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This parallel randomized controlled trial aimed to evaluate the effect of acceptance and commitment therapy (ACT) focused on disrupting repetitive negative thinking (RNT) versus a waitlist control (WLC) in the treatment of depression and generalized anxiety disorder (GAD). Forty-eight participants with a main diagnosis of depression and/or GAD were allocated by means of simple randomization to a 2-session RNT-focused ACT intervention or to the WLC. The primary outcomes were emotional symptoms as measured by the Depression, Anxiety, and Stress Scales–21. Process outcomes included ACT- and RNT-related measures: general RNT, experiential avoidance, cognitive fusion, values, and generalized pliance. At the 1-month follow-up, linear mixed effects models showed that the intervention was efficacious in reducing emotional symptoms ($d = 2.42$, 95% confidence interval [1.64, 3.19]), with 94.12% of participants in the RNT-focused ACT condition showing clinically significant change in the Depression, Anxiety, and Stress Scales–21 total scores versus 9.09% in the WLC condition (70% vs. 8% in intention-to-treat analysis). The intervention effects were maintained at the 3-month follow-up. No adverse events were found. A very brief RNT-focused ACT intervention was highly effective in the treatment of depression and GAD.

Clinical Impact Statement
Question: What is the applied clinical practice question this paper is hoping to address? To analyze whether a 2-session acceptance and commitment therapy (ACT) intervention focused on disrupting repetitive negative thinking (RNT) is effective in treating depression and GAD. ***Findings:*** How would clinicians meaningfully use the primary findings of this paper in their applied practice? Clinicians might use the RNT-focused ACT protocol to treat depression and GAD. ***Meaning:*** What are the key conclusions and implications for future clinical practice and research? The RNT-focused ACT protocol was highly effective in treating depression and GAD. ***Next Steps:*** Based on the primary findings and limitations of this paper, what are future directions to be explored in clinical practice and research? To analyze the long-term effects of the RNT-focused ACT protocol.

Keywords: acceptance and commitment therapy, relational frame theory, repetitive negative thinking, depression, generalized anxiety disorder

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Unipolar depression and generalized anxiety disorder (GAD) are the most frequent psychological complaints seen in primary care and secondary mental health services (Wittchen et al., 2002).

The estimation of the lifetime prevalence of depression reaches 16% (Kessler et al., 2003), whereas for GAD, it is considered to be between 4% and 7% (Kessler, 2000). Comorbidity between these

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disorders is more the rule than the exception (Gorman, 1996), especially in primary care settings (Hirschfeld, 2001; Löwe et al., 2008), with studies estimating it at up to 80% (Judd et al., 1998; Lamers et al., 2011). This comorbidity is associated with worse therapeutic outcomes and greater chronicity, recurrence rates, health costs, disability days, suicide attempts, and psychosocial disability (Gorman, 1996; Hirschfeld, 2001; Wittchen, 2002).

The need of developing effective, brief interventions for depression and GAD has been strongly emphasized in recent years for at least two reasons (Glasgow et al., 2014; Strosahl, Robinson, & Gustavsson, 2012). On the one hand, brief interventions seem necessary in view of the frequency of premature psychotherapy termination (Hilsenroth, Handler, Toman, & Padawer, 1995). On the other hand, psychological therapy provided in primary care settings for these disorders is usually brief (Stiles, Barkham, Connell, & Mellor-Clark, 2008) because of the limited budget in mental health care, especially in low- and middle-income countries (Saxena, Thornicroft, Knapp, & Whiteford, 2007). Accordingly, the concept of "minimal intervention needed for change" (MINC) has been coined, which refers to "the minimal level of intervention intensity, expertise, and resources needed to achieve a clinically significant improvement" (Glasgow et al., 2014, p. 26).

Nowadays, few systematic researches have been conducted regarding the efficacy of brief interventions for depression and GAD. Cape, Whittington, Buszewicz, Wallace, and Underwood (2010) conducted a meta-analysis of brief psychological interventions, defined as treatment with two to 10 sessions, provided in primary care for anxiety disorders and depression. The median length of psychological interventions was six sessions. The results showed that the effect sizes for anxiety disorders were comparable with the ones found for longer treatments ($d = 1.06$), but the effects for depression ($d = 0.33$) and mixed anxiety and depression ($d = 0.26$) were considerably lower. These results highlight the relevance of developing more effective and briefer interventions for depression and mixed anxiety and depression.

The past 2 decades have seen the emergence of transdiagnostic therapies such as acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999), the unified protocol for transdiagnostic treatment of emotional disorders (Barlow et al., 2010), and metacognitive therapy (Wells, 2009), among others. Transdiagnostic treatments offer some advantages over single disorder protocols (SDPs) such as the ability to treat multiple disorders with only one approach and attending to the complexity of the cases due to comorbidity (Martin, Murray, Darnell, & Dorsey, 2018). These advantages maximize the adoption, implementation, and maintenance of these approaches in mental health services, which can be as important as the efficacy of the interventions (Glasgow, Vogt, & Boles, 1999). Importantly, preliminary evidence shows that transdiagnostic treatments of depression and anxiety disorders have at least the same efficacy as SDPs for treating the main disorder (Barlow et al., 2017) and comorbid disorders (Steele et al., 2018). Furthermore, some evidence shows that transdiagnostic treatments can have some advantages over SDPs such as lower attrition (Barlow et al., 2017) and the reduction of scores in transdiagnostic processes (Cassiello-Robbins et al., 2018; Gros et al., 2019). However, the MINC has not been explored in detail for transdiagnostic treatments.

Transdiagnostic therapies target some transdiagnostic processes such as experiential avoidance (Hayes, Wilson, Gifford, Follette,

& Strosahl, 1996), psychological inflexibility (Törneke, Luciano, Barnes-Holmes, & Bond, 2016), emotion regulation (Gross, 1998), and repetitive negative thinking (RNT; Ehring & Watkins, 2008). The latter process is especially relevant for depression and GAD. Specifically, RNT is a relatively new term that was coined to include a series of related thinking processes including worry and rumination (Ehring & Watkins, 2008). Whereas excessive worry is a core characteristic of GAD (Borkovec, 1994), rumination has been found to play a very relevant role in depression (Nolen-Hoeksema, 2004). Indeed, worry and rumination have been identified in prospective and experimental studies as common factors in the onset and maintenance of GAD and depression (Ehring & Watkins, 2008). Accordingly, some therapeutic approaches have been proposed in recent years that are focused on disrupting RNT, such as metacognitive therapy (Wells, 2009), rumination-focused cognitive–behavioral therapy (RF-CBT; Watkins, 2016), and RNT-focused ACT (Ruiz et al., 2018; Ruiz, Riaño-Hernández, Suárez-Falcón, & Luciano, 2016).

Like traditional ACT protocols, RNT-focused ACT is based on a functional-contextual conceptualization of language and cognition known as relational frame theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001). Additionally, RNT-focused ACT emphasizes and incorporates some relevant suggestions based on RFT analyses. First, it is suggested that values are symbolic hierarchical positive reinforcers that are built in the individual's history (Barnes-Holmes, Barnes-Holmes, McHugh, & Hayes, 2004; Plumb, Stewart, Dahl, & Lundgren, 2009). Second, hierarchical negative reinforcers are also built during the same process and become related in opposition with the network of positive reinforcers as the "other side of the coin" of values (Gil-Luciano, Calderón-Hurtado, Tovar, Sebastián, & Ruiz, 2019; Luciano, 2017). Third, negative thoughts and emotions acquire aversive functions because they signal some negative reinforcer of the hierarchical network. Fourth, RNT in the form of worry and rumination is considered to be a predominant experiential avoidance strategy because it tends to be the first reaction to aversive private experiences due to the human's fluency in derived relational responding (i.e., language and cognition abilities). Fifth, RNT has a paradoxical effect because it prolongs negative affect due to the fact that the thinking process is focused on negative content (Ehring & Watkins, 2008; Newman & Llera, 2011). Sixth, the prolonged negative affect usually leads the individual to engage in additional experiential avoidance strategies that are more effective in reducing discomfort in the short term. Seventh, engaging in RNT strengthens and extends the networks of triggers due to the repetition of the thoughts and the generation of new contents during the process. This causes more thoughts to initiate the RNT cycle in the future. Finally, the repetition of this cycle generates an inflexible pattern of behavior characterized by engagement in RNT and the impossibility of advancing toward personal values.

Following the previous analyses, RNT-focused ACT protocols attempt to disrupt unconstructive RNT in response to the hierarchical triggers and to redirect behavior to valued actions. Focusing the intervention on the hierarchical triggers for RNT is thought to provoke more rapid and generalizable effects due to the basic research on how transformation of functions through hierarchical relations works (Gil, Luciano, Ruiz, & Valdivia-Salas, 2012). Additionally, RNT-focused ACT protocols attempt to incorporate the available RFT research on how to improve the effects of ACT

processes and techniques such as defusion, metaphors, and so forth (Criollo, Díaz-Muelle, Ruiz, & García-Martín, 2018; Gil-Luciano, Ruiz, Valdivia-Salas, & Suárez-Falcón, 2017; López-López & Luciano, 2017; Luciano et al., 2011; Sierra, Ruiz, Flórez, Riaño-Hernández, & Luciano, 2016; Törneke, 2017; Villatte, Villatte, & Hayes, 2015).

Several preliminary studies following single-case experimental designs (SCEDs) have provided evidence of the efficacy of very brief RNT-focused ACT protocols in reducing emotional suffering and improving processes such as RNT, experiential avoidance, cognitive fusion, and valued living. In an initial study ($N = 11$), Ruiz, Riaño-Hernández, et al. (2016) showed that a one-session, RNT-focused ACT protocol was sufficient to significantly reduce RNT in participants with mild to moderate emotional suffering as determined by self-reported ratings. The design-comparable standardized mean differences for SCEDs (Pustejovsky, Hedges, & Shadish, 2014) found at the 6-week follow-up were very large for pathological worry ($d = 1.63$) and two measures of emotional symptoms ($d = 1.05$ and 1.29)[1]. Subsequently, Ruiz et al. (2018) analyzed the effect of a two-session protocol in the treatment of 10 participants suffering from moderate emotional symptoms. Nine participants showed clinically significant changes in emotional symptoms, with very large effect sizes ($d = 2.44$ and 2.68). Two additional SCEDs have analyzed the effect of a three-session, RNT-focused ACT protocol for participants with GAD with couple relationship as the main worry domain (Ruiz, García-Beltrán, Monroy-Cifuentes, & Suárez-Falcón, 2019) and for chronic and comorbid depression and GAD (Ruiz, Luciano, Flórez, Suárez-Falcón, & Cardona-Betancourt, 2019). The effect sizes in these two studies were also very large.

In summary, there is preliminary evidence of the efficacy of brief RNT-focused ACT interventions for emotional suffering. These promising results warrant conducting a more systematic evaluation of brief, RNT-focused ACT protocols. Specifically, the effect sizes found using SCED tend to be considerably higher than those found in randomized controlled trials (RCTs; Parker & Vannest, 2009). Thus, the results found in the abovementioned SCED studies should be corroborated by conducting an RCT. Accordingly, the aim of this study was to analyze the effect of a two-session, RNT-focused ACT protocol for depression or GAD versus a waitlist control (WLC) through an RCT. We expected that participants in the RNT-focused ACT condition would show greater reductions of emotional symptoms and improvements in process measures than the WLC. The CONSORT statement (Moher et al., 2010) was followed to guide the reporting of this RCT.

Method

Participants and Selection

Participants were recruited through advertisements on social media. A total of 276 individuals showed interest in the study. The inclusion criteria were as follows: (a) more than 18 years old, (b) showing the main diagnosis of depression and/or GAD, and (c) obtaining a minimum score of 25 in the Depression, Anxiety, and Stress Scale–21 (DASS-21; Lovibond & Lovibond, 1995). The exclusion criteria were as follows: (a) being in psychological or psychiatric treatment, (b) showing severe suicidal ideation, and (c) diagnosis of substance abuse, anorexia nervosa, psychotic disor-

ders, and antisocial personality disorder. Potential participants were asked to respond to an online survey to explore the accomplishment of initial inclusion criteria (age, at least 25 points in the DASS-21, and not being in psychological/psychiatric treatment). Participants who met these criteria were invited to a personal interview in which the Mini International Neuropsychiatric Interview (Sheehan et al., 1998) was administered to explore the accomplishment of the remaining inclusion criteria.

Figure 1 shows that 167 of the 276 participants who showed initial interest in the study responded to the online survey to preliminarily assess the inclusion criteria. Of them, 106 met the initial inclusion criteria and were invited to the personal interview (52 potential participants showed scores below 25 in the DASS-21 and nine were receiving psychological/psychiatric treatment). Eighty potential participants attended this interview, and 48 met the inclusion criteria. Of the 32 participants who were rejected, 13 did not meet the criteria for the diagnoses of depression or GAD, two met the criteria for a psychotic disorder, six showed a diagnosis different from depression or GAD as the main concern, six showed substance abuse, and five showed severe suicidal ideation. Rejected participants were offered options to obtain inexpensive treatment in a clinical psychology center in Bogotá.

The study was presented in detail to the remaining 48 potential participants. All of them agreed to participate and provided informed consent. Table 1 shows the sociodemographic and clinical characteristics of the final sample. Participants were remunerated with 25,000 Colombian pesos (~8 U.S. dollars) for completing the study as compensation for the intensive measurement carried out in the study.

Research Design and Procedure

This study was conducted in the clinical psychology laboratory of a Colombian university. The procedure of this study was approved by the institutional ethics committee, and it was conducted between April and December, 2018. The recruitment period was extended from April to August, with the idea of recruiting the maximum possible number of participants, even above the number of participants indicated by the power analysis conducted (see the Data Analysis section). A parallel, two-arm RCT was conducted. Simple randomization was conducted following a 1:1 ratio with the assistance of the web-based tool Research Randomizer (www.randomized.org; Urbaniak & Plous, 2013). Participants were randomly allocated to the RNT-focused ACT intervention ($N = 23$) or to the WLC ($N = 25$). Francisco J. Ruiz generated the random allocation sequence with a maximum total number of participants of 100. Pili D. Sánchez, who was not involved in the recruitment and the application of the intervention, created 100 numbered, opaque envelopes in which the allocated condition for the specific participant was presented on a piece of paper. The clinical interviews for enrollment purposes were conducted by Andrés Peña-Vargas and Eduar S. Ramírez, who were research assistants previously trained in the administration of the Mini International Neuropsychiatric Interview by Francisco J. Ruiz. The interviewers

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[1] Note that these effect sizes were not the ones reported in the original study because the statistical analysis was not available at that moment. They correspond to the re-analysis computed by Ruiz et al. (2018) to compare the effect sizes obtained in both studies.
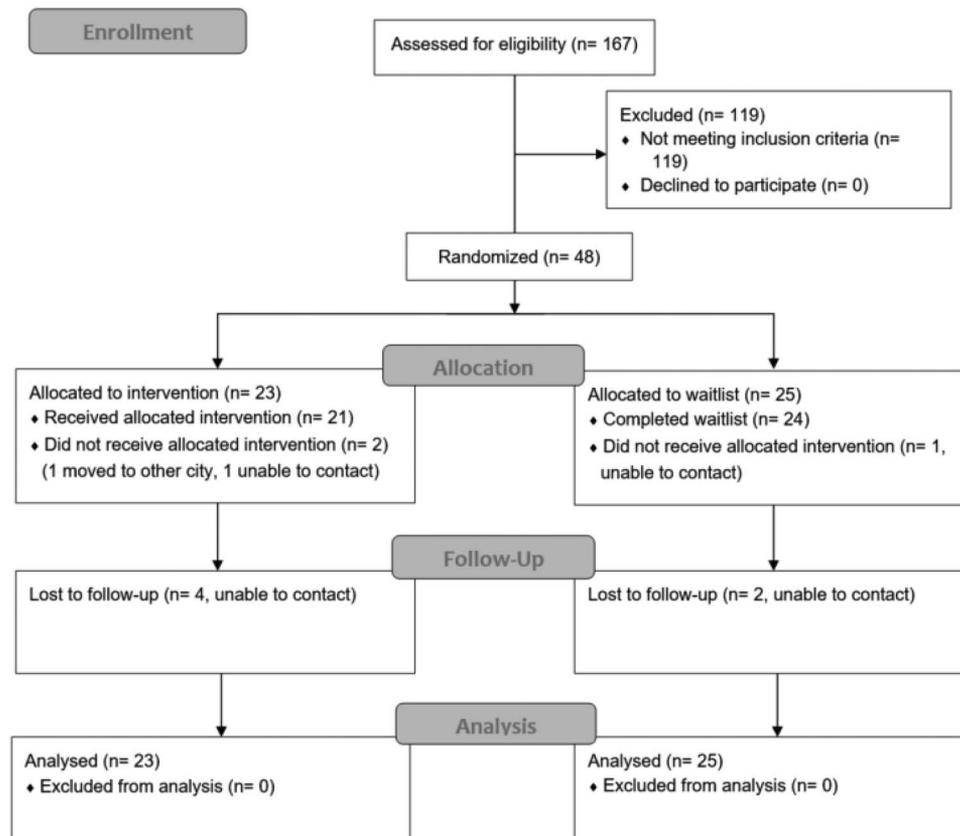
Figure 1. Participants' flow throughout the study.

did not act as therapists in this study. The interviews took ~30 min.

When a participant met the inclusion criteria and signed the informed consent to participate in the study, the corresponding envelope was opened and the participant was informed of the experimental condition to which he or she was allocated. Participants were asked to report if they initiated some type of psychological or psychiatric treatment throughout the study. Also, participants were explicitly asked about this when closing the study with the participants. No participant initiated psychological or psychiatric treatment during the study.

Participants in the WLC received the intervention after completing the 1-month follow-up because, according to previous empirical evidence (Ruiz et al., 2018), the effect of brief RNT-focused ACT protocols seems to stabilize 1 month after concluding the intervention. After finishing the 3-month follow-up, the participants were appointed to close the research and were offered further intervention if necessary.

All measures were applied electronically through the platform www.typeform.com. Five assessment points were established: pre-treatment, midtreatment (i.e., before commencing the second session), posttreatment (i.e., 1 week after conducting the second session), 1-month follow-up, and 3-month follow-up. This article reports all the variables measured in the study. The primary and secondary outcomes were decided when designing the study and before data collection.

Outcome Measures: Depression, Anxiety, and Stress Scales–21

The DASS-21 is a 21-item, 4-point Likert-type scale (3 = *applied to me very much or most of the time*; 0 = *did not apply to me at all*) that measures the negative emotional states experienced during the past week (Lovibond & Lovibond, 1995; Spanish version by Ruiz, García-Martín, Suárez-Falcón, & Odriozola-González, 2017). The DASS-21 has shown a hierarchical factor structure with three first-order factors (Depression, Anxiety, and Stress) and a second-order factor that is an overall indicator of emotional symptoms. In this study, the DASS-21 obtained an α of .93 for the total scale and the αs were .89, .86, and .84, for Depression, Anxiety, and Stress.

Process Outcomes

Perseverative Thinking Questionnaire. The Perseverative Thinking Questionnaire (PTQ) is a 15-item, 5-point Likert (4 = *almost always*; 0 = *never*) self-report instrument (Ehring et al., 2011). It is a content-independent self-report of RNT in response to negative events. In this study, the PTQ obtained an α of .96.

Acceptance and Action Questionnaire–II. The Acceptance and Action Questionnaire–II (AAQ-II) is a seven-item, 7-point Likert-type scale (7 = *always true*; 1 = *never true*) that measures experiential avoidance as averaged across contexts (Bond et al.,

Table 1
Demographic and Clinical Characteristics of the Intent-to-Treat Sample (N = 48)

Characteristic	Total (%)	ACT (N = 23; %)	WLC (N = 25; %)	t or χ^2	p
Gender					
Female	70.8 (34/48)	78.3 (18/23)	64.0 (16/25)	1.18	.28
Age in years, M (SD)	28.50 (8.09)	28.09 (9.55)	28.88 (6.65)	−0.34	.74
Education					
Secondary	37.5 (18/48)	43.5 (10/23)	32.0 (8/25)	0.67	.41
Vocational training	14.6 (7/48)	13.1 (3/23)	16.0 (4/25)	0.08	.77
Bachelor	29.2 (14/48)	30.4 (7/23)	28.0 (7/25)	0.03	.85
Postgraduate	18.8 (9/48)	13.1 (3/23)	24.0 (6/25)	3.17	.21
Marital status					
Married/cohabiting	16.7 (8/48)	17.4 (4/23)	16.0 (4/25)	0.02	.90
Single	77.1 (37/48)	78.3 (18/23)	76.0 (19/25)	0.04	.85
Divorced/separated	6.3 (3/48)	4.4 (1/23)	8.0 (2/25)	0.27	.60
Received previous treatment	37.5 (18/48)	39.1 (9/23)	36.0 (9/25)	0.05	.82
Diagnoses					
Depression	91.7 (44/48)	95.7 (22/23)	88.0 (22/25)	0.92	.34
Generalized anxiety disorder	93.8 (45/48)	91.3 (21/23)	96.0 (24/25)	0.45	.50
Both	85.4 (41/48)	87.0 (20/23)	84.0 (21/25)	0.08	.77
Comorbid disorder (1+)	70.8 (34/48)	73.9 (17/23)	68.0 (17/25)	0.20	.65
Panic disorder	31.3 (15/48)	30.4 (7/23)	32.0 (8/25)	0.01	.91
Agoraphobia	29.2 (14/48)	26.1 (6/23)	32.0 (8/25)	0.20	.65
Social phobia	39.6 (19/48)	43.5 (10/23)	36.0 (9/25)	0.06	.82
Obsessive–compulsive disorder	16.7 (8/48)	17.4 (4/23)	16.0 (4/25)	0.02	.90
Posttraumatic stress disorder	6.3 (3/48)	4.3 (1/23)	8.0 (2/25)	0.27	.60
Bulimia	4.2 (2/48)	8.7 (2/23)	0 (0/25)	2.27	.13

Note. ACT = acceptance and commitment therapy; WLC = waitlist control.

2011; Spanish version by Ruiz, Suárez-Falcón, et al., 2016). It is one of the most used measures of ACT processes. In this study, the AAQ-II obtained an α of .88.

Cognitive Fusion Questionnaire. The Cognitive Fusion Questionnaire (CFQ) is a seven-item, 7-point Likert-type scale (7 = *always*; 1 = *never true*) that measures cognitive fusion as averaged across contexts (Gillanders et al., 2014; Spanish version by Ruiz, Suárez-Falcón, Riaño-Hernández, & Gillanders, 2017). Together with the AAQ-II, it is one of the most frequently used measures of ACT processes. In this study, the CFQ obtained an α of .91.

Valuing Questionnaire. The Valuing Questionnaire (VQ) is a 10-item, 7-point Likert (6 = *completely true*; 0 = *not at all true*) self-report instrument that assesses valued living averaged across life areas during the past week (Smout, Davies, Burns, & Christie, 2014). It comprises two subscales: Progress and Obstruction. In this study, the VQ obtained αs of .82 and .74 for Progress and Obstruction, respectively.

Generalized Pliance Questionnaire–9. The Generalized Pliance Questionnaire–9 (GPQ-9) is the short form of the 18-item GPQ (Ruiz, Suárez-Falcón, Barbero-Rubio, & Flórez, 2019). It is responded on a 7-point Likert-type scale (7 = *always*; 1 = *never true*). The GPQ was designed to measure generalized pliance, which is a pattern of rule-governed behavior in which social whim is the individual's main source of reinforcement. In this study, the GPQ-9 obtained an α of .93. The correlations between all self-report used in this study at pretreatment can be seen in Table S1 in the online supplemental materials.

RNT-Focused ACT Protocol

The protocol consisted of two weekly, individual, 60-min sessions and was very similar to the one used in Ruiz et al. (2018),

with the main difference that, in the current protocol, we dedicated a larger part to values clarification and committed action at the end of Session 2. The Table S2 in the online supplemental materials summarizes the content of the protocol (a detailed description of the protocol in English and Spanish can be found at https://bit.ly/2UBHuyU).

Session 1 began with the presentation of the intervention rationale: developing the skill to focus on what really matters to the participant's life and to stop actions inconsistent with their stated values. Engaging in RNT was then established as the first step that leads people to go away from values. Subsequently, the therapist metaphorically asked about the trigger for RNT at the top of the hierarchy of triggers, and the participant and the therapist collaboratively constructed the hierarchy (see examples in Gil-Luciano et al., 2019). The additional experiential avoidance strategies connected with RNT were then explored. Afterward, the therapists conducted a Socratic dialogue to amplify the negative consequences of engaging in the latter inflexible pattern of behavior. The session ended with two experiential exercises in which the participant was invited to practice and differentiate the inflexible and flexible patterns (i.e., the "pushing triggers away" and "go around" metaphors), and the consequences linked to both patterns were amplified more deeply. Lastly, the participant was invited to practice the latter differentiation with an audio file that presented an exercise of ~8 min of duration.

Session 2 began with an exploration of the participant's engagement in RNT and valued actions during the past week. The first part of this session was dedicated to conducting a multiple-exemplar training in identifying triggers for RNT, the process of RNT itself, and to framing the thoughts contained in the RNT chain in hierarchy with the self. The second part of the session consisted of identifying values and committed actions in which the

participants might engage during the next weeks as the alternative to engage in RNT. At the end of Session 2, participants were given three additional audio files (~20 min) to practice what was worked in this session.

Therapist and Therapist Training

The RNT-focused ACT protocol was implemented by five therapists (four females, age range = 27–50, M = 37.20, SD = 8.35). Three of them had a Master's degree and two had a Ph.D. degree in clinical psychology. All therapists had training in CBT and contextual therapies. They received at least 40 hr of ACT training and were trained in the application of the protocol for ~25 hr by Francisco J. Ruiz. The therapists implemented the intervention to approximately the same number of participants (i.e., three therapists implemented the intervention five times and two therapists implemented it four times). They received consultation from Francisco J. Ruiz when they found difficulties implementing the protocol.

Protocol Integrity and Therapist Competence

The sessions were videotaped to analyze the integrity of the protocol application and the therapists' competence. To analyze treatment integrity, we designed a list of clinical interactions that should be found in the sessions (19 items for Session 1 and 10 items for Session 2) and how the therapist should act to implement the protocol competently. Independent raters rate whether or not these interactions occurred during the session and whether the therapist's performance was considered competent (see the complete instrument at https://bit.ly/2UBHuyU).

Five clinical psychologists with training in CBT and contextual therapies acted as independent raters. All of them received at least 25 hr of training in RNT-focused ACT protocols leaded by Francisco J. Ruiz and were involved in other studies that aimed to analyze the efficacy of these protocols. Francisco J. Ruiz presented them the instrument to measure the protocol integrity and therapist competence in a 1-hr session.

Half of the sessions conducted (i.e., 21 sessions) were randomly selected to be observed through the web application www.randomized.org. Two independent observers were also randomly assigned to each session to be observed. We computed the percentage of integrity and competence for each session (i.e., number of items met/total number of items) and calculated a mean score by taking into account the scores of both independent reviewers. Kappa index was calculated to analyze interrater reliability, which was interpreted following the guidelines provided by Landis and Koch (1977): 0.41–0.60 moderate, 0.61–0.80 substantial, and 0.81–1.00 almost perfect.

The mean percentage of integrity per session was 96.4% of the relevant clinical interactions contained in the observed protocol. The Kappa index was 0.91, which can be interpreted as an "almost perfect" interrater reliability. Regarding therapist competence, the mean percentage of clinical interactions conducted competently was 88.8%. The Kappa index was 0.79, which can be interpreted as "substantial" interrater reliability.

Data Analysis

Before beginning the study, we conducted a power analysis to explore how many participants were necessary to recruit to identify a large effect size of d = 1.0 with power (1 − β) set at 0.80 and α = .05. We selected this effect size because previous studies with RNT-focused ACT protocols showed higher effect sizes for the outcome and process measures. Because we planned to analyze the results of the trial with linear mixed models, the software Optimal Design (Raudenbush & Liu, 2000) was used to conduct the power analysis. The results indicated that it was necessary to recruit 37 participants.

The raw data of this study can be accessed at https://bit.ly/2UBHuyU. All statistical analyses were carried out in SPSS 24. Independent t tests and χ² tests were conducted to analyze the initial equivalence of the experimental conditions. The effect of the intervention for each variable was analyzed through linear mixed models using maximum likelihood estimation and following the guidelines provided by Hesser (2015). This estimation method provides a full-intention-to-treat analysis because it makes use of all available data. In so doing, it provides unbiased estimates in the presence of missing data by assuming that they are missing at random, which is the least restrictive assumption (Mallinckrodt, Clark, & David, 2001; Schafer & Graham, 2002). The missing at random (MAR) assumption allows the probability of missing data to be related to other observed variables (Enders, 2011; Johansson et al., 2017; Little & Rubin, 2002; Schafer & Graham, 2002). Despite the fact that MAR-based methods yield accurate estimates in most cases, before conducting the main analyses we examined the missing data mechanism by exploring the relationship between baseline characteristics and the presence of missing data in the sample. In the case of finding variables with a significant correlation with missing data, they were included in the statistical model.

When conducting the linear mixed models, the variable time was coded according to the weeks passed since the pretreatment: pretreatment (t = 0 weeks), midtreatment (t = 1 week), posttreatment (t = 2 weeks), and the 1-month follow-up (t = 6 weeks). The treatment variable was coded so that the WLC would take on a value of 1 and the RNT-focused ACT, a value of 2. We selected the best-fitted model by computing the log-likelihood ratio test in the different nested models beginning with the null model. In so doing, the necessary number of random effects to identify growth across measurement points was determined, and the associated covariance structure was specified. Accordingly, random effects in intercepts, slopes, and their covariance were specified when they were shown to be statistically significant. Then, we decided which covariance structure for errors was more adequate for the observed data. Lastly, the fixed effects of condition, time, and the interaction between time and condition were included in the model. To determine the treatment effect, the fixed effect on time by group interaction (i.e., slope) was tested. The between-condition effect sizes and 95% confidence intervals (CIs) at posttreatment and the 1-month follow-up were calculated following the guidelines suggested by Feingold (2009, 2015) to compute Cohen's d in growth-modeling analyses. The effect sizes at the 1-month follow-up were taken as the main measure of the effect of the intervention because the data at posttreatment were collected only 2 weeks after the pretreatment assessment. These effect sizes were interpreted as

small (d = .20 to .49), medium (d = .50 to .79), and large (above d = .80; Cohen, 1988).

As participants in the WLC received the intervention after conducting the 1-month follow-up, we explored if there were statistically significant differences between the scores at the 1-month and 3-month follow-ups in the RNT-focused ACT condition. In so doing, we computed the linear mixed models with only the ACT condition and explored if the post hoc mean pairwise comparisons (I-J) using the Bonferroni correction were statistically significant.

The reliable change (RC) and clinically significant change (CSC) were computed with the data presented for the DASS-Total (i.e., the primary outcome) by following the guidelines provided by Jacobson and Truax (1991). The RC indicates whether a participant has shown a change score on a psychometric instrument that exceeds the reasonably expected change due to measurement error alone. According to the data provided by Ruiz, García-Martín, et al. (2017), a change of 9 points was needed to obtain an RC. CSC occurs when the participant shows an RC, and his or her score on the instrument is closer to the nonclinical average than to the clinical one. According to Ruiz et al. (2018), the cutoff to claim for CSC was established in 22/23 points (i.e., 22 points were closer to the nonclinical average and 23 points to the clinical average). The χ^2 tests were conducted to analyze possible statistically significant differences in the frequency of RC and CSC between conditions. We computed this analysis for the participants who responded to each measurement point and for the whole sample (i.e., intent-to-treat analysis) assuming that participants who did not respond did not show RC or CSC. The latter analysis provides a more conservative rate of RC and CSC.

Results

Sample Characteristics and Equivalence of Conditions at Pretreatment

Table 1 shows detailed demographic information for the participants. Almost all participants showed depression (91.7%) and GAD (93.8%), with 85.4% of participants having both diagnoses. The comorbidity with other disorders was very high, with 70.8% of participants showing at least an additional diagnosis. There were no statistically significant differences between conditions for demographic and clinical characteristics.

Mean scores on the outcome measures used in the study were within the clinical range (see Table 2). Participants showed very high scores in the DASS-Total (M = 39.00, SD = 10.16), with ~1 SD higher than in clinical samples in Colombia (Ruiz, García-Martín, et al., 2017). Mean scores on the subscales Depression (M = 14.15, SD = 4.45) and Anxiety (M = 10.19, SD = 5.06) indicated extremely severe symptomatology, whereas the mean score in Stress (M = 14.75, SD = 3.52) indicated severe symptoms. There were no statistically significant differences between treatment conditions at pretreatment in the primary outcome, DASS-Total, $t(46)$ = −0.48, p = .63; secondary outcomes, Depression: $t(46)$ = 0.93, p = .36, Anxiety: $t(46)$ = −1.37, p = .18, Stress: $t(46)$ = −0.72, p = .48; and process measures, PTQ: $t(46)$ = 0.32, p = .75, AAQ-II: $t(46)$ = 0.75, p = .46, CFQ: $t(46)$ = 0.92, p = .36, VQ-Progress: $t(46)$ = −0.76, p = .45,

Table 2
Observed Mean Scores, Standard Deviations (in Parentheses), and Effect Sizes of the Study

Measures	RNT-focused ACT					Waitlist control				Cohen's d[a]	
	Pre	Mid	Post	1-m FU	3-m FU	Pre	Mid	Post	1-m FU	Post	1-m FU
	(n = 23)	(n = 21)	(n = 18)	(n = 17)	(n = 17)	(n = 25)	(n = 24)	(n = 24)	(n = 22)	95% CI	95% CI
DASS-Total	39.74 (9.78)	26.67 (12.66)	18.72 (10.16)	11.71 (9.00)	15.58 (15.07)	38.32 (10.65)	33.71 (10.99)	32.46 (11.26)	36.18 (9.95)	1.50 [0.82, 2.18]	2.42 [1.64, 3.19]
DASS-Depr.	13.52 (4.85)	8.48 (4.83)	5.72 (4.24)	4.00 (4.33)	5.12 (5.49)	14.72 (4.06)	11.75 (4.87)	10.96 (4.50)	12.00 (4.88)	0.87 [0.14, 1.59]	1.48 [0.59, 2.37]
DASS-Anx.	11.22 (4.58)	7.43 (4.58)	4.83 (2.90)	2.71 (2.26)	4.35 (5.30)	9.24 (5.08)	8.25 (4.36)	9.13 (5.42)	9.59 (5.22)	1.40 [0.89, 1.92]	1.81 [1.18, 2.44]
DASS-Stress	15.13 (3.21)	10.71 (4.05)	8.22 (4.05)	5.00 (3.18)	6.41 (4.96)	14.40 (3.40)	12.92 (3.57)	12.38 (3.97)	14.45 (3.63)	1.45 [0.70, 2.21]	2.96 [2.16, 3.77]
PTQ	45.43 (11.13)	34.76 (11.82)	28.11 (12.05)	20.76 (12.10)	19.41 (13.77)	46.40 (9.90)	46.54 (11.78)	44.13 (11.74)	47.32 (9.39)	1.48 [0.74, 2.23]	2.26 [1.58, 2.95]
AAQ-II	34.91 (7.35)	29.00 (8.11)	23.44 (9.96)	17.47 (8.72)	19.29 (11.14)	36.52 (7.61)	35.00 (7.01)	35.29 (6.99)	36.95 (7.05)	1.38 [0.71, 2.05]	2.32 [1.55, 3.09]
CFQ	37.48 (6.29)	31.00 (7.89)	24.94 (9.73)	19.00 (9.68)	19.35 (12.15)	39.24 (7.08)	37.83 (8.19)	38.29 (7.29)	39.45 (6.60)	1.79 [1.06, 2.52]	2.73 [1.99, 3.48]
VQ-Progress	13.52 (5.91)	18.86 (5.92)	19.11 (6.88)	19.82 (6.80)	18.41 (8.14)	12.40 (3.26)	12.83 (6.15)	13.17 (5.76)	12.64 (6.82)	1.01 [0.20, 1.81]	0.95 [0.09, 1.81]
VQ-Obstruction	20.17 (5.46)	14.81 (7.00)	12.39 (5.77)	10.24 (4.48)	9.29 (7.46)	20.96 (4.57)	19.71 (5.64)	19.00 (6.03)	20.18 (4.22)	1.23 [0.53, 1.92]	1.67 [0.94, 2.40]
GPQ-9	32.22 (11.92)	27.76 (10.47)	24.33 (11.36)	22.12 (11.94)	20.88 (12.93)	34.44 (11.44)	34.64 (15.22)	35.17 (14.42)	35.09 (14.15)	0.55 [0.09, 1.02]	0.89 [0.23, 1.54]

Note. RNT = repetitive negative thinking; ACT = acceptance and commitment therapy; Pre = pretreatment; Mid = midtreatment; Post = posttreatment; 1-m FU = 1-month follow-up; 3-m FU = 3-month follow-up; CI = confidence interval; DASS = Depression, Anxiety, and Stress Scales–21; Depr. = Depression; Anx. = Anxiety; PTQ = Perseverative Thinking Questionnaire; AAQ-II = Acceptance and Action Questionnaire–II; CFQ = Cognitive Fusion Questionnaire; VQ = Valuing Questionnaire; GPQ-9 = Generalized Pliance Questionnaire–9.
[a] Cohen's d is according to the guidelines provided by Feingold (2009, 2015).

VQ-Obstruction: $t(46) = 0.54$, $p = .59$, GPQ: $t(46) = 0.61$, $p = .54$.

Attrition, Dropout, and Missing Data

Figure 1 shows the participants' flow throughout the study. One participant in the WLC could not be contacted after the recruitment session. In the RNT-focused ACT condition, two participants did not begin the intervention (one moved to other city and one could not be contacted). The remaining 21 participants in the ACT condition completed the two sessions of the protocol (i.e., no dropout was observed). Four participants in the ACT condition (final $N = 17$) and two participants in the WLC (final $N = 22$) were lost at follow-up because they could not be contacted. The χ^2 test indicated that there was no different level of attrition between the two conditions, $\chi^2(1) = 1.56$, $p = .21$.

Regarding missing data, the overall response rate was 90.7%: 100%, 93.8%, 87.5%, and 81.25% at pretreatment, midtreatment, posttreatment, and 1-month follow-up, respectively. The 10 participants with missing data at any time assessment points were compared with the 38 participants who returned complete data. There were no statistically significant differences between conditions in missing data. Likewise, clinical and demographic variables at baseline were not related to missing data, except gender, which was included in the models. Gender effect was statistically significant only for the secondary outcome variable DASS-Depression and so it was retained in the model. According to these results, we relied on standard statistical assumptions of ignorable missing (i.e., missing at random).

Primary Outcome

The descriptive data of the study can be observed in Table 2. Figures depicting the change in scores across time for all outcomes and a table with the estimated means and standard errors obtained when conducting the linear mixed-effects models can be seen at https://bit.ly/2UBHuyU.

The linear mixed effects regression analysis conducted on the DASS-Total showed a statistically significant interaction between condition and time, $B = 4.13$, 95% CI [2.76, 5.49], $t(40.40) = 6.11$, $p < .01$. This result indicates that the RNT-focused ACT group improved more than the WLC group in the DASS-Total scores. The between-groups effect size at the 1-month follow-up

was very large (see Table 2). There was no significant individual variance either in intercepts, $\text{var}(u_{0i}) = 43.36$, $Z = 1.42$, $p = .16$, or in individual slopes, $\text{var}(u_{1i}) = 0.58$, $Z = 0.47$, $p = .64$. This indicates that, once the fixed-effects (i.e., condition and Time $\times$ Condition) were included in the model, there was not significant variability in scores at pretreatment and the degree of change across time was similar across participants. Accordingly, the random effects for intercepts and slopes were not retained in the model.

Secondary Outcomes

The mixed-models analyses also showed statistically significant interactions between condition and time for the DASS-21 subscales: DASS-Depression: $B = 1.10$, 95% CI [0.43, 1.77], $t(40.05) = 3.30$, $p < .01$; DASS-Anxiety: $B = 1.46$, 95% CI [0.94, 1.98], $t(40.80) = 5.62$, $p < .01$; DASS-Stress: $B = 1.64$, 95% CI [1.19, 2.08], $t(130.89) = 7.24$, $p < .01$. The between-groups effect sizes at the 1-month follow-up were very large. Random effects for intercepts and slopes were retained in the final models only when the individual variances were statistically significant. There was not significant individual variance in intercepts for Depression, $\text{var}(u_{0i}) = 11.34$, $Z = 1.75$, $p = .08$; and not for variance in slopes, $\text{var}(u_{1i}) = 0.36$, $Z = 1.27$, $p = .20$. Also, there was significant individual variance in intercepts for Anxiety, $\text{var}(u_{0i}) = 13.76$, $Z = 2.68$, $p < .01$, but not for variance in slopes, $\text{var}(u_{1i}) = 0.26$, $Z = 0.47$, $p = .13$. With regard to Stress, there was significant individual variance in intercepts, $\text{var}(u_{0i}) = 4.32$, $Z = 7.93$, $p < .01$. No random effects for slopes were included in the final model for the variable Stress because the log-likelihood ratio test was not statistically significant when entering the random effects for slopes in the previous model.

Process Outcomes

Table 2 shows the scores on process measures throughout the study, whereas Table 3 presents the results of the mixed-model analyses. Regarding measures of RNT (i.e., PTQ), experiential avoidance (i.e., AAQ-II), and cognitive fusion (i.e., CFQ), the mixed-models analyses showed statistically significant interactions between condition and time. The between-groups effect sizes at the 1-month follow-up were very large for the PTQ, AAQ-II, and CFQ.

Table 3

Results of the Linear Mixed Models for the Process Outcomes

Measure	B [95% CI]	t (df)	$\text{var}(u_{0i})$	Z	$\text{var}(u_{1i})$	Z
PTQ	3.97 [2.72, 5.21]	6.45** (40.17)	57.75	6.56	0.36	0.47
AAQ-II	2.90 [1.91, 3.88]	5.94** (39.29)	54.40	2.84**	0.91	1.54
CFQ	3.06 [2.22, 3.90]	7.22** (130.73)	22.77	3.28**	—	—
VQ-Progress	−0.75 [−1.43, −0.07]	−2.17* (128.82)	14.59	3.15**	—	—
VQ-Obstruction	1.40 [0.78, 2.01]	4.49** (128.23)	10.44	2.97**	—	—
GPQ-9	1.73 [0.42, 3.04]	2.66* (39.14)	224.92	3.76**	2.51	2.53*

Note. B = interaction effect between condition and time (fixed effect on linear slope); CI = confidence interval; $\text{var}(u_{0i})$ = individual variance of the intercepts; $\text{var}(u_{1i})$ = individual variance of the slopes; — = no random effects for slopes were included in the model according to the log-likelihood ratio test. PTQ = Perseverative Thinking Questionnaire; AAQ-II = Acceptance and Action Questionnaire–II; CFQ = Cognitive Fusion Questionnaire; VQ = Valuing Questionnaire; GPQ-9 = Generalized Pliance Questionnaire–9.
* $p < .05$. ** $p < .01$.

With respect to measures of values (i.e., VQ-Progress and VQ-Obstruction) and generalized pliance (i.e., GPQ), the mixed-models analyses also showed statistically significant interactions between condition and time. The between-groups effect sizes at the 1-month follow-up were large for all the variables.

Results at the 3-Month Follow-Up

The results of the post hoc comparison showed that the effect of the intervention was maintained at the 3-month follow-up for all measures: DASS-Total: I-$J(17.15) = -3.37, p > .05$; Depression: I-$J(16.42) = -1.11, p > .05$; Anxiety: I-$J(15.77) = -0.91, p > .05$; Stress: I-$J(17.30) = -1.29, p > .05$; PTQ: I-$J(16.13) = 1.24, p > .05$; AAQ-II: I-$J(16.03) = -1.45, p > .05$; CFQ: I-$J(16.10) = -0.44, p > .05$; VQ-Progress: I-$J(16.50) = 1.45, p > .05$; VQ-Obstruction: I-$J(17.63) = 1.48, p > .05$; GPQ-9: I-$J(17.37) = 0.40, p > .05$.

Reliable and Clinically Significant Changes

Table 4 shows the percentages of reliable change (improved and deteriorated) and CSC for each condition at each assessment point. In the ACT condition, 16 of the 17 participants who responded to this measurement point showed both RC and CSC (94.1%) at the 1-month follow-up, whereas only 27.3% and 9.1% of the participants in the WLC showed RC (improved) and CSC, respectively. Approximately 18% of the participants in the WLC showed a reliable deterioration at the 1-month follow-up, whereas no participant in the ACT condition deteriorated (however, see that at the 3-month follow-up, one participant deteriorated). The χ^2 tests showed that a higher percentage of participants in the ACT condition obtained reliable changes (improved) and clinically significant changes: RC, $\chi^2(1) = 18.28, p < .001, d = 1.85$, and CSC, $\chi^2(1) = 28.82, p < .001, d = 3.21$.

Regarding the intent-to-treat analysis, the percentage of RC and CSC for the ACT condition at the 1-month follow-up was 70%, whereas for the WLC condition was 24% for RC and 8% for CSC (with 16% showing a significant deterioration). The χ^2 tests showed that a higher percentage of participants in the ACT condition obtained RC (improved) and CSC in intent-to-treat analysis: RC, $\chi^2(1) = 10.02, p < .01, d = 1.03$, and CSC, $\chi^2(1) = 19.37, p < .001, d = 1.65$. At the 3-month follow-up, the percentage of RC and CSC was 65.2% in the ACT condition.

Discussion

Overview of the Study

During the past few years, brief RNT-focused ACT protocols for the treatment of emotional disorders, with special emphasis on depression and GAD, have been developed and tested using SCED (Ruiz et al., 2018; Ruiz, García-Beltrán, et al., 2019; Ruiz, Luciano, et al., 2019; Ruiz, Riaño-Hernández, et al., 2016). These protocols obtained very large effect sizes according to design-comparable standardized mean difference for SCEDs (Pustejovsky et al., 2014). Accordingly, the previous results of brief RNT-focused ACT protocols warranted conducting more systematic evaluations of this type of intervention. This study presents the first RCT that has evaluated the effect of an RNT-focused ACT protocol for depression and GAD. Specifically, this RCT ($N = 48$) analyzed the effect of a two-session, RNT-focused ACT protocol versus a WLC condition. The ACT protocol was almost identical to the one used by Ruiz et al. (2018); however, the sample in this study showed higher emotional symptoms. Also, participants had a high degree of comorbidity, with 85.4% of the participants showing the diagnoses both of depression and GAD, and 70.8% of the participants meeting criteria for an additional disorder.

Table 4
Percentages of Reliable Change and Clinically Significant Change in DASS-Total Scores

Condition	Midtreatment (%)	Posttreatment (%)	1-month F-U (%)	3-month F-U (%)
Analysis for participants who responded to the assessment				
RNT-focused ACT				
RC improved	66.7 (14/21)	94.4 (17/18)	94.1 (16/17)	88.2 (15/17)
CSC	42.9 (9/21)	66.7 (12/18)	94.1 (16/17)	88.2 (15/17)
RC deteriorated	4.8 (1/21)	0 (0/18)	0 (0/17)	5.9 (1/17)
Waitlist control				
RC improved	33.3 (8/24)	29.2 (7/24)	27.3 (6/22)	
CSC	8.3 (2/24)	12.5 (3/24)	9.1 (2/22)	
RC deteriorated	12.5 (3/24)	8.3 (2/24)	18.2 (4/22)	
Intent-to-treat analysis				
RNT-focused ACT				
RC improved	60.9 (14/23)	73.9 (17/23)	70.0 (16/23)	65.2 (15/23)
CSC	39.1 (9/23)	52.2 (12/23)	70.0 (16/23)	65.2 (15/23)
RC deteriorated	4.3 (1/23)	0 (0/23)	0 (0/23)	4.3 (1/23)
Waitlist control				
RC improved	32.0 (8/25)	28.0 (7/25)	24.0 (6/25)	
CSC	8.0 (2/25)	12.0 (3/25)	8.0 (2/25)	
RC deteriorated	12.0 (3/25)	8.0 (2/25)	16.0 (4/25)	

Note. DASS = Depression, Anxiety, and Stress Scales–21; F-U = follow-up; RNT = repetitive negative thinking; ACT = acceptance and commitment therapy; RC = reliable change; CSC = clinically significant change.

The attrition rate of the study was relatively low and did not differ across conditions. No dropout was observed in the ACT condition (i.e., all participants who commenced the intervention finished it), which suggests that the brief RNT-focused ACT protocol was well received by the participants. This is consistent with previous studies with brief RNT-focused ACT protocols (Dereix-Calonge, Ruiz, Sierra, Peña-Vargas, & Ramírez, 2019; Ruiz, Flórez, et al., 2018; Ruiz, Riaño-Hernández, et al., 2016). According to the data provided by the independent observers, the RNT-focused ACT protocol was implemented with fidelity and competence by the therapists. These data and the finding of equivalence of both experimental conditions at pretreatment supported the internal validity of the trial.

Participants in the WLC condition showed a slight improvement in emotional symptoms at midtreatment and posttreatment, but their scores at the 1-month follow-up were very similar to pretreatment. Indeed, only 9.1% (8% in the intent-to-treat analysis) of participants showed CSC in the primary outcome (i.e., DASS-Total), whereas 18.2% (16% in the intent-to-treat analysis) showed significant deterioration. The RNT-focused ACT condition showed statistically significant better effects than the WLC in primary and secondary outcomes. Participants in the ACT condition showed rapid decreases of emotional symptoms, with the lowest scores shown at the 1-month follow-up. The effect size in the primary outcome was very large ($d = 2.42$) and was basically the same as in the previous study by Ruiz et al. (2018). At the 1-month follow-up, 94.1% (70% in the intent-to-treat analysis) of the participants in the ACT condition showed CSC in the primary outcome. The effect sizes of the intervention for secondary outcomes at the 1-month follow-up were also very large, especially for stress ($d = 2.96$). This is consistent with previous studies and might be related to the content of the stress items of the DASS-21, which reflect GAD-related symptoms such as tension, irritability, nervousness, and impatience.

The RNT-focused ACT condition also showed statistically significant effects in all process measures, with large effect sizes. These were very similar to the ones found in Ruiz et al. (2018), which further supports that RNT-focused ACT protocols improve scores on process measures in an important way. Specifically, the effect sizes of the intervention were especially large for measures of experiential avoidance ($d = 2.32$), cognitive fusion ($d = 2.73$), and RNT ($d = 2.26$). Lower effect sizes were found for values and generalized pliance. This indicates that extended RNT-focused ACT protocols could place more emphasis on these processes.

The effect sizes in outcomes obtained in this study are larger than those usually found for brief interventions (Cape et al., 2010) and for more extensive protocols for the treatment of emotional disorders. For instance, the meta-analysis conducted by Cuijpers, Cristea, Karyotaki, Reijnders, and Huibers (2016) found that CBT yields weighted effect sizes of $d = .98$ and $d = 0.85$ for major depression and GAD, respectively, when compared with WLCs. Also, the effect sizes for some of the process measures (i.e., RNT, experiential avoidance, and cognitive fusion) were larger than those usually seen in ACT and CBT studies. For instance, the meta-analysis by Spinhoven et al. (2018) showed that the weighted effect size of CBT for depression in RNT measures was $d = 0.48$.

Future Directions and Recommendations

It is important to note, however, the limitations of the empirical evidence of the efficacy of RNT-focused ACT interventions. First, the most relevant limitation is that all studies have been conducted by the same research team. According to Chambless and Hollon (1998), replication by independent research teams is critical to establish the efficacy of an intervention because it protects the field from (a) extraordinary, but isolated findings; (b) researcher bias; and (c) reliance on findings that might be unique to a particular context or group of therapists. Accordingly, future studies should replicate these findings in other laboratories and settings. Second, the studies conducted testing the efficacy of RNT-focused ACT protocols adopted SCEDs or RCTs with WLC as comparison. The SCEDs cannot control for the participants' hope and expectancies for change and, although WLC conditions control for these variables, they cannot control for the potentially beneficial effect of unspecific factors such as attention and support (Knock, Janis, & Wedig, 2008). In this sense, the effect sizes found in waitlist-controlled trials are usually larger than when comparing with other control conditions (e.g., psychological placebo or treatment as usual). This might be a reason for the unusual large effect sizes found in this study. Accordingly, future research should compare the RNT-focused ACT protocol with other control conditions or with brief interventions for depression and GAD. Lastly, it is necessary to establish the psychometric properties of the instrument designed for measuring protocol integrity and therapist competence. Ideally, this analysis should be conducted with independent raters from different laboratories.

If further empirical research confirms the large effect sizes of RNT-focused ACT protocols, future research could consider the following points. For instance, these protocols incorporate the findings of current RFT research in defusion (Gil-Luciano et al., 2017; López-López & Luciano, 2017; Luciano et al., 2011), the components of metaphors that maximize their effect (Criollo et al., 2018; Sierra et al., 2016), and the relationships between triggers for RNT (Gil-Luciano et al., 2019). Further research might analyze how the inclusion of the findings of this research impacts on the effect of RNT-focused ACT protocols. Additionally, these findings encourage conducting an RCT in primary care settings. If the high efficacy of these protocols is confirmed in these settings, a significant step would be reached regarding the analysis of the MINC (Glasgow et al., 2014). In this sense, RNT-focused ACT protocols might posit a big potential to be adopted and implemented in mental health services, especially in low- and middle-income countries, due to their brevity, high efficacy, and transdiagnostic nature (Glasgow et al., 1999).

Limitations of the Study

Some limitations of the current study are worth mentioning. First, the mean age of the sample of this study was relatively low, and participants were relatively well-educated, with 48% of the sample with at least a bachelor's degree. Accordingly, future studies should analyze the effect of the RNT-focused ACT protocol with a more diverse adult population to extend the generalizability of these findings. Note, however, that recent meta-analyses have shown that psychological therapy does not seem to be more effective for well-educated, young participants (Cuijpers, Cristea, Ebert, et al., 2016). Second, the current study relied solely on

self-report measures. Further studies should evaluate the intervention effect including independent clinician-administered assessments. Third, no funding was available for this study beyond December 2018 and, therefore, the follow-up conducted was relatively short. This limitation is especially relevant because it might be argued that the large effects found in this study could be due to the observed rapid response phenomenon and regression to the mean. Accordingly, future studies analyzing the long-term effect of brief, RNT-focused ACT protocols are emphasized. Fourth, this study has not provided evidence of moderator and mediator variables. Lastly, the instrument used to measure the protocol integrity and therapist competence was designed for the current study. Thus, we do not have evidence of its reliability and validity. Note, however, that the raters showed a high degree of agreement in their scores.

Conclusions

This study constitutes the first RCT that has analyzed the effect of a very brief, RNT-focused ACT protocol for the treatment of depression and GAD. The efficacy of the intervention was very similar to a previous study from our group that tested an almost identical protocol in an SCED (Ruiz et al., 2018). Future studies should replicate these findings in other laboratories and analyze the effect of this type of intervention at a longer term. If the high efficacy of these very brief protocols is confirmed, the RNT-focused ACT approach would be a good candidate to be adopted and implemented in mental health services.

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