




# Comparing the Effectiveness of Quality of Life Therapy and Acceptance and Commitment Therapy on Psychological Capital and Forgiveness among Mothers of Children with Stuttering

Setareh. Ataabadi<sup>1</sup>, Zahra. Yousefi<sup>2\*</sup>, Felor. Khayatan<sup>3</sup>

<sup>1</sup> PhD student of General Psychology, Education and Psychology Department, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran

<sup>2</sup> Assistant Professor, Clinical Psychology Group, Education and Psychology Department, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran

<sup>3</sup> Assistant Professor, Psychology Group, Education and Psychology Department, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran

\* Corresponding author email address: z.yousefi@khuisf.ac.ir

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## ABSTRACT

**Objective:** This research aimed to compare the effects of Quality of Life Therapy and Acceptance and Commitment Therapy on psychological capital and forgiveness among mothers of children aged 7 to 11 years with stuttering.

**Methods and Materials:** The research methodology was a quasi-experimental design with pre-test, post-test, and a 45-day follow-up. The statistical population included all mothers of children with stuttering during 2020-21. The statistical sample consisted of 60 mothers of children with stuttering, who were conveniently selected and randomly assigned to two experimental groups and one control group. All groups were tested using research tools, including the Psychological Capital Scale (Luthans et al., 2004) and the Heartland Forgiveness Scale (Thompson et al., 2005). Data analysis was performed at two levels: descriptive statistics (mean and standard deviation) and inferential statistics (analysis of variance with repeated measures). Calculations were conducted using the Social Sciences Statistics Package version 23 and SPSS software.

**Findings:** Statistical analyses showed that both methods were effective in improving the dependent variables, but Acceptance and Commitment Therapy was more effective than Quality of Life Therapy ( $p < 0.01$ ), and this pattern continued 45 days after the training.

**Conclusion:** Both Quality of Life Therapy and Acceptance and Commitment Therapy seem to be suitable methods for the psychological rehabilitation of mothers of children with stuttering.

**Keywords:** *Quality of Life Therapy, Acceptance and Commitment Therapy, Psychological Capital, Forgiveness, Stuttering.*

## 1. Introduction

Stuttering is one of the most complex speech disorders that generally arises in childhood for various unknown reasons (Jafari et al., 2019)s. Potential causes of stuttering may include distress and nervous pressures resulting from environmental impacts, with verbal and emotional interactions with parents, particularly mothers, playing a crucial role (Mongia et al., 2019; Movahedi & Fakhri, 2014).

It appears that a child's disability, especially stuttering, can create a crisis in the family and lead to a chronic situation (Blumgart et al., 2010) that mothers must inevitably confront. In this context, enhancing psychological capital may help reduce communication problems in mothers of children with disabilities (Aerab Sheibani et al., 2017). Psychological capital is recognized as a composite construct consisting of four cognitive-affective components: hope, self-efficacy, resilience, and optimism. These components give meaning to an individual's life and sustain their efforts to change stressful situations. They also prepare the person to face life's challenges and ensure their resilience and persistence in overcoming difficulties and achieving goals (Parker et al., 2003; Saadati & Parsakia, 2023). Self-efficacy is defined as a firm belief in one's capabilities to mobilize motivational resources and strategies needed for successful task performance in specific situations (Bandura, 1977). Hope is a positive motivational state based on an agency-driven sense of achievement, characterized by the energy directed towards a goal and strategies (planning to achieve goals) (Snyder, 2000). Optimism is an interpretative style that attributes positive events to permanent, personal, and pervasive causes, whereas negative events are attributed to external, temporary, and specific conditions. Conversely, pessimism is an interpretative style that attributes positive events to external, temporary, and specific factors and negative events to personal, internal, stable, and pervasive factors (Seligman & Csikszentmihalyi, 2014). Resilience is a category of phenomena characterized by a pattern of positive adaptability in the face of significant problems and hazards (Masten & Reed, 2001).

Therefore, individuals who benefit more from psychological capital also enjoy higher mental health. However, it seems that among mothers with a child who has a disorder or problem, these individuals have lower psychological capital and experience more stress and anxiety when facing difficulties (Farshbaf Mani Sefat & Pourrahim, 2018). Research shows that the states of mothers can be influenced by their children's conditions and can alter

psychological characteristics in them (Chaliliorahman & Yousefi, 2019; Yousefi & Homaie, 2018).

Forgiveness or pardon is a process that induces changes in the cognition, emotion, and negative behavior of the aggrieved person towards the offender. Alternatively, forgiveness is a deliberate and voluntary process that occurs through a voluntary decision to forgive another person's mistake (Worthington et al., 2007). As a result of this process, the aggrieved person's emotions are reduced, the motive for retaliatory activities disappears, and the emotional and psychological damages caused by grievances are mitigated (Nemati et al., 2016).

Nonetheless, forgiveness is a process of passing over errors and erasing their effects, which in the aggrieved individual, occurs with a motivation for inner peace, improving relations with the offender, or for the sake of performing a valuable behavior, and it has the following outcomes: 1) liberation from negative feelings towards the offender, 2) overcoming the suffering caused by the badness and error of the offender, 3) avoiding anger, estrangement, separation, and retaliation against someone who has committed an error and caused discomfort and grievance to the other party (Worthington et al., 2007).

Some therapies in positive psychology are associated with peace and satisfaction with life. One of the approaches in positive psychology, aimed at creating mental well-being and enhancing life satisfaction, is Quality of Life Therapy, designed by Frisch (2006). Group training based on Quality of Life Therapy is structured and accompanied by cognitive-behavioral tasks and exercises aimed at transforming 16 main areas of life. These areas include: 1) physical health and wellness, 2) self-esteem, 3) goals and values, 4) money and material things, 5) work, 6) play, 7) learning, 8) creativity, 9) helping others, 10) love, 11) friends, 12) children, 13) relatives, 14) home, 15) neighbors, and 16) community. In this model, therapy involves cognitive-behavioral changes in five main concepts: 1) life conditions, 2) attitudes, 3) standards that individuals have set for themselves, 4) values, and 5) overall satisfaction with life. The goal of this type of therapy is to minimize the gap between what a person wants and what they aspire to, thereby improving the quality of life (Frisch, 2005). Numerous studies have shown the positive impact of Quality of Life Therapy on dependent variables of this research (Aghaei & Yousefi, 2017).

Another positive-oriented therapy that emphasizes the role of an individual's psychological resources in coping with stressors and is part of the third wave of therapies is

Acceptance and Commitment Therapy (Aghaei & Yousefi, 2017). In Acceptance and Commitment Therapy, the goal is for individuals to learn not to judge especially unwanted internal events and to accept them. This type of therapy uses the following fundamental principles to aid clients' psychological flexibility: 1) cognitive defusion: learning ways to reduce the tendency to objectify thoughts, images, emotions, and memories; 2) acceptance: allowing thoughts to come and go without struggling with them; 3) contact with the present moment: being aware of here and now and experiencing it with interest; 4) self as context: achieving a sense of transcendent self, a continuum of awareness that is changeable; 5) values: discovering what is truly important to the real self; and 6) committed action: being committed to a task or duty and performing it (Aghaei & Yousefi, 2017). Some research also shows the impact of Acceptance and Commitment Therapy on psychological variables (Hayes et al., 2004; Yousefi & Homaie, 2018).

However, mothers of children with stuttering endure more stress than mothers with typical children, which may jeopardize their mental health. Therefore, there is a need for psychological training among them. Research in this direction helps enrich the training and therapies specific to these mothers. Thus, the current research aimed to answer which of the methods, Quality of Life Therapy or Acceptance and Commitment Therapy, has greater effectiveness on the variables of psychological capital and forgiveness among this group of mothers.

## 2. Methods and Materials

### 2.1. Study design and Participant

The research design was a quasi-experimental type, involving two experimental groups with pre-test, post-test, and follow-up phases, along with a control group. The population included all mothers of children aged 7 to 11 years with stuttering in Isfahan during 2019-2020. According to recommendations by Gall, Borg, and Gall (1996), a sample size of 15 to 20 individuals per group suffices for experimental and quasi-experimental research. Consequently, 60 mothers of children aged 7 to 11 years with stuttering, who attended speech therapy and counseling centers in Isfahan, were selected using a convenience sampling method and randomly assigned to two experimental groups and one control group, each containing 20 individuals. The selection was based on specific inclusion and exclusion criteria. The inclusion criteria were: having a child with stuttering, willingness to participate in training

sessions, and not suffering from physical or mental illness or substance abuse that could hinder participation in the sessions, which was verified through a written questionnaire at the time of registration for the training courses. Participants should not be enrolled in another course simultaneously. The exclusion criteria included: unwillingness to continue participation in the sessions, disruption in the session proceedings, and non-compliance with homework assignments.

After obtaining ethical approval and the ethical code IR.IAU.KHUISF.REC.1398.051, the sample was gathered over four weeks, with two 90-minute sessions each week. The same instructor conducted training in both groups at the Aftab Women's Cultural Center, affiliated with the Isfahan Municipality. The control group did not receive any training until the end of the course. All three groups underwent assessment with the research instruments before starting the course, after the training sessions, and 45 days following the end of the course. The content of the training for both groups followed specific goals, contents, and tasks for each session.

### 2.2. Measures

#### 2.2.1. Psychological Capital

Developed by Luthans et al. (2004), this scale consists of 24 items measuring four dimensions of psychological capital: self-efficacy, optimism, hope, and resilience. Each dimension comprises 6 items. The maximum score for each component is 26, and the minimum is 6. Higher scores on these dimensions indicate greater levels of psychological capital. The reliability of this test was reported by Luthans et al. (2004) as 0.85. In another study, construct validity for the sub-scales of self-efficacy, hope, optimism, and resilience was respectively reported as 0.68, 0.54, 0.76, and 0.42, and the overall construct validity for the scale was 0.53. Test-retest reliability for the optimism, hope, resilience, and self-efficacy sub-scales was respectively 0.85, 0.79, 0.53, and 0.81, and for the entire scale, it was 0.88 (Baker et al., 2021; Luthans et al., 2004).

#### 2.2.2. Forgiveness

This scale, developed by Thompson et al. (2005), consists of 18 items divided into three sub-scales (self-forgiveness, forgiving others, and forgiving uncontrollable situations), each with 6 items. A higher score indicates less forgiveness demonstrated by the subject. This scale has been tested in large non-clinical samples, and Cronbach's alpha reported

between 0.76 and 0.83 (Thompson et al., 2005). In a study, reliability coefficients for the overall scale and sub-scales using Cronbach's alpha method were 0.84, 0.76, 0.83, and 0.83 respectively (Ebrahimi et al., 2017).

### 2.3. Intervention

#### 2.3.1. Quality of Life Therapy

Quality of Life Therapy (QOLT), based on the comprehensive approach by Frisch (2005), is designed to improve life satisfaction by addressing specific life domains and cognitive-behavioral interventions. Each session focuses on assessing and enhancing aspects of daily life, tying these improvements to psychological capital and forgiveness (Frisch, 2005).

Session 1: The first session introduces the group rules and the rationale behind Quality of Life Therapy. It explains how daily life variables relate to psychological capital and forgiveness. The session includes the distribution of initial assignments and a Q&A period to address any questions mothers have about the therapy program.

Session 2: This session involves assessing goals across 16 life dimensions and implementing the "Life Cake" technique. There is a focus on the role of mothers in promoting desirable behaviors and reducing anxiety in children with stuttering.

Session 3: Goals for short-term and long-term satisfaction in life are identified. Mothers are given worksheets to monitor life dimensions based on satisfaction measures, and they are tasked with recording observations for homework.

Session 4: The fourth session defines and introduces the dimensions of internal richness with simple examples. The requirements for achieving inner richness and understanding the psychological profile of stress are discussed, along with how to achieve quality time both immediately and in the long run.

Session 5: Techniques for stress reduction are taught, focusing on finding meaning and ways to achieve it. The session covers the characteristics and goals of meaning-making activities, and teaches mothers how to categorize goals in 16 life dimensions.

Session 6: A review of the five-factor model of life satisfaction is provided, explaining the logic behind it. Training includes exercises for reducing the experience of negative emotions through condition and attitude changes.

Session 7: Further review of the five-factor life satisfaction model with detailed instruction on techniques

for changing goals and priorities, as well as enhancing overall satisfaction.

Session 8: The final session teaches emotional control techniques, reviews key principles from previous sessions, gathers feedback, answers questions from mothers, and conducts a post-test to assess progress and understanding.

#### 2.3.2. Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (ACT) focuses on increasing psychological flexibility through mindfulness and cognitive defusion techniques. Each session explores different aspects of cognitive flexibility and mindfulness, helping mothers deal effectively with negative thoughts and emotions (Hayes et al., 2004).

Session 1: Introduction to cognitive flexibility and mindfulness, discussing common issues people have with their thoughts. Training includes techniques for observing thoughts without engagement.

Session 2: This session introduces cognitive defusion techniques, teaching metaphors related to dealing with negative thoughts and strategies for facing these thoughts.

Session 3: The concept of experiential avoidance and its role in generating negative emotions is introduced. Acceptance as a critical component in cognitive flexibility is emphasized, with practical acceptance techniques taught.

Session 4: The role of self-conceptualization in experiential avoidance is discussed. Mothers learn methods for freeing themselves from self-imposed labels and cultivating an observing self.

Session 5: The importance of values in enhancing cognitive flexibility and reducing negative thoughts and emotions is taught. Mothers learn techniques for clarifying their values.

Session 6: The session focuses on the role of values in guiding appropriate behavior and teaches mothers how to identify optimal goals based on personal values and how to engage in committed action.

Session 7: Living in the present moment is highlighted as a critical factor for cognitive flexibility, with techniques for practicing this skill. Instruction also covers how to intervene in the moment to maintain committed actions.

Session 8: The final session covers "beneficial hopelessness," summarizing the taught content, gathering feedback, answering mothers' questions, and conducting a post-test to evaluate understanding and application of the techniques.

## 2.4. Data Analysis

For data analysis, descriptive statistics (mean and standard deviation) and inferential statistics (analysis of variance with repeated measures) were used. Statistical calculations were performed using SPSS software version 23. Ethical considerations included obtaining the necessary ethical approvals, respecting the right to withdraw from the study, confidentiality of information, and the opportunity for the control group to participate in training sessions after the course ended.

**Table 1***Mean and Standard Deviation of Psychological Capital and Forgiveness by Group*

Variable and Stage	Group	Control Group Mean	Control Group SD	Quality of Life Therapy Group Mean	Quality of Life Therapy Group SD	Acceptance and Commitment Therapy Group Mean	Acceptance and Commitment Therapy Group SD
Psychological Capital	Pre-test	69.40	8.51	69.30	10.96	66.35	10.23
	Post-test	71.00	8.67	91.60	10.80	113.85	12.11
	Follow-up	72.60	9.97	92.40	9.29	112.65	13.60
Forgiveness	Pre-test	110.5	9.77	109.95	6.36	113.65	8.49
	Post-test	111.7	11.29	113.8	4.93	122.8	9.31
	Follow-up	110.15	11.82	114.4	5.58	122.2	8.97

The results in [Table 1](#) indicate that the scores for psychological capital and forgiveness in the post-test and follow-up stages of the experimental groups using Quality of Life Therapy and Acceptance and Commitment Therapy have changed compared to the control group.

In the statistical analysis of this study, various assumptions required for conducting a valid repeated measures ANOVA were thoroughly checked and confirmed for the variables of psychological capital and forgiveness. Firstly, the assumption of sphericity, which tests whether variances of the differences between all possible pairs of groups are equal, was assessed and confirmed, ensuring the robustness of our F-statistics. The Mauchly's test of sphericity indicated that the assumption was not violated for psychological capital ( $p = .13$ ) and forgiveness ( $p = .18$ ),

## 3. Findings and Results

All participants remained in the study until its conclusion, with no dropouts occurring. The mean age in the Quality of Life Therapy group was 36.72 (SD = 6.46), in the Acceptance and Commitment Therapy group it was 35.73 (SD = 5.46), and in the control group it was 34.63 (SD = 5.68). In the Quality of Life Therapy group, 35% of participants had a high school diploma and 65% had a bachelor's degree or higher; in both the Acceptance and Commitment Therapy group and the control group, 40% had a diploma and 60% had a bachelor's degree or higher.

validating the use of standard repeated measures ANOVA. Additionally, the assumption of normality was verified using the Shapiro-Wilk test, which showed that the distribution of scores for both psychological capital ( $p = .22$ ) and forgiveness ( $p = .20$ ) did not significantly deviate from normality. Furthermore, the assumption of homogeneity of variances was satisfied as indicated by Levene's test, with p-values of .15 for psychological capital and .14 for forgiveness, suggesting that the error variance of the dependent variable is equal across groups. These assessments confirm that the statistical prerequisites for conducting the repeated measures ANOVA were adequately met, ensuring the reliability and validity of the findings derived from our analysis.

**Table 2***Results of Repeated Measures ANOVA for Psychological Capital and Forgiveness by Group*

Source of Variation	Variables	Sum of Squares	Df	Mean Squares	F	Significance	Eta Squared	Test Power
Psychological Capital	Factor 1 (Time)	23,044.80	2	11,522.40	619.37	<.0001	.916	1.000
	Factor 1 * Group	13,277.07	4	3,319.27	178.42	<.0001	.862	1.000
	Error	2,120.80	114	18.60				

Between Subjects	Group	21,254.03	2	10,627.02	35.63	<.0001	.556	1.000
Forgiveness								
Within Subjects	Factor 1 (Time)	809.03	2	404.52	38.29	<.0001	.702	1.000
	Factor 1 * Group	489.53	4	124.63	11.80	<.0001	.698	1.000
	Error	1,204.43	114	10.57				
Between Subjects	Group	2,545.73	2	1,272.87	6.07	.004	.674	.866

The results of the repeated measures ANOVA indicate that there were significant changes in the mean scores for psychological capital and forgiveness from pre-test to post-test and follow-up among the experimental and control groups. The changes in the mean scores for psychological capital and forgiveness in the Acceptance and Commitment

Therapy group indicate a more effective method compared to other groups. Therefore, it can be said that the Acceptance and Commitment Therapy model is more effective than the other groups. LSD post hoc tests were used to determine the differences between groups. Table 5 shows the results of this analysis.

**Table 3**

*Summary Results of LSD Test for Comparing Group Mean Differences in Forgiveness and Psychological Capital*

Variables	Group Comparison	Mean Difference	Standard Deviation	Significance	Lower Bound	Upper Bound
Psychological Capital	Quality of Life Therapy Group - Acceptance and Commitment Therapy Group	-13.183	1.153	<.0001	-19.498	-6.89
	Quality of Life Therapy Group - Control Group	13.433	1.153	<.0001	7.119	19.748
	Acceptance and Commitment Therapy Group - Control Group	26.617	1.153	<.0001	20.302	32.931
Forgiveness	Quality of Life Therapy Group - Acceptance and Commitment Therapy Group	-6.833	2.654	.013	-12.148	-1.518
	Quality of Life Therapy Group - Control Group	1.933	2.654	.469	-3.382	7.248
	Acceptance and Commitment Therapy Group - Control Group	8.767	2.654	.002	3.452	14.082

Table 3 indicates that the differences in mean scores for psychological capital and forgiveness between the Quality of Life Therapy group and the Acceptance and Commitment Therapy group are significant. Thus, according to the results, the Acceptance and Commitment Therapy method is more effective than the other groups.

**4. Discussion and Conclusion**

This research aimed to compare the effectiveness of Quality of Life Therapy and Acceptance and Commitment Therapy on psychological capital and forgiveness among mothers of children with stuttering. The results indicated that both methods were effective on the study variables; however, follow-up tests showed that Acceptance and Commitment Therapy was more effective than Quality of Life Therapy in enhancing psychological capital and forgiveness.

The findings on the efficacy of Acceptance and Commitment Therapy in this group of mothers align with previous research findings (Hayes et al., 2004; Salimi Souderjani & Yousefi, 2017; Yousefi & Homaie, 2018) which have demonstrated its effectiveness on other psychological variables and groups. Explaining the

effectiveness of Acceptance and Commitment Therapy on psychological capital and forgiveness, it can be said that the problems associated with having a child with stuttering cause these mothers to experience more stress and anxiety compared to mothers of children without such issues. This anxiety can exacerbate the stuttering in these children. Additionally, stuttering can confront mothers with a sense of hopelessness about their child's future, leading to ongoing conflict with the children and thereby increasing stress and exacerbating the speech issues (Ebrahimi et al., 2017). Therefore, these trainings have contained elements that have been able to enhance the psychological capital of mothers. It seems that mothers have learned how to manage painful thoughts without merging with them, free themselves from self-conceptualization, and observe themselves in situations and make and implement the best decisions—all contributing together to improved cognitive flexibility and thus experiencing less anxiety. On the other hand, it seems that reduced anxiety has been able to increase mood, which has made tolerating problems and solving issues easier, and consequently, the combination of reduced anxiety, increased mood, and solving issues alongside the taught strategies has helped improve psychological capital.

Regarding the effectiveness of Quality of Life Therapy on the current research variables among mothers of children with stuttering, the findings of this study are consistent with the research findings of other researchers who have shown the effectiveness of this method on other psychological variables in other groups (Aghaei & Yousefi, 2017). Explaining these results, it can be said that since fluent and coherent communication in conveying messages in daily life with family, friends, and social environments is important, deficiencies in message transmission among children with stuttering can not only harm them but can also be a source of anxiety and worry for their mothers. Findings indicate that their anxiety can exacerbate their children's stuttering (Ebrahimi et al., 2017). Therefore, always increasing psychological capital can be a priority for these mothers to maintain their calm. These trainings have contained teachings that have led to an increase in psychological capital and forgiveness among these mothers, including them becoming acquainted with the three dimensions of inner richness, quality time, and life meaning and strategies for improving these dimensions. They also learned that life has 16 different dimensions and if they cannot achieve satisfaction in a specific dimension, how to improve their lives with five Quality of Life Therapy strategies and related techniques. These five strategies included changes in tangible conditions, changing priorities, changing standards, changing goals, and focusing on increasing overall life satisfaction. Thus, it appears that the strategies mentioned with improved mood, happiness, and increased life satisfaction have helped increase the psychological capital and forgiveness of these mothers.

Moreover, regarding the more effective method of Acceptance and Commitment Therapy compared to Quality of Life Therapy, the findings of the current research are consistent with the findings of other researchers (A-Tjak et al., 2014). In explaining the greater effectiveness of Acceptance and Commitment Therapy over Quality of Life Therapy on research variables, it can be pointed out that it is more systematic, has more precise and detailed tasks, and compared to Quality of Life Therapy. Given the results of the current research, both treatments can alleviate the psychological pain of mothers with children suffering from stuttering, but it can be said that Acceptance and Commitment Therapy, in terms of accepting anxiety and internal disturbances caused by external conditions such as observing a child's stuttering and observing others' reactions to the child's stuttering, has greater effectiveness compared to Quality of Life Therapy and helps to enhance the positive

constructs of psychological capital and forgiveness in these mothers.

## 5. Limitations and Suggestions

These findings highlight the importance of Quality of Life Therapy and Acceptance and Commitment Therapy in teaching and helping to improve psychological capital and the forgiveness process among mothers of children with stuttering. Based on these findings, it can be concluded that if counseling and speech therapy centers have access to these therapies, they can improve psychological capital and forgiveness among mothers of children with stuttering and reduce communication problems between children with stuttering and their mothers. Limitations of this research included the inability to control some unrelated and confounding variables; the cross-sectional nature of the research and the limitation of the results to the short-term evaluation of the variables. Therefore, it is recommended that in future research, to ensure the irreversibility of these teachings and the duration of the learners' use of these strategies through longitudinal research, the situation of these mothers be examined and also the effect of these teachings on family and social performance be investigated; also, since this research was only conducted on mothers of children with stuttering, it is suggested that in future research, fathers of this group of children should also be considered.

## Authors' Contributions

Authors contributed equally to this article.

## Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

## Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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## Declaration of Interest

The authors report no conflict of interest.

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## Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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