The effective comparison between emotion-focused cognitive behavioral group therapy and cognitive behavioral group therapy in children with separation anxiety disorder

Afrooz Afshari, Hamid Taher Neshat-Doost, Mohammad Reza Maracy¹, Mozhgan Kar Ahmady², Shole Amiri*

Ph.D. Student of Psychology, Department of Psychology, University of Isfahan, Department of Psychology, University of Isfahan, Department of Epidemiology, ²Associate Professor, Child Psychiatrist, Isfahan University of Medical Science, Isfahan, Iran

Background: Emotion-focused cognitive behavioral therapy (ECBT) is a new form of CBT with emotion regulation components. This form of treatment is suggested to be employed to improve dysregulation of anxiety and other kind of emotions in anxious children. This study observed and compared the effectiveness of CBT and ECBT on anxiety symptoms; sadness and anger management; and cognitive emotion regulation strategies in children with separation anxiety disorder (SAD). Materials and Methods: This study is a randomized clinical trial. Subjects were 30 children from 9 to 13-years-old (15 girls and 15 boys) with diagnosis of SAD, being randomly assigned to CBT, ECBT, and control groups (five girls and five boys in each group). Subject children in CBT group participated in 10-h weekly sessions within Coping Cat manual; whereas, subject children in ECBT group contributed in 12-h weekly sessions within ECBT. The control group received no treatment. The Screen for Child Anxiety Related Emotional Disorders (SCARED; child and parent forms), Children's Emotion Management Scale (CEMS; anger and sadness forms), and Cognitive Emotion Regulation Questionnaire (CERQ) tests administered to all subjects in pretest, posttest, and the follow-up measurement (3 months later). Analysis of covariance (ANCOVA) repeated measure and Kruskal-Wallis were applied to analyze data by Statistical Package for Social Sciences (SPSS) software package (v. 20). Results: CBT and ECBT; demonstrated no significant difference in reducing separation anxiety and total anxiety symptoms from parent and children's reports. ECBT effectively increased anger coping and decreased negative cognitive strategies and dysregulation of anger in children, both in posttest and follow-up. Also, ECBT reduced sadness dysregulation and increased sadness coping, though these significant advantages were lost in 3 months later follow-up. CBT reduced negative cognitive strategies in follow-up and increased sadness coping in posttest. None of treatments affected on anger and sadness inhibition and positive coping in separation anxious children. Conclusion: ECBT, in comparison with CBT; effectively improved emotion regulation strategies in children with separation anxiety.

Key words: Cognitive behavioral therapy, children, emotion-focused cognitive behavioral therapy, group therapy, separation anxiety

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INTRODUCTION

Considering the high prevalence and persistence of childhood onset anxiety disorders and the association with considerable impairments in social and academic functioning,^[1,2] anxiety disorders are the most prevalent psychiatric disorders in children.^[3,4]

Separation anxiety disorder (SAD) is probably the most prevalent diagnosis^[5] in pre-adolescents occurring approximately at the same rate in males and females.^[6] SAD is defined to be "developmentally inappropriate and excessive fear or anxiety concerning separation from those to whom the individual is attached".^[7] These children may resort to oppositional behaviors (such as screaming and temper tantrums) in order to prevent

separation being, by itself, an evidence of emotional dysregulation.

This uproar produces clinically significant distress or impairment in social, academic, occupational, or other important areas of functioning.^[7] There are some evidences suggesting relationships between childhood SAD and adult panic disorder (PD)^[8,9] as well. Therefore, developing some efficient and intervening programs for this particular group of children is of great importance.

Cognitive behavioral therapy (CBT) is considered as "probably efficacious" for the treatment of anxiety disorders in children.^[10,11] Most CBT programs focus on modifying the cognitive (e.g., maladaptive thinking patterns) and behavioral (e.g., avoidance) components

Address for Correspondence: Dr. Shole Amiri, Associate Professor of Psychology, Department of Psychology, University of Isfahan, Isfahan, Iran. E-mail: afroozafshari@gmail.com

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of anxiety. CBT helps children to recognize somatic aspects of anxiety and to develop a plan, as well, to cope with an anxiety-provoking situation. Children apply the skills in real-life situations to gain mastery over their anxiety. [12] Robust support has now been collected by independent researchers using various CBT formats. [13-20] Nonetheless some researchers suggested that some maintaining factors associated with childhood anxiety are not addressed in typical CBT protocols, therefore, about 30-40% of anxious children participating in a CBT programs did not experience a significant reduction in anxiety symptoms. [21,22]

Suveg et al., [23] examined changes in emotion awareness along with worry, anger, and sadness regulation in 37 children, aged among 7-17 years, being diagnosed with generalized anxiety disorder (GAD), SAD, and/or social phobia (SP). Having completed 16 CBT sessions, the mentioned children demonstrated significant improvements in anxiety, self-efficacy, emotion awareness, and worry regulation skills; although these findings did not include anger or sadness regulation. Results suggest that CBT for children with anxiety disorders may facilitate broad emotion identification skills, yet does not adequately teach children to regulate emotional experiences beyond the experience of anxiety. One possible reason for this finding is that children with anxiety disorders do not appreciate different ways to manage emotional experiences, thus they experience anger and worry more deeply.^[24]

Carthy et al., exploited a study on patterns of emotional reactivity and regulation in anxious children. Results of the study revealed that anxious children demonstrated greater intensity and frequency of negative emotional responses. These children had less ability in evaluating negative emotional situations and more reliance in emotion regulation strategies, in which the risk of functional impairment and intense negative emotion is increased. [25] Furthermore these children perceived themselves as less able to manage the emotionally provocative situations successfully. They exhibited more dysregulated management (i.e., culturally inappropriate emotional expression) and less adaptive coping across experiences of anger, sadness, and worry compared with the healthy children.[21] Altogether, these studies illustrated that children having anxiety disorders along with emotion-related deficits - not anxiety specific — required receiving a more complete treatment than CBT.

Suveg *et al.*,^[26] developed an emotion-focused CBT (ECBT) program for children with anxiety disorders. ECBT addresses all the empirically-based components of traditional CBT, including an additional component to address the emotion-related deficits recognized in children and youths with anxiety disorders. "The fundamental

difference between CBT and ECBT is the systematic integration of emotion-related concepts in ECBT. Further than experiencing anxiety, this fact, actually, facilitates the development of both emotion understanding and emotion regulation skills" (pp. 80-81). Description of ECBT treatment packages were compromised of two sections. During the first phase of ECBT treatment, child discovers different emotions (e.g., anxiety, anger, guilt, happiness, etc.), and focuses on the recognition of emotion in oneself and others. Within the second half of treatment, exposure treatment, child utilizes exposures to anxiety provoking scenarios, as well as exposures to the situations exasperating other emotions (e.g., anger) in which the child has difficulty in regulating. The child is then instructed to manage these emotion-provoking experiences.

According to previous literature, and in comparison to CBT, more effective intervention for anxious children may be consisting of emotion regulation components. As SAD is one of the most common psychological problems in children, the aim of this study is to compare the effectiveness of CBT and ECBT in children with SAD and overall anxiety, sadness, and anger management, and positive and negative cognitive strategies of emotional regulation as well.

MATERIALS AND METHODS

Participants and procedure

This study is a randomized clinical trial that was conducted from October 2011 to August 2012. Principally, for more assessment and psychotherapy schools, private child and adolescent clinics, pediatric psychiatrists, and psychologists engaging with children and adolescents were notified to refer the anxious children who were diagnosed with SAD to the child and adolescent clinic.1 Parents and children participated separately in a semistructured diagnostic interview (i.e., ADIS-IV-C = P) conducted by pediatric psychiatrist and a PhD student in clinical psychology. Following the diagnostic evaluation, those children who met the criteria for diagnosis of SAD were selected. The participants with intelligent quotient (IQ) lower than 80, learning disorders, psychosis, serious mental or physical problems, and low interest in continuing the study were excluded from this study. Also children in three groups did not receive medication or stopped using drugs for at least 1 month before pretest. Although there was a high comorbidity among different anxiety disorders and these children had some kind of mood and anxiety symptoms as well, these symptoms did not counter the criteria for other anxiety or mood disorders being diagnosis in them. Written consent was obtained from parents of all subjects.

¹Assessment and therapy sessions were administered in a private clinic in Isfahan.

Finally after 3 month, a sample of 34 children who met the criteria for SAD was collected. These children were randomly assigned into two treatments and a control group.

Coping Cat treatment manual^[24] was pursued by CBT group and was designed to follow a 1-h long session in a 10 week schedule. The schedule for ECBT group was structured for 12 weeks, in which parents had to participate into two sessions and children received 10 sessions of training. Both schedules were divided into training and practice sections; whereas, in CBT program children mostly learned to recognize and manage anxiety. While children in ECBT, as well as the behavioral and cognitive skills, were conducted into emotional understanding (e.g., recognizing emotional cues, familiarizing with the causes and consequences of emotion and the simultaneous and changing emotion states) in addition to emotion regulation (e.g., coping with emotion, appropriate use of display rules).^[26] In ECBT children were engaged in different emotions other than anxiety.

Therapists of both treatments were advanced PhD students in psychology. Children and their parents were evaluated with the Screen for Child Anxiety Related Emotional Disorders (SCARED) measures for separation and total anxiety symptoms (actually to assessing children's anxiety symptoms two informants were employed). Also to examine the kind of effective therapy on the other emotions rather than anxiety, children were tested by Children's Emotion Management Scale (CEMS) questionnaires for emotion regulation strategies across sadness and anger experiences; to examine the kind of effective therapy on cognitive aspects of emotion regulation children reported kids' version of Cognitive Emotion Regulation Questionnaire (CERQ-k). All tests were taken before treatment (pretest T_0), just after finishing the program (posttest T_1), and after 3 months (follow-up T₂). The obtained data were analyzed by analysis of covariance (ANCOVA) repeated measure to estimating the variation of scores in each variable, (pretest scores were considered as a covariate). Data analyses were conducted by Statistical Package for Social Sciences (SPSS) software, version 20.

Measures

Cognitive coping strategies (CERQ-k)

Cognitive coping strategies in children were assessed with the CERQ-k.^[27] The CERQ-k is an adaptation of the original CERQ.^[28] being suitable for adults and adolescents over 12-years-old. The items of the original CERQ were simplified and shortened. The CERQ-k was constructed as a self-reporting questionnaire for 9-11-year-old children. It assesses the feeling of children experiencing negative proceedings in daily life. The CERQ-k consists of 36-item questions measuring nine different subscales. Each subscale includes four item questions ranging from 1 ((almost) never)

to 5 ((almost) always). The higher the subscale score, the more the specific cognitive coping strategy is employed. The CERQ-k subscales are: Refocus on planning (positive strategy); rumination (negative strategy); putting into perspective (positive strategy); catastrophizing (negative strategy); positive refocusing (positive strategy); positive reappraisal (positive strategy); acceptance (positive strategy; self-blame (negative strategy); and other-blame (negative strategy). By adding the positive strategies' subscales and calculating each one of the negative strategies, two scores of positive and negative cognitive coping strategies will be accomplished. It is essential to state that the psychometric properties of the CERQ-k are verified. The factorial validity and the criterion-related validity of the CERQ-k are satisfactory. All subscales demonstrate to have high internal consistency ranging from 0.72 to 0.85.[28] The reliability of CERQ-k negative and positive cognitive strategies in a sample of 85 anxious children was 0.89 and 0.86, respectively in this study.

Scared

To assess the severity of anxiety symptoms, participants completed the SCARED (SCARED-C). Parent form of this measure (SCARED-P) was completed by one of the child's parents. Since the nature of anxiety symptoms are covert and anxious children do not demonstrate interpersonal behavior problems that would generate a thorough diagnostic, [29,30] both forms of SCARED were performed in this study.

The SCARED was originally developed by Birmaher *et al.*,^[31] as a screening tool for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) childhood anxiety disorders. It comprises of five groups of anxiety symptoms subscales, specifically: PD, GAD, SAD, SP, and school anxiety (SA). A meta-analysis study evaluating the cross-cultural psychometrics of SCARED suggested that the SCARED can be utilized in different countries as a cross-cultural screening instrument for DSM-IV Text Revision (DSM-IV-TR) anxiety disorder symptom dimensions.^[32]

The SCARED has been widely used in studies of anxiety and has demonstrated high reliability and validity in both clinical and nonclinical populations. [31-33] Internal consistency of SCARED-C and SCARED-P in the current study was evaluated in a sample of 50 anxious children. Cronbach's a was 0.86 and 0.94 for the SCARED-C and SCARED-P, respectively.

CEMS: Anger and sadness

The CEMS assesses children's self-reporting of sadness and anger regulation. [34,35] Children specified the frequency of being engaged in a variety of emotion management strategies using a Likert scale of 1 (hardly ever), 2 (sometimes),

or 3 (often). For each emotion three subscales were recognized:

- a. Inhibition (four item questions), assessing masking or suppression emotional expression (e.g., I get mad in but I don't show it);
- b. Dysregulated expression (three item questions), measuring culturally inappropriate expression of negative emotions (e.g., I cry and go on when I am sad; I say mean things to others when I'm mad); and
- c. Emotion regulation coping (five-item questions for sadness scale and four-item questions for anger scale), exploratory regulating negative emotions through constructive control over emotional behaviors (e.g., when I feel worried I do something totally different until I calm down; I try to calmly deal with what is making me sad).

The assessment of the reliability of the CEMS of anger and sadness scales designated coefficient alphas to range from 0.62 to 0.77 and the test-retest reliability ranged from 0.61 to 0.80 for the individual subscales.^[34] The sample, in this study, were 320 nonclinical primary students (boys and girls). The internal consistency for sadness and anger questionnaires being evaluated by Cronbach's a method were 0.66 and 0.62, respectively.

RESULTS

There were 34 children with SAD aged from 9 to 13 years with mean age of 10.57 ± 2.27 attending in this study (12 children in each subject group of CBT and ECBT and 10 children in the control group; but there were two missing subjects in each therapeutic group due to their low interest in attending sessions). The mean age \pm standard deviation (SD) of CBT group was 11.40 ± 0.84 , and in ECBT and control groups were 11 ± 0.94 and 10.30 ± 1.25 , respectively, with no significant difference (F (2, 27) = 2.93; P > 0.05).

Before intervention, scores of anxiety from two informants (SCARED-C-P), cognitive coping (CERQ-k), and emotional management (CEMS) of separation anxious children were considered as covariates. Effect of CBT and ECBT group therapies, in comparison to control group, on variables were measured just after (posttest, T_1) and 3 months after interventions (follow-up, T_2) which were considered as dependent variables.

The normality assumption tested by Shapiro-Wilk and Kolmogorov-Smirnov tests determined that normality assumption was met for all variables. The correctness of assumptions for the fitting model was verified, except in separation anxiety symptoms (child and parent reports) and sadness dysregulation that Levene's tests of equality of error variances did not show equality across groups. Kruskal-Wallis and Mann-Whitney U tests were used to analyze these data.

Table 1 illustrates mean scores and SD for all study variables of each group in three different times (pretest, posttest, and the follow-up).

Results of Kruskal-Wallis test in comparing separation anxiety, in posttest (T1) and follow-up (T_2), revealed that separation anxiety symptoms of children (obtained from children and parent's reports) were significantly different in three groups (P < 0.0001). Finding of Mann-Whitney U test used to compare treatment groups in posttest and also in follow-up showed that both treatments significantly reduced separation anxiety symptoms (P < 0.001) and there was no significant difference between two treatments (P > 0.05).

To compare three groups in other variables, ANCOVA repeated measure was used to analyze data. Test of between subject effects in children and parent's reports of children's total anxiety symptoms showed that there is significant difference between mean averages of groups in children (P < 0.0001) and parent's reports (P < 0.0001). By using independent t-test, prudent comparison of CBT ($T_1 = -2.9$; $T_2 = -5.3$) and ECBT ($T_1 = -4.4$; $T_2 = -5.5$) with the control group, in children's report of total anxiety, and also in parent's report (ECBT: $T_1 = -2.1$; $T_2 = -5.4$ and CBT: $T_1 = -1.7$; $T_2 = -5.2$) demonstrated that these treatments effectively reduced the anxiety symptoms (P < 0.05). This fact clarifies that there was no difference between two treatments in reducing anxiety (P < 0.05).

Results demonstrated that through comparing the effectiveness of treatments on anger dysregulation and coping with control group, only ECBT significantly reduced anger dysregulation ($T_1 = -3.5$; $T_2 = -2.2$; P < 0.05), and increased anger coping ($T_1 = 5.9$; $T_2 = 2.1$; P = 0.05). CBT could not present any significant effect on these subscales (P > 0.05).

Just in posttest both CBT ($T_1 = 1.8$) and ECBT ($T_1 = 2.8$) significantly increased sadness coping (P < 0.05). The comparison of negative cognitive regulation after treatment and in the follow-up measurement (3 months later) among subject and control groups showed that there was significant difference between ECBT and control group ($T_1 = -3.6 T_2$) = -5.3; P < 0.001), declaring that only ECBT considerably reduces negative cognitive regulation of emotions. CBT just in follow-up significantly reduced this variable in separation anxious children ($T_2 = -2.8$; P = 0.01). Therefore in followup no significant difference emerged between CBT and ECBT in reducing negative cognitive strategies in children $(T1 = 2.1, P = 0.05; T_2 = 0.9; P > 0.05)$. In case of comparing the effectiveness of treatments on sadness dysregulation with control group, results of Mann-Whitney U test indicated that only ECBT significantly reduced sadness dysregulation after treatment (P = 0.03), but not in follow-up.

Table 1: Mean and standard deviation of main study variables in CBT, ECBT, and control group				
Variable	Phase	Control <i>n</i> = 10 M (SD)	CBT <i>n</i> = 10 M (SD)	ECBT n = 10 M (SD)
Separation anxiety (children self-reporting)	Pretest (T ₀)	12.30 (2.1)	11.20 (4.2)	12.40 (1.0)
	Posttest (T ₁)	11.60 (3.5)	9.10 (1.7)	5.20 (0.9)
	Follow-up (T ₂)	10.50 (3.0)	7.00 (1.3)	4.40 (1.1)
Total anxiety score (children self-reporting)	Pretest (T ₀)	53.70 (12.1)	51.30 (5.4)	53.40 (6.9)
	Posttest (T ₁)	51.80 (13.8)	36.70 (7.8)	31.50 (4.6)
	Follow-up (T ₂)	50.70 (14.0)	25.50 (5.4)	22.20 (8.1)
Parent's report of children's separation anxiety	Pretest (T ₀)	11.60 (4.7)	5.70 (2.1)	9.60 (4.0)
	Posttest (T ₁)	9.90 (2.6)	10.30 (4.9)	6.90 (2.9)
	Follow-up (T ₂)	10.10 (1.7)	4.60 (1.9)	4.60 (2.4)
Parent's report of children's total anxiety	Pretest (T ₀)	42.20 (11.0)	34.10 (10.4)	35.90 (11.3)
	Posttest (T ₁)	37.90 (11.5)	29.50 (10.9)	26.80 (11.7)
	Follow-up (T ₂)	38.10 (11.4)	15.40 (7.4)	13.60 (8.5)
Dysregulation of anger	Pretest (T ₀)	6.30 (1.3)	6.30 (0.4)	6.90 (0.8)
	Posttest (T ₁)	6.10 (1.2)	5.00 (1.7)	4.40 (0.8)
	Follow-up (T ₂)	6.00 (1.2)	5.00 (1.9)	4.70 (1.4)
Inhibition of anger	Pretest (T ₀)	7.70 (1.4)	7.90 (1.4)	7.00 (1.3)
	Posttest (T ₁)	7.60 (1.9)	7.10 (2.1)	7.30 (2.1)
	Follow-up (T ₂)	7.60 (1.9)	6.60 (2.1)	7.90 (2.4)
Anger coping	Pretest (T ₀)	7.67 (1.9)	7.90 (1.5)	7.10 (1.2)
	Posttest (T ₁)	6.50 (1.5)	7.00 (1.7)	6.90 (0.6)
	Follow-up (T ₂)	6.80 (1.8)	7.50 (2.7)	8.50 (1.7)
Dysregulation of sadness	Pretest (T ₀)	6.50 (1.8)	6.90 (0.9)	6.80 (1.0)
	Posttest (T ₁)	6.40 (1.8)	5.70 (1.6)	4.60 (0.9)
	Follow-up (T ₂)	6.40 (1.8)	5.60 (1.6)	4.80 (1.4)
Inhibition of sadness	Pretest (T ₀)	7.80 (1.8)	7.80 (1.3)	7.10 (2.3)
	Posttest (T ₁)	8.30 (2.0)	8.00 (1.8)	8.90 (1.5)
	Follow-up (T ₂)	8.30 (2.0)	7.60 (2.6)	6.60 (2.3)
Sadness coping	Pretest (T ₀)	8.80 (1.8)	8.20 (1.9)	7.00 (1.7)
	Posttest (T ₁)	7.70 (1.7)	9.50 (1.7)	10.50 (1.9)
	Follow-up (T ₂)	7.70 (1.4)	7.00 (1.6)	8.70 (2.0)
Positive cognitive strategies	Pretest (T ₀)	66.10 (12.6)	62.60 (9.9)	57.80 (7.0)
	Posttest (T ₁)	59.90 (17.9)	62.50 (13.6)	62.70 (9.5)
	Follow-up (T ₂)	54.50 (12.5)	58.30 (9.9)	58.40 (10.2)
Negative cognitive strategies	Pretest (T ₀)	53.10 (9.8)	49.30 (9.4)	43.50 (7.8)
	Posttest (T ₁)	58.00 (10.0)	50.80 (10.7)	40.10 (12.0)
	Follow-up (T ₂)	59.30 (11.1)	40.60 (18.4)	34.60 (9.5)

CBT = Cognitive behavioral therapy; ECBT = Emotion-focused CBT

In case of anger and sadness inhibition and positive cognitive strategies results revealed that none of the treatments compared to the control group incorporated any significant effect on these subscales (P > 0.05).

DISCUSSION

Regarding to the results and based on reports obtained from children and their parents, both CBT and ECBT cause a continual reduction in separation anxiety and total anxiety symptoms. These results were consistent with previous studies that discretely reported the effectiveness of CBT and ECBT in diminishing anxiety symptoms in children. [10,11,14-16,20,21,23,26] By considering the similarity of these two treatments on anxiety reduction, it can be mentioned that both CBT and ECBT are overlapped in cognitive and behavioral techniques and even some components of typical

CBT programs serve to target emotion dysregulation. For example, relaxation training is often used to help reduce a child's physiological response to anxiety. Since relaxation allows children to modify their physiological arousal, it may serve as an emotion regulation strategy, thus it decreases the excitement.^[26]

A further verdict of this study is the effectiveness of ECBT in decreasing dysregulation of anger and sadness, and increasing sadness and anger coping scores in children. This fact confirms the effectiveness of emotional skills in ECBT manual on separation anxious children's emotional management compared to CBT. This finding was in consistency with the findings of Suveg *et al.*^[23,26]

A further consequence was the effectiveness of ECBT in reducing negative cognitive strategies. Also CBT

decreased negative cognitive coping in children and increases sadness coping after treatment (this result contradicted the previous study^[23]). Cognitive coping is another valuable psychological construct that in some studies reported to be effective in prevention and treatment of anxiety disorders[36] and is correlated with depression and sadness.^[37] Maladaptive or excessive uses of negative cognitive strategies contribute to the development and persistence of anxiety, sadness, and anger.[37,38] This construct is distinguished from emotion regulation by its predominant focus on decreasing negative effect in response to stressful situations. [39,40] Accordingly, as CBT and ECBT are common in cognitive and behavioral techniques, CBT is an effective therapy in regard to emotional and cognitive aspects of sadness rather than anxiety. These findings suggest that CBT for separation anxious children facilitates anxiety and sadness identification skills, but not adequately teach children methods of regulating other emotions (such as anger).

Nonetheless these findings confirmed the importance of emotional education in addition to cognitive and behavioral strategies in increasing adaptive anger management and sadness regulation in children with SAD.

CONCLUSION

ECBT is an effective treatment program for the anxious children that might have difficulty in managing the negative emotions rather than anxiety.

Limitations and suggestions

One of the main limitations of this study was the small size of subjects; the other limitation was associated with the age range of children (9-13 years).

The findings have implications for clinical practice. Broadly, clinicians have access to an increasingly greater number of therapies with emerging empirical support. The researchers are recommended to perform ECBT manual for other type of anxiety disorders on children and youths.

Another suggestion is about CERQ-k in testing cognitive coping. Use of other questionnaires for assessing this variable in children due to their cognitive development is recommended.

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