görülmektedir. Elde edilen sonuçlar ışığında, kabul ve kararlılık terapisinin ergen ve genç yetişkinlere yönelik hazırlanacak müdahaleler aracılığı ile önleyici ve koruyucu ruh sağlığı hizmetlerinde kullanılması önerilebilir.

Anahtar sözcükler: Kabul ve kararlılık terapisi, psikoeğitim, grup müdahalesi, sistemik gözden geçirme, genç yetişkin, ergen

Introduction

In the introduction part of Russ Harris's book translated into Turkish as “Gerçeğin Tokadı” [Reality Slap], the difficult experiences that an individual may face throughout his life are mentioned as follows: “We've all had plenty of slaps that can be called the reality slap in our lives; those moments when life deals us a painful blow, it shock and it hurt us, and it knocks us off balance;

we struggle to stay on our feet and sometimes we fall.” (Harris 2017, p.19). Difficult experiences occurring in different ways sometimes manifest themselves with the death of a loved one, sometimes with the diagnosis of a fatal illness, and sometimes with experiencing or witnessing a sudden and unexpected accident. This study includes a systematic review of intervention studies conducted in Turkey based on acceptance and commitment therapy which is among the third wave therapies

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and deals with the lives of individuals who feel vulnerable in the presence of difficult experiences on the basis of *acceptance* and *commitment* instead of using *conventional* methods. Intervention studies conducted abroad appear to be a compilation of review studies carried out with children (Fang and Ding 2020) and adults (Landy et al. 2015, Coto-Lesmes et al. 2020, Zhenggang et al. 2020). Although there are review studies based on acceptance and commitment therapy in Turkish literature, this study was carried out since there is not any compilation study that deals with experimental studies all together.

Acceptance and commitment therapy is a representative of the third wave of behavioral therapy approaches. Explaining the journey of behavioral therapies that extends to third wave behavioral therapies which includes acceptance and commitment therapy, may be helpful in understanding the original purpose of acceptance and commitment therapy.

First wave behavioral therapies emerged as a response to the psychoanalytic approach, which is at the forefront with the insight, preconscious, conscious and unconscious concepts, and focuses on the individual's behaviors that can be examined through observation and the causes of these behaviors. While the first wave behavioral therapies which make use of learning experiences and conditioning responses to explain the individual's behavior continued to be popular until the late 1970s, the development process of the second wave behavioral therapies, however, began with Donald Meichenbaum, who combined cognitive and behavioral therapy. Among the second wave behavioral therapies there are cognitive behavioral therapies and problem-solving therapy, eye movement desensitization and reprocessing (EMDR) which are based on addressing the individual's cognitive processes and behaviors together rather than focusing only on the individual's thoughts or behaviors (Yerlikaya 2020).

The common ground of the third-wave behavioral therapies, which finds the structure of cognitive-behavioral therapies focusing on reducing the symptoms of individuals insufficient and finds the individual's gaining awareness about their internal processes and initiating the acceptance process regarding themselves and their experiences after gaining it meaningful, is that they emphasize the present moment and acceptance (Kul and Türk 2020). Major third wave behavioral therapies include dialectical behavioral therapy (Linehan 1993), mindfulness-based cognitive therapy (Segal et al. 2002), acceptance and commitment therapy (Hayes and Strosahl 2004). Having become prominent with both its theoretical and intervention studies in recent years, acceptance and commitment therapy is among the third wave behavioral therapies (Hayes 2016). Acceptance and commitment therapy is open to experience with focusing on the present moment, and it refers to the individual's performing the act by surrendering (commitment) themselves to whatever is being done. *Acceptance and Commitment Therapy is abbreviated as ACT*, and this abbreviation is not pronounced by its individual letters, but by spelling the English word "ACT", which means movement or action in Turkish. Acceptance and commitment therapy reveals three processes at this very point (Işık et al. 2021).

A = Accept your thoughts and feelings, experience the moment (Accept)

C = Choose an action based on values (Choose, Commit)

T = Take action

This acrostic, generated with the abbreviation of acceptance and commitment therapy (ACT) for speech and meaning easiness, briefly states the main objectives in the consultation process. -

The purpose of ACT is to help individuals live a rich and meaningful life, and to accept them instead of escaping from pain in the natural flow of life (Harris 2017). ACT is based on the *relational frame theory*, the theory of language and cognition. Relational frame theory proposes that human language and cognition can mutually associate events that are unrelated to each other, and individuals can establish relationships and connections between events. The individual pays as much attention to the environment in which the behavior takes place, in other words to the context, as much as the stimulus (Hayes et al. 2006). In relational frame theory which states that people learn to speak and their spoken language through interaction with their environment, the individual's interaction with their environment is called the *functional context* (Işık et al. 2021). According to relational framework theory, the core of human language and cognition is the ability to learn to relate events under control of arbitrary contextual circumstance. The relational frame theory deals with the effects of language and cognition on the pain experienced by individuals. Challenging the language cluster, seen as a source of problem, is among the goals of acceptance and commitment therapy (Hayes 2016). Instead of avoiding and expelling painful feelings and thoughts from one's mind, learning to live with those painful feelings and thoughts to reduce the effects of painful experiences, to alleviate their effects on the individual and to weaken their effects on the individual's life (Harris, 2016) plays an important role in acceptance and commitment therapy. One of the general purposes of ACT is to weaken the actual verbal content of the cognition that causes the individual to display avoidance behavior and to create an alternative context in which a behavior appropriate to the individual's value is more likely to occur (Hayes, 2016). Unfortunately, attempts to avoid disturbing particular events tend to increase their functional significance as they become more conspicuous. Because these control efforts are themselves linked to verbally conceptualized negative consequences, and this leads to narrowing the range of possible behavior. In other words, as the control effort increases, the individual moves away from the solution. As people begin to live in their own minds, their contact with the present moment decreases (Hayes et al. 2006). Called the main source of the suffering experienced by the individual, the conceptualized self reveals the individual's self-definition, self-explanation, in other words, the way of expressing themselves. Individual's expressing or defining themselves through limited concepts seems to be effective in the emergence of problems (Işık et al. 2021). The conceptualized self is thought to increase its effect on the individual and causes more rigidity. ACT has the general aim that each of these basic problems can be overcome through increasing *the psychological flexibility* (communicating more thorough with

the present moment as a conscious individual, and while doing so, changing one's behavior or accepting the negative things that occur) (Hayes et al. 2006). Psychological flexibility refers to taking the experiences as they come, being conscious of one's experiences and being open to experiences, regardless of what is happening at that very moment (Işık et al. 2021). The fact that the individual is conscious, open to experiences, and able to act in line with their values more will increase the quality of life. Six basic processes of the ACT appear at this very point. The figure called ACT hexagon includes *being present, defusion, acceptance, self-as-context, values and value-oriented actions* (Harris 2017). Explaining the concepts appearing in model individually, also called the psychological flexibility model, can provide a better understanding of the ACT hexagon.

Acceptance: Acceptance is taught as an alternative to experiential avoidance. Acceptance means giving room in the mind for feelings, memories and experiences that particularly harm or upset us. Acceptance involves actively and consciously embracing these special events that occur as a result of one's luck, without struggling with psychologically damaging factors or without making unnecessary attempts to change their frequency or form (Hayes et al. 2006).

Being present: This process involves being conscious of the emotions experienced in the moment with the presence of momentary awareness. The individual's inclination to their inner world, being aware of what is happening in the outer world, and being able to direct their attention flexibly explains the contact with the present moment. Being present aims to prevent the individual from being stuck between the past and the future and to ensure their active participation in interpersonal relations (Işık et al. 2021).

Defusion: Also called cognitive defusion, it means that the individual stops for a moment and moves away from their current situation, takes a step back from the thoughts, pictures and memories that occupy their mind. Defusion is when an individual accepts their thinking process as it is and follows their thoughts instead of clinging to his/her intellectual process and wrestling with it (Harris 2017).

Self-as-context: Although the individual's feelings, thoughts, values and responsibilities change throughout his life, the "self" who resides in and observes this process of change and experiences the process, does not change. Self-as-context, which can also be expressed as being conscious and aware of one's experiences and livings, facilitates defusion and acceptance (Hayes et al. 2006).

Values: Values are expressed as determining the path to be followed in one's life and maintaining a meaningful work process (Coto-Lesmes et al. 2020). Values are the principles that guide and motivate the individual to take action throughout his life (Kul and Türk 2020).

Value-oriented actions: Value-oriented actions refer to behaviors that are guided by the values of the individual. It is positive for an individual to know what their own values are, however, what makes life more meaningful and adds richness and fullness to it

is to display behaviors compatible with these values. Expressing a wide range of behaviors, value-oriented actions mean doing what is necessary for values (Harris 2017).

The individual is dragged into psychopathology by being stuck between the past and the future and exhibiting rigid attitudes instead of thinking psychologically flexible. Aiming to help the individual lead a rich, full and meaningful life to effectively handle the pain they may face as a matter of living, ACT aims to achieve this goal with its psychological flexibility model. The psychological flexibility model consisting of acceptance, being present, defusion, self-as-context, values and value-oriented actions, tries to reduce the rigidity of the individual's cognition and action, to accept the pain and experiences, and to lead a meaningful life.

As the individual tries to hold on to happiness and avoid pain, these will slip out of their hands every time. A life spent in pursuit of feelings that make the individual feel good may not be satisfactory in the long run. The more effort an individual puts into reaching pleasing actions, the closer they will get to anxiety and depression they want to avoid (Harris 2016). Stating that individuals are not *impaired or defective*, but stuck, and that the pain can be a facilitating factor in having a rich and meaningful life, ACT manifests itself as third wave behavior therapy with a strong theoretical framework.

It is seen that there are studies conducted in Turkey on ACT, which has a strong theoretical background, but there is no research that considers them as a whole and examines effectiveness studies. The aim of this research is to examine the studies that test the effectiveness of ACT, in other words, to present a general framework for experimental studies by systematically reviewing the experimental studies based on ACT. For this purpose, the questions to be answered can be listed as follows: What are the characteristics of experimental studies based on acceptance and commitment therapy in Turkey? How were the research group, design and session contents of the experimental studies determined? What are the measurement tools used in experimental studies? What is the effectiveness level of experimental studies?

Method

Research Strategy

This research is a systematic review aiming to examine the ACT-based interventions and the effectiveness of these intervention studies in Turkey. The PRISMA guideline was used to examine the literature review in a systematic and structured way (Moher et al. PRISMA Group 2009). Within the scope of the study, a literature review was carried out between February 2021 and October 2021 in the Google Academic, TR Dizin, YÖK Ulusal Tez Merkezi, Springer Link, Wiley Online Library and Sage Journals databases, with the publication date filtered between 2010-2021 and covering articles and theses related to ACT written in Turkish and English. Since only one of the studies carried out in the foreign literature after 2010 is included in the scope of the research, the systematic review is limited to the studies conducted

in Turkey and in Turkish and English. To identify experimental studies based on ACT and not to narrow the scope, “acceptance and commitment therapy”, “acceptance and devotion therapy”, “acceptance and commitment program” were used as key words.

Selection Criteria

The following selection criteria were used in the literature review to determine the articles and theses to be included in the research: a) Articles on group counseling interventions based on ACT for adolescents and young adults, b) Theses on group counseling interventions based on ACT for adolescents and young adults, c) Articles on psychoeducational interventions based on ACT for adolescents and young adults, d) Theses on psychoeducational interventions based on ACT for adolescents and young adults, e) Articles and theses that include the content and sessions of the intervention program based on ACT for adolescents and young adults, f) Articles and theses that demonstrate the effectiveness of the intervention program based on ACT for adolescents and young adults with statistical findings. The exclusion criteria of the study are as follows: a) compilation studies based on ACT, b) Articles and theses whose abstracts can only be accessed, c) Non-experimental studies, d) Descriptive articles and theses, e) Case studies, f) Treatment programs based on ACT.

907 studies were reached in the first stage of the literature review. Within the scope of the study, nine of 907 studies that were evaluated in detail were decided to be considered in line with the selection and exclusion criteria. While two of these studies are

articles, seven of them are thesis studies. The PRISMA process for the systematic review of the studies to be included in the research is shown in figure 1.

Results

In the content of this research, seven doctoral dissertations and two articles on ACT-focused interventions conducted in Turkey with adolescents and university students between 2010-2021 were selected and examined. The characteristics and findings of seven doctoral theses and two articles examined within the scope of the research are shown in Table 1 and discussed under the titles listed below.

Research Groups

It was observed that three of the nine studies, seven doctoral dissertations and two research articles published between the years 2010-2021 were conducted with adolescents (Usta 2017; Yalnız 2019; Yapan 2021) and the other six were conducted with university students (Demirci-Seyrek 2017; Ercengiz and Şar 2018; Kaya-Akdemir 2018; Uğur 2018; Kaya 2019; Kırca and Eksi 2020) and that the grades levels of research groups differed as 9, 10, 11, 12. grades in secondary education and 1, 2, 3, 4. grades in higher education. When examining how research groups are determined in studies, all studies is seen to be student-based (Demirci-Seyrek 2017; Ercengiz and Şar 2018; Kaya-Akdemir 2018; Uğur 2018; Kaya 2019; Kırca and Eksi 2020).

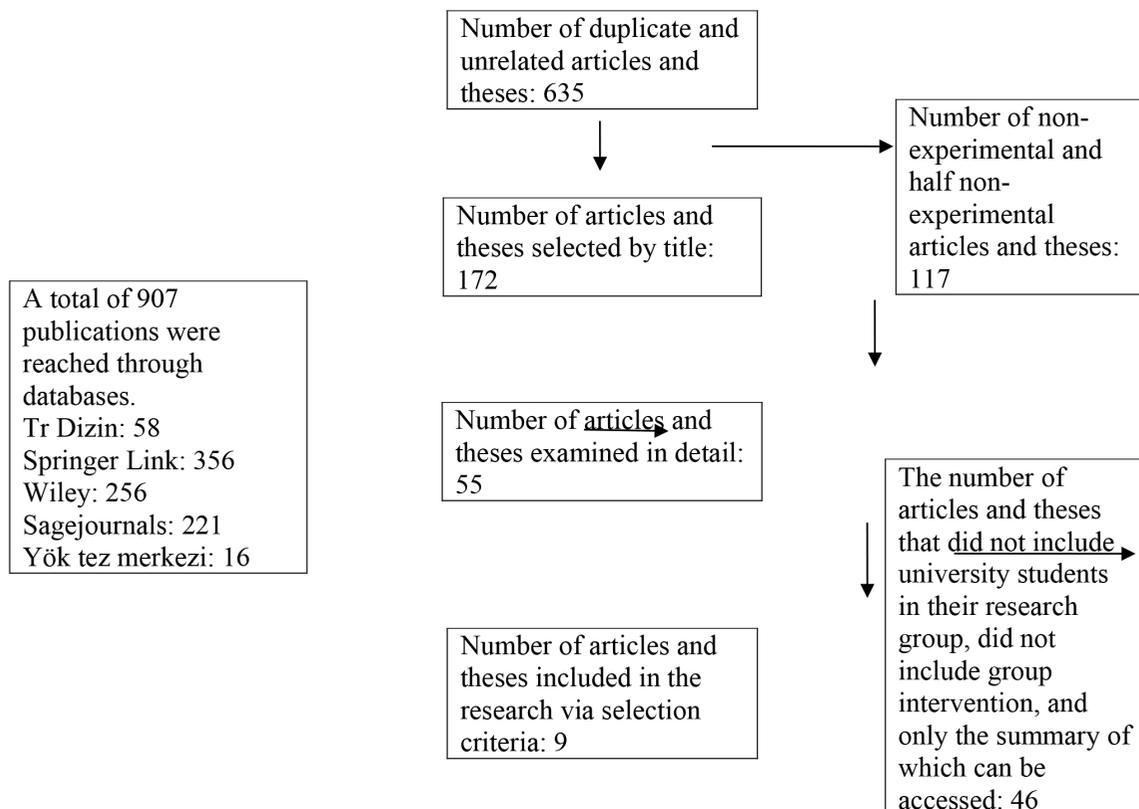


Figure 1. PRISMA Flow Chart

Table 1. Characteristics of Selected Studies

Author, Year, Type of Thesis	Research Group	Research Design	Interventions Applied to Groups	Characteristics of the Acceptance and Commitment Program	Measurement Tools Used	Conclusion and Comment
Demirci-Seyrek (2017) Turkey PhD thesis	University students 1, 2, 3, 4th Grade N: 36 Experiment: 9x2 Control: 9x2	Solomon Four Group Experimental Model was used in the research.	Experimental groups: ACT-Based Psycho-education Program Control groups: no intervention.	The psycho-education program, which lasted 8 sessions, each of which was 90 minutes, started with acquaintance and continued with being in the moment, staying here and now, observing self, watching thoughts, embracing life, acceptance and choices and ended with the determination of value-oriented life goals to take action.	*Meaning of Life Inventory *Personal Information Form	The program is observed to provide an increase in the presence meaning, and a decrease in the sought-after meaning of their lives, which is one of the dependent variables. It was determined that there was no change in the control group.
Usta (2017) Turkey PhD thesis	Adolescents 9, 10, 11th Grade N: 24 Experiment: 12 Control: 12	A 2x3 (experimental/control groups x pre-test/post-test/follow-up test) split plot pattern was used in the research.	Experimental group: ACT-Oriented Psycho-Education Program Control group: no intervention.	The psycho-education program, which lasted 8 sessions with each of which consisted of 60 minutes, started with the acquaintance, structuring and introduction of the program, continued with social appearance anxiety model, the concepts of control and acceptance, solutions to difficulties, alternative solutions, values and determination of decisive action, barriers to thought, distancing from thoughts and ended with a general evaluation and termination.	*Social Appearance Anxiety Scale (SAAS) *Acceptance and Action Questionnaire (AAQ) *Personal Information Form	It was concluded that the program was effective in reducing social appearance anxiety, the dependent variable, and increasing acceptance and action-taking, and that this effect did not change during the follow-up process. No change was observed in control group.
Ercengiz ve Şar (2018) Turkey Article	University students N: 24 Experiment: 12 Control: 12	A 2x3 (experimental/control groups x pre-test/post-test/follow-up test) split plot design was used in the research	Experimental group: Acceptance and Commitment Therapy Oriented Psycho-Education Program Control group: no intervention	The psycho-education program, which lasted 9 sessions with each of which consisted of 90 minutes, started with the acquaintance and introduction of ACT, continued with the concepts of decision-making styles, feelings about decision-making styles, focusing on the present, reactions during decision-making, values, challenging thoughts, non-value-oriented behavioral difficulties, difficult experiential acceptance, conceptual self, experiential avoidance and cognitive fusion, and ended with a general evaluation.	*Decision Making Styles Questionnaire (DMSQ) *Information Collection Form *Group Session Rating Questionnaire *Therapeutic Process Evaluation Scale	The program was observed to cause a decrease in the dependent variable of avoidant decision-making styles and this decrease continued in the follow-up period. In addition, no change was observed in control group.
Kaya-Akdemir (2018) Turkey PhD thesis	University students 1st Grade N: 20 Experimental: 10 Control: 10	A 2x3 (experimental/control groups x pre-test/post-test/follow-up test) split plot design was used in the research.	Experimental group: ACT-Oriented Psycho-Education Program Control group: no intervention	The psycho-education program, which lasted 8 sessions with each session 75 minutes, started with the acquaintance and introduction of ACT, continued with creative hopelessness, experiential avoidance, control, mental fusion/defusion, observing self, acceptance of disliked emotions, being present, mindfulness, values, value-oriented goals and actions, and ended with a general evaluation.	*Coping Self-Efficacy Scale (CSFS) *Personal Information Form	It was concluded that the program was effective in increasing the dependent variable, which is coping efficacy, and this effect did not change in the follow-up measures, and it was observed that there was no change in the control group.

Table 1. Continued

Author, Year, Type of Thesis	Research Group	Research Design	Interventions Applied to Groups	Characteristics of the Acceptance and Commitment Program	Measurement Tools Used	Conclusion and Comment
Uğur (2018) Turkey PhD thesis	University students 1, 2, 3, 4th grade N: 26 Experimental: 13 Control: 13	2x2 (pre-test, post-test with control group) real experimental design was used in the research	Experimental group: Program based on Acceptance and Commitment Therapy Control group: no intervention	The psycho-education program, which lasted 8 sessions with each session of 90 minutes, started with a warm-up and structuring, continued with fear of negative evaluation, focusing on the moment, psychological flexibility, cognitive fusion/difusion, values, orientation to values with decisive actions, acceptance as a coping strategy, and ended with trials for fear of negative evaluation.	The Brief Fear of Negative Evaluation Scale (BFNE) *Acceptance and Action Questionnaire-II (AAQ-II) *Personal Information Form	The program was determined to be effective in reducing the fear of negative evaluation, the dependent variable, and this effect continued at the end of the three-month follow-up and no change was observed in the control group.
Kaya (2019) Turkey PhD thesis	University students 1, 2, 3, 4th grade N: 42 Experimental: 14 Placebo: 14 Control: 14	3x3 (experimental/placebo/control groups x pre-test/post-test/follow-up test) factorial mixed design was used in the research	Experimental group: Body Image Flexibility Psycho-Education Program Placebo group: Personal development program Control group: no intervention	The psycho-education program, which lasted 8 sessions with each session of 75 minutes, started with acquaintance and program introduction, continued in the context of body image, dysfunctional control strategies, cognitive fusion/difusion, acceptance exercises, self exercises, determined behavior, values, value-oriented goals and actions, body image flexibility, and ended with termination and general evaluation.	*Body Image Flexibility Questionnaire *Personal Information Form	It was concluded that the program was effective in increasing bodily image flexibility, which is the dependent variable, and that this effect continued during the follow-up period. No change was observed in the placebo and control groups.
Yalın (2019) Turkey PhD thesis	Adolescents 9, 10, 11th Grade N: 24 Experiment: 12 Control: 12	A 2x3 (experimental/control groups x pre-test/post-test/follow-up test) split plot design was used in the research	Experimental group: ACT-Oriented Psycho-Education Program Control group: no intervention.	The psycho-education program, which lasted 10 sessions with each session of 90 minutes, started with warm-up and giving information about the group, continued with the concepts of self-knowledge, self-acceptance, vulnerability, emotion recognition, emotion regulation, control, coping with anxiety, resilience, ACT hexagon, types of bullying, isolation, social exclusion, coping with social exclusion, empathy, social skills, and ended with leaving with positive emotions and evaluation.	*Peer Victimization (Bully and Victim) Scale (PVS) *Personal Information Form	The program was observed to be effective in reducing peer bullying, which is the dependent variable, and this effect did not change in the follow-up measurements. No change was observed in control group.

Table 1. Continued

Author, Year, Type of Thesis	Research Group	Research Design	Interventions Applied to Groups	Characteristics of the Acceptance and Commitment Program	Measurement Tools Used	Conclusion and Comment
Kırca ve Eksi (2020) Turkey Article	University students 1st grade N: 13 Experimental: 8 Control: 5	2x2 (pre-test, post-test with control group) real experimental design was used in research	Experimental group: ACT-Based Psychological Flexibility Psycho-Education Program Control group: no intervention	The psycho-education program, which lasted 8 sessions with each session of 90 minutes, started with the meeting, determining group rules and self-recognition, self-observation, and metacognition concepts, then continued with the contexts of functions of the mind, the self as a context, acceptance, avoidance, difficult inner events, cognitive fusion and diffusion, approaching thoughts in the context of their functional roles, existence, wandering mind, autopilot, difference between values and goals determining values, determining the goals of the deceased, value-based goals, value-based actions, barriers to value-based actions, solutions to overcome obstacles and ended with termination and general evaluation.	*Acceptance and Action Questionnaire II *Open-ended question list	It was concluded that the program increased psychological flexibility, which is the dependent variable, that it provide a change in themes of staying present, self-control, value-oriented actions, difusing from and coping with emotions and thoughts, knowing oneself and one's environment, acceptance, not avoiding, managing conflict and crisis, being authentic and anxiety. No change was observed in control group.
Yapan (2021) Turkey PhD thesis	Adolescents 12th grade N: 46 Experimental: 15 Experimental 2: 16 Control: 15	3x4 (experimental/control groups x pre-test/post-test/follow-up 1 and 2 test) factorial mixed design was used in the research	Experimental group: ACT Psycho-education Program Experimental group 1: CBT psycho-educational program Control group: no intervention	The psycho-education program, which lasted 7 sessions with each session of 90 minutes, started with acquaintance and introduction of program, continued within the context of test anxiety, control strategies, self-worth, values, difference between control and voluntariness, acceptance skills, cognitive difusion, giving space for self-as-context skills and their relationship with test anxiety, and ended with termination and positive emotions.	*Demographic information form, *Test Anxiety Inventory (TAI) The Avoidance and Fusion Questionnaire – Youth (AFQ-Y) Automatic Thoughts Questionnaire (ATQ-N)	It was concluded that ACT and CBT programs were effective in reducing test anxiety, which is the dependent variable, and this effect continued during the follow-up period. In addition, it was observed that the subjects in the ACT group experienced a decrease in avoidance and fusion levels.

In six studies in which psycho-educational programs were applied (Demirci-Seyrek 2017; Usta 2017; Ercengiz and Şar 2018; Kaya-Demir 2018; Uğur 2018; Yalnız 2019), it was observed that the number of experimental and control groups varied between 20 and 36 and they were equally distributed among the groups. Besides, in the study in which a placebo group was formed alongside the experimental and control groups, it is understood that the number of groups was 42 and the participants were equally distributed into three groups (Kaya 2019). In the last study, it is seen that there were two experimental and one control groups, and 15 participants were assigned to experiment 1 and control group, and 16 participants to experiment 2 group (Yapan 2021). Finally, in one study, it is seen that the numbers of the experimental and control groups are not equal (Kırca and Eksi 2020).

In nine studies that designated the research group as student-based, firstly the institution/school to be studied was determined, then the examinations were made in the context of the existing criteria and the students who met the criteria were determined to be included in the research. Usta (2017) chose an Anatolian High School as a research environment in order to determine the effect of the psycho-education program, prepared based on ACT, on social appearance anxiety. Accordingly, 376 adolescents (9th, 10th and 11th grade students) who volunteered to participate in the research were surveyed through forms suitable for the variables. In addition, the participant pool was determined by excluding students who have recently experienced trauma, who are extremely thin, overweight or obese, or have undergone or are undergoing therapy. Then, a pre-interview was held with the students who met the criteria, and 48 potential members who volunteered for the research were randomly assigned to the 12 student experimental group and the 12 student control group.

In Ercengiz and Şar's (2018) study prepared based on ACT, the effect of the psycho-education program on decision-making styles were investigated and 400 volunteer university students were surveyed with an appropriate measurement tool. In addition, students who had previously received psychiatric treatment and participated in different programs were excluded from the study, a pre-interview was held with the students who met the criteria and 35 volunteer students were selected. Then, the participants were also examined in terms of characteristics that could be related to the dependent variable such as their sex, age, department, parents' marital status, and their level, and 11 students were not included in the study since they did not meet the criteria. Of the remaining 24 students, 12 were assigned to the experimental group and 12 to the control group.

In Demirci-Seyrek's (2017) study prepared based on ACT, the effect of the psycho-education program on the meaning of life, 629 volunteer university students were surveyed with appropriate measurement tools. Students who received psychological treatment, were diagnosed and experienced intense rumination were excluded from the study, and out of 18 students, nine were assigned to the experimental group and nine were assigned to the control group randomly by ordering from the lowest score to the highest score.

In Kaya-Akdemir's (2018) study prepared based on ACT, to determine the effect of the psycho-education program on coping efficacy 342 university students who volunteered were surveyed with appropriate measurement tools. In addition, the participant pool was determined by excluding students who were not in the middle in terms of scores. Students who volunteered to participate in the research were determined through the pre-interview, and out of 24 students included in the research, 12 were randomly assigned to the experimental group and 12 were assigned to the control group.

In Uğur's (2018) study prepared based on ACT, to determine the effect of the psycho-education program on the fear of negative evaluation, 837 university students who volunteered were surveyed with appropriate measurement tools. In addition, the students who were not in the middle group in terms of scores were excluded from the study, and the scores were ordered from the lowest to the highest score, and out of total 26 volunteer students, 13 were assigned to the experimental group and 13 were assigned to the control group.

In Yalnız's (2019) study prepared based on ACT, to determine the effect of the psycho-education program on peer victimization, 232 volunteer adolescents (9th, 10th and 11th grade students) were surveyed with appropriate measurement tools. After assigning of 24 students, 12 to the experimental group and 12 to the control group, information about the group process was given through interviewing.

In Kaya's study prepared based on ACT, to determine the effect of the psycho-education program on body image flexibility, 1100 university volunteer students were surveyed with appropriate measurement tools. A research group consisting of 14 students in the experimental group, 14 in the placebo group and 14 in the control group was formed aimfully according to the students' suitability for the research.

In Yapan's (2021) study, to determine the effect of the psycho-education program on the test anxiety of the students, 192 volunteer students were surveyed with appropriate measurement tools. 84 students, who met the research criteria such as test anxiety score, voluntary participation, being a 12th grader, were interviewed and 46 students who wanted to be included in the study were distributed into three groups.

Research Model

When the seven PhD theses and two articles are examined within the scope of the research according to the research model, it is seen that three studies (Usta 2017, Kaya-Akdemir 2018, Yalnız 2019) were planned in 2x3 split-plot design, one study (Demirci-Seyrek 2017) was planned in a solomon four-group experimental design, one study (Uğur 2018) was planned in 2x2 real experimental, one study (Kaya 2019) was planned in a 3x3 split plot factorial mixed design, and the last study (Yapan 2021) was planned in a 3x4 split plot factorial mixed design. When the articles are examined, it is seen that one research (Kırca and Eksi 2020) is planned in a 2x2 real experiment, and another research (Ercengiz and Şar 2018) is planned in a 2x3 split-plot design. When the duration and format

of the follow-up studies are examined, it is seen that the follow-up measurement was applied again with the same scales to all groups, two months later (Usta 2017; Kaya-Akdemir 2018, Yalnız 2019), three months later (Ercengiz ve Şar 2018, Uğur 2018), three weeks later (Kaya 2019), one month and three months (Yapan 2021) later. In addition to quantitative evaluations, it is seen that there are two studies in which both the sessions and the process are evaluated with qualitative questions (Ercengiz and Şar 2018, Kırca and Eksi 2020).

Theoretical Orientations of the Interventions Prepared Based on ACT, Number of Sessions, Duration and Contents of the Sessions

It is seen that all of the seven PhD theses reviewed were made based on ACT, and were prepared as a psycho-educational program in order to intervene in different variables such as coping efficacy, meaning of life, peer bullying, body image flexibility, social appearance anxiety, fear of negative evaluation, and test anxiety and were carried out by the researchers themselves (Demirci-Seyrek 2017, Usta 2017, Kaya-Akdemir 2018, Uğur 2018, Kaya 2019, Yalnız 2019, Yapan 2021). Similarly, the programs discussed in the two articles were prepared with the aim of gaining decision-making strategies and increasing psychological flexibility (Ercengiz and Şar 2018, Kırca and Eksi 2020).

When the seven PhD theses and two articles reviewed are examined in terms of session duration, it is seen that six studies lasted 90 minutes (Demirci-Seyrek 2017, Ercengiz ve Şar 2018, Uğur 2018, Yalnız 2019, Kırca and Eksi 2020, Yapan 2021), two studies lasted 75 minutes (Kaya-Akdemir 2018, Kaya 2019) and one study lasted 60 minutes (Usta 2017). The sessions continued for seven weeks (Yapan 2021), eight weeks (Demirci-Seyrek 2017, Usta 2017, Kaya-Akdemir 2018, Uğur 2018, Kaya 2019, Kırca and Eksi 2020), 9 weeks (Ercengiz and Şar 2018) and ten weeks (Yalnız 2019), with one session per week.

Seven PhD theses and two articles within the scope of the research were examined according to the sessions' contents, and the data obtained are given as follows: The psycho-education program prepared by Usta (2017) to reduce the social appearance anxiety of the students in the experimental group started with the acquaintance, structuring and introduction of the program. Then, the program continued with concepts of social appearance anxiety model in ACT, concepts of control and acceptance, difficulties and solutions experienced by adolescents, alternative solutions, values and determination of decisive action, barriers to and distancing from thought, and ended with a general evaluation and termination. During the program, different activities such as meditation, homework, giving information and metaphor were used.

The psycho-education program prepared by Demirci-Seyrek (2017) to help students in the experimental group increase their meaning of life started with acquaintance. The sessions continued with being present, staying here and now, observing self, watching thoughts, embracing life, acceptance and choices, and ended with determining value-oriented life goals for taking

action. During the program, breathing exercises, homework, stories, warm-up activities and different exercises were used.

The psycho-education program prepared by Ercengiz and Şar (2018) to reduce the addiction and avoidance decision-making styles of the students in the experimental group started with the acquaintance and introduction of ACT. Then, the sessions continued with the concepts of decision-making styles, emotions related to decision-making styles, focusing on the moment, reactions during decision making, values, challenging thoughts, non-value-oriented behavior difficulties, accepting difficult experiences, conceptual self, experiential avoidance, and cognitive fusion. The program ended with a general evaluation. During the program, awareness raising activities, relaxation exercises, brainstorming, metaphors and homework were included.

The psycho-education program prepared by Kaya-Akdemir (2018) to increase the coping skills of the students in the experimental group started with the acquaintance and introduction of ACT. Afterwards, the sessions continued with creative hopelessness, experiential avoidance, control, mental fusion/difusion, observing self, acceptance of unpleasant feelings, being present, mindfulness, values, value-oriented goals and actions. The program ended with a general evaluation. Various techniques such as exercise, homework, giving information, metaphor, daydreaming and drama were used during the program.

The psycho-education program prepared by Uğur (2018) in order to reduce the fear of negative evaluation experienced by the students in the experimental group started with warm-up and structuring. The following sessions continued with the concepts of fear of negative evaluation, focusing on the moment, psychological flexibility, cognitive fusion/difusion, values, inclining to values with decisive actions, acceptance as a coping strategy. The program ended with trials for fear of negative evaluation. During the program, techniques such as various exercises, homework, giving information and stories were used.

The psycho-education program prepared by Yalnız (2019) to reduce the peer bullying of the students in the experimental group started with warm-up and group information. The following sessions continued with the topics of self-knowledge, self-acceptance, valuableness, emotion recognition, emotion regulation, control, coping with anxiety, resilience, ACT hexagon, types of bullying, isolation, social exclusion, coping with social exclusion, empathy and social skills. The program ended with leaving with positive feelings and evaluation. During the program, giving information, homework, asking questions, role playing, bibliotherapy, breathing exercises, metaphor, grading and various exercises were used.

The psycho-education program prepared by Kaya (2019) according to the ACT hexagon in order to increase the body image flexibility of the students in the experimental group started with an acquaintance and program introduction. Then, the session continued with the topics of body image, dysfunctional control strategies, mental fusion/difusion, acceptance exercises, selfdom exercises, decisive behavior, values, value-oriented

goals and actions, body image flexibility. The program ended with termination and general evaluation. During the program, experiential experiences, various exercises and metaphors were used.

The psycho-education program that Kırca and Eksi (2020) prepared to increase psychological flexibility started with acquaintance and determining group rules. Then, the session continued within the contexts of functions of mind, the self as a context, acceptance, avoidance, difficult inner events, cognitive fusion and difusion, approaching thoughts in the context of their functional roles, existence, wandering mind, autopilot, difference between values and goals, determining values, determining the goals of the deceased person, value-based goals, value-based actions, barriers to value-based actions, solutions to overcome obstacles, and ended with termination and general evaluation.

The psycho-education program prepared by Yapan (2021) based on ACT in order to reduce the test anxiety of the students in the experimental group started with the acquaintance and introduction of the program. Then it continued within the contexts of test anxiety, control strategies, self-worth, values, difference between control and voluntariness, acceptance skills, cognitive difusion, giving space for self-as-context skills and their relationship with test anxiety, and ended with termination and positive emotions. As a result, in addition to the concepts of ACT, it is seen that the content of the concept constituting the dependent variable of the research is also included in the sessions and different techniques are used.

Measurement Tools Used in the Research

When the measurement tools used to test the effectiveness of the ACT-based psycho-educational interventions applied in the studies examined within the scope of the study are analysed, both quantitative and qualitative measurement tools -different from each other and mostly quantitative- are seen to be included in the studies. Personal Information Form, which includes the demographic information of the study group and some criteria, was used in all of the studies (Demirci-Seyrek 2017, Usta 2017, Ercengiz and Şar 2018, Kaya-Akdemir 2018, Uğur 2018, Kaya 2019, Yalnız 2019, Yapan 2021). However, it is observed that while measurement tools related to acceptance and commitment were used in three studies (Usta 2017, Uğur 2018, Yapan 2021), measurement tools related to dependent variable were used in other studies. Measurement tools used in studies to determine the difference in dependent variable are as follows: Acceptance and Action Questionnaire-II (Usta 2017, Uğur 2018); Social Appearance Anxiety Scale (Usta 2017); Meaning of Life Inventory (Demirci-Seyrek 2017). The effectiveness of the research was tried to be determined with these measurement tools. In addition, Coping Self-Efficacy Scale (CSES) (Kaya-Akdemir 2018); The Brief Fear of Negative Evaluation Scale (BFNE) (Uğur 2018); Body Image Flexibility Questionnaire (Kaya 2019); Peer Victimization Scale (Yalnız 2019) were used. In addition to the Decision Making Styles Questionnaire (DMSQ) and Test Anxiety Inventory (Yapan 2021), qualitative research forms were preferred to evaluate the sessions and the process. (Ercengiz and Şar 2018, Kırca and Eksi 2020).

Effectiveness of ACT-Focused Psycho-educational Programs

In all of the studies examined within the scope of the research, it was determined that the applied program contributed to the increase or decrease in the level of the dependent variable intervened. In addition, the existing effect on the independent variable continued in the monitoring measurements.

In Usta's (2017) study, the ANOVA technique was used. In the study, the program was determined to be significant in reducing social appearance anxiety ($F_{(1-22)} = 18.782$; $p < .05$). Similarly, the follow-up scores of social appearance anxiety scores ($F_{(2-44)} = 52.611$; $p < .05$) were found to be lower than the first measurements and the social appearance anxiety post-test and follow-up test measurement scores of the experimental group were significantly lower than the scores of the control group. Finally, it was observed that there was no significant difference between the social appearance anxiety scores of the students in the control group during the experimental process ($F_{(2-33)} = .30$, $p > .05$).

Ercengiz and Şar (2018) used the ANOVA technique. The difference in the dependent decision-making sub-dimension ($F_{(2-44)} = 12.793$; $p < .001$) of the research's decision-making styles scale was found to be statistically significant. Similarly, the difference in social appearance anxiety scores ($F_{(2-44)} = 52.611$; $p < .05$) in the follow-up process after the experiment was found to be statistically significant. The scores in the follow-up measurements are observed to be lower than the pre-test measurement scores. In addition, it was observed that there was no time effect and after the program process, the social appearance anxiety scores of the experimental group were lower than the scores of the control group. Finally, no significant difference was observed in control group's social anxiety scores ($F_{(2-33)} = .307$, $p > .05$).

Demirci-Seyrek (2017) used the ANOVA technique in their research. The difference in the scores of the experimental 1 group in their sought-after meaning ($F_{(2-16)} = 11.504$, $p < .001$) and current meaning scores ($F_{(2-16)} = 5.917$, $p < .01$) after the program process was found to be statistically significant. In the post-test measurements, the sought-after meaning and current meaning scores of the experimental group decreased compared to the pre-test measurements and there was no significant decrease until the follow-up test. In addition, a significant difference is seen in both the sought-after meaning ($F_{(3-32)} = 11.409$, $p < .05$) and the current meaning ($F_{(3-32)} = 3.732$, $p < .05$) aspects of the post-test measurement scores. In both of the experimental group, it was seen that the sought-after meaning scores were significantly lower than the two control groups, and the current meaning levels were significantly higher. Finally, there is no significant difference between the sought meaning and existing meaning scores of the students in the control group.

Kaya-Akdemir (2018) used a two-factor variant analysis technique for repeated measurements over a single factor. The difference between the scores of the study's coping efficacy scale ($F_{(1-18)} = 3.176$; $p > 0.05$) was found to be insignificant. This result shows that there is no significant difference between the

scores of the coping efficacy scale in the measurements of the experimental and control groups.

Uğur (2018) used the ANOVA technique in their study. The difference between the fear of negative evaluation scores ($F_{(1,24)}=7.215$; $p<.05$) of the experimental group at the end of the program process was found to be statistically significant in the study. In the post-test measurements, the fear of negative evaluation scores of the experimental group was found to decrease compared to the pre-test measurements and there was no significant change until the follow-up test. Finally, no significant difference was observed between the fear of negative evaluation scores of the students in the control group and this situation continued in the follow-up measurements.

Yalnız (2019) used the ANOVA technique. In the study, the difference between the scores of physical bullying ($F_{(1,22)}=.82$; $p<.05$), verbal bullying ($F_{(1,22)}=2.11$; $p<.05$), isolation bullying ($F_{(1,22)}=29.06$; $p<.05$), rumor spreading bullying ($F_{(1,22)}=9.58$; $p<.05$), damaging property bullying ($F_{(1,22)}=10.10$; $p<.05$) and peer bullying ($F_{(1,22)}=8.93$; $p<.05$) suffered by the victims in the experimental group at the end of the program process was observed to be statistically significant. In the post-test measurements, it is seen that the bullying sub-dimension scores of the experimental group decreased compared to the pre-test measurements and this decrease continued in the follow-up measurements. In the study, it was observed that the difference between the scores of physical bullying ($F_{(1,22)}=7.12$; $p<.05$), verbal bullying ($F_{(1,22)}=6.24$; $p<.05$), isolation bullying ($F_{(1,22)}=8.80$; $p<.05$), rumor spreading bullying ($F_{(1,22)}=7.10$; $p<.05$), damaging property bullying ($F_{(1,22)}=3.40$; $p<.05$) and peer bullying ($F_{(1,22)}=9.28$; $p<.05$) by the bullies in the experimental group at the end of the program process was statistically significant. In the post-test measurements, it was observed that the bullying sub-dimension scores of the experimental group decreased in all, and this decrease was permanent in the follow-up period. Finally, no significant difference was observed between the scores of the students in the control group.

Kaya (2019) used the ANOVA technique in their study. The difference between body image flexibility ($F_{(2,31)}=15.97$; $p<.05$) measurements performed during the program of the study was found to be statistically significant. At the end of the program, it was concluded that the body image flexibility of the experimental group increased and this increase continued during the follow-up period. Finally, no significant difference was observed between the body image flexibility scores of the students in the control group, and this situation continued in the follow-up measurements.

In the study of Kirca and Eksi (2020), quantitative data were examined with Mann Whitney U and Wilcoxon Signed-Rank test, and qualitative data were examined through thematic analysis. The quantitative findings showed that the applied program significantly increased the psychological flexibility of the experimental group. Qualitative findings, on the other hand, emphasize that after the program, the participants experienced changes in staying in the moment, self-control, value-oriented

actions, diffusion and coping with emotions and thoughts, recognizing oneself and surroundings, acceptance, not avoiding conflict and crisis management, being authentic, and anxiety.

Yapan (2021) used a two-factor ANOVA technique for mixed designs in their study. The scores obtained by the subjects in the ACT, cognitive behavioral therapy and control groups from the measurements carried out during the experimental period are observed to decrease significantly ($F_{(2,30)}=6.334$; $p<.05$). In addition, it was determined that the experimental effect continued in the one-month and three-month follow-up periods, while there was no change in the scores of the control group.

Discussion

Among the third wave behavioral therapies, ACT comes to the fore both theoretically and scientifically. It has been observed that there has been an increase in studies based on ACT in Turkey in recent years. The review studies conducted by Yavuz (2015), Kul and Türk (2020) have been guiding in terms of understanding the theoretical framework of the ACT. Intervention studies based on ACT started to emerge with two PhD theses carried out in 2017. In the aforementioned studies, Demirci-Seyrek (2017) and Usta (2017) developed psycho-educational programs based on ACT and examined the effectiveness of this approach. In the period from 2017, when the first intervention studies based on ACT were carried out, to October 2021, a total of nine applications within the scope of this research were carried out. The aim of this study is to present a general framework for intervention studies by systematically reviewing the effectiveness of ACT-based programs, which have attracted attention with the increasing practice studies in Turkey in recent years. When the effectiveness of the seven PhD theses and two articles included in the research was evaluated in general, all programs was found to have a significant effect on the experimental groups. In addition, the inclusion of the control group in all studies also increases the reliability of the effectiveness of the intervention studies.

When the scope of intervention studies based on SCT examined in the study, it is seen that these are realized in the themes of reducing social appearance anxiety, reducing avoidant decision-making style, increasing the meaning of life, increasing coping efficacy, reducing fear of negative evaluation, reducing peer bullying levels, increasing body image flexibility, increasing psychological flexibility and reducing test anxiety. The intervention and compilation studies carried out abroad are as follows: an experimental study based on ACT for self-compassion (Yadavaia et al. 2014), a review study examining the effectiveness of ACT in the treatment of anxiety disorders (Landy et al. 2015), a meta-analysis study dealing with studies to reduce substance use disorder (Lee et al. 2015), a review of intervention programs for emotional disorders such as anxiety and depression (Coto-Lesmes et al. 2020), a review and meta-analysis study examining intervention programs to reduce depression (Zhenggang et al. 2020), a review study examining the effectiveness of internet-based interventions on variables such as anxiety, depression, quality of life, and psychological flexibility (Thompson et al. 2021).

It is important to carry out intervention studies based on ACT in different themes, in order to prove the effectiveness of the approach in different problem areas. When the intervention programs discussed in this study are examined, it is seen that there are not only practices that reduce risk factors, but also practices that increase protective factors. When the nine studies discussed in the systematic review study are analyzed according to sample groups, it is seen that three studies were conducted with high school students and six studies were conducted with university students. All of the intervention programs were applied based on the psycho-educational program, seven of these studies included experimental and control groups, and one study included two experimental and one control group, and another study included experimental, control and placebo groups all together. The fact that intervention studies are based only on psycho-education, the placebo group is included in only one study, the lack of program diversity and the lack of a clearer assessment about the impact of the program contents can be seen as a shortcoming. A follow-up study was carried out in all of the studies reviewed within the scope of this study. Carrying out the follow-up study in all studies, which is important in terms of measuring the persistency of the impact of the applied intervention programs, contributes to reaching reliable results regarding the effectiveness of the implemented programs. Considering whether the implementation studies were evaluated by the participants in the reviewed studies, in Ercengiz and Şar's & Kırca and Eksi's researches, the general evaluation of the sessions and the process was provided through the forms prepared by the researchers. Evaluating the effectiveness of experimental research with the views of participants can be seen as valuable in terms of guiding researchers about the studies to be carried out. The researcher can shed light on the studies to be done in future with the suggestions they will present to the other researchers by getting feedback on the sessions and the process. In this sense, it can be seen as a shortcoming that seven of the studies do not include the general evaluation of the sessions and the process.

Finally, when looking at the meta-analysis review studies that deal with the effectiveness of intervention studies conducted abroad, ACT is seen to be effective in reducing anxiety and depression and increases psychological flexibility (Coto-Lesmes et al. 2020). Similarly, in the study examining the effectiveness of ACT in reducing depression with 18 studies consisting of 1088 participants, it was concluded that ACT significantly reduced depression (Zhenggang et al. 2020). ACT was found to have a significant effect on reducing anxiety, depression, behavioral and mental problems in children; Similarly, it was found to have a significant effect on reducing anxiety, depression and behavioral problems in adolescents (Fang and Ding 2020). In another review study, a multiple meta-analysis was conducted on 20 meta-analysis studies covering 133 studies with 12477 participants. Accordingly, ACT was found to have effective results in intervening depression, anxiety, substance use and chronic pain (Gloster et al. 2020).

When the studies carried out at home and abroad are looked at from a holistic perspective, it can be seen that the effectiveness

of ACT in reducing anxiety and coping with anxiety is frequently examined in both literatures (Landy et al. 2015, Usta 2017, Uğur 2018, Coto-Lesmes et al. 2020, Kırca and Minus 2020, Fang and Ding 2020, Gloster et al. 2020, Yapan 2021). In both literatures, ACT has proven to be effective in reducing and coping with anxiety.

Conclusion

In this study, in which experimental studies based on ACT were systematically reviewed, the applied programs were observed to be effective on variables such as reducing social appearance anxiety, decreasing the avoidant decision-making styles, increasing the meaning of life, gaining the coping ability, reducing the fear of negative evaluation and peer bullying, gaining social skills, increasing body image flexibility and reducing test anxiety. In the literature study, it was concluded that experimental studies based on ACT carried out abroad have a significant effect on increasing self-compassion, reducing depression and anxiety, improving quality of life and reducing substance abuse disorder (Yadavaia et al. 2014, Lee et al. 2015, Thompson et al. 2021). Although the research contributes to the evaluation of the studies on acceptance and commitment therapy as a whole, it also has some limitations. The study is limited only to the adolescent/young adult sample and studies conducted in Turkey. Since there is only one study conducted abroad (Gloster et al. 2020), it has been limited in the context of studies conducted in Turkey. Although three of the intervention studies carried out in Turkey were carried out for high school students, it is noteworthy that preventive studies were not carried out for the secondary school group, where the problems of adolescence began to be seen for the first time. Starting preventive studies in early age groups such as secondary school and primary school are considered beneficial in order to avoid problems in later ages and to obtain both economic and rapid results. In addition, when the studies conducted in Turkey are examined, it is quite striking that there are no intervention studies for children and adults. Applying ACT will provide effective results not only for high school and university students, but also for children and adults since its effectiveness has been proven by experimental studies and usage area is increasing day by day.

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