

## Turkish Validity and Reliability of The Mini Service User Recovery Evaluation Scale

### Ruhsal ve Manevi İyileşmeyi Değerlendirme Ölçeği Kısa Formu'nun Türkçe Geçerlilik ve Güvenilirliği

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#### ABSTRACT

**Objective:** The aim of this research is to adapt the Mini-Service User Recovery Evaluation (MiniSeRvE) Scale to Turkish culture and establish its psychometric properties.

**Materials and Methods:** This methodological study included 150 patients who applied to psychiatry outpatient clinics between March 2020 and January 2021. "The Personal Information Form," "The MiniService User Recovery Evaluation (MiniSeRvE) Scale," "The Subjective Recovery Assessment Scale," and "The Spiritual Well-Being Scale" were used to collect the data.

**Results:** The CFA of the MiniSeRvE Scale determined that the three sub-dimensions and factor loadings were between 0.50 and 0.91, consistent with the original scale. The Cronbach's alpha coefficient was found to be 0.864 for the total scale and between 0.77 and 0.95 for the sub-dimensions.

**Conclusions:** The MiniSeRvE Scale is a valid and reliable measurement tool.

**Keywords:** Mental recovery, reliability, spiritual recovery, validity

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**Atf / Cited:** Danış Ş and Günaydın N. Turkish Validity and Reliability of The Mini Service User Recovery Evaluation Scale. *Online Türk Sağlık Bilimleri Dergisi* 2024;9(3):232-239. doi: 10.26453/otjhs.1454819

#### ÖZ

**Amaç:** Bu araştırmanın amacı MiniService İyileşmeyi değerlendirme (MiniSeRvE-Ruhsal ve Manevi İyileşmeyi Değerlendirme Ölçeği) Ölçeği'nin Türk kültürüne uyarlanması ve psikometrik niteliklerinin ortaya konulmasıdır.

**Materyal ve Metot:** Bu metodolojik çalışmaya psikiyatri polikliniklerine Mart 2020-Ocak 2021 tarihleri arasında başvuran 150 hasta dahil edilmiştir. Veri toplamak için "Kişisel Bilgi Formu", "Ruhsal ve Manevi İyileşmeyi Değerlendirme Ölçeği (MiniSeRvE)", "Öznel İyileşmeyi Değerlendirme Ölçeği" ve "Spiritüel İyilik Ölçeği" kullanılmıştır.

**Bulgular:** MiniSeRvE Ölçeğinin DFA analizi sonucunda üç alt boyutun ve faktör yüklerinin orijinal ölçekte olduğu gibi 0,50 ile 0,91 arasında olduğu belirlendi. Cronbach alfa katsayısı ölçeğin tamamı için 0,864, alt boyutları için ise 0,77-0,95 arasında bulunmuştur.

**Sonuç:** Ruhsal ve Manevi İyileşmeyi Değerlendirme Ölçeği, geçerli ve güvenilir bir ölçme aracıdır.

**Anahtar Kelimeler:** Geçerlilik, güvenilirlik, ruhsal iyileşme, spiritüel iyileşme

#### Yayın Bilgisi / Article Info:

Gönderi Tarihi/ Received: 18/03/2024  
Kabul Tarihi/ Accepted: 19/07/2024  
Online Yayın Tarihi/ Published: 16/09/2024

## INTRODUCTION

Recovery is a process that enables a person to use their current potential in the best way, to participate in practices that will protect and improve their health.<sup>1</sup> Recovery from mental illnesses is a process rather than an outcome.<sup>2</sup>

Recovery is the process of discovering new meaning and purpose in life as an individual. It is critical to remember that it implies a decision to develop a life beyond the illness.<sup>3</sup> However, people with SPMI (severe and persistent mental illness) face unique challenges in finding meaning in life and establishing a new existence outside of psychiatric treatment. They remain defenceless in dealing with these issues.<sup>4</sup>

One of the most important factors that affect recovery and support the process of finding meaning in life is the concept of "spirituality". Most of the data obtained show that spirituality/ practices contribute positively to the recovery process.<sup>5,6</sup> Seeing spirituality as a source of power, considering spiritual values and using spirituality to eliminate sources of stress demonstrates that health, recovery, and spirituality are integral.<sup>7</sup>

There are multiple measurement tools used to evaluate recovery in the national literature.<sup>8-11</sup> However, a scale including the subject of spirituality was not found among these scales. This scale, which evaluates spirituality and recovery, will be able to objectively assess the subjective concepts of "recovery in mental illnesses and spirituality." It is expected that the results of this study will contribute to the treatment and care management of individuals with mental health problems.

The purpose of this study is to test the validity and reliability of the Mini-SeRvE scale in Turkish.

## MATERIALS AND METHODS

**Ethical Considerations:** Research permission was obtained from the Ordu Provincial Health Directorate (Date: 29.09.2020, decision no: 66501263-535324) and approval from the Ordu University Clinical Research Ethics Committee (Date: 30.01.2020, decision no: 2020-15) were obtained for the study. Written informed consent was obtained from the participants.

**Type of Study:** This study was carried out methodologically to adapt the Mini Service User Recovery Evaluation Scale (Mini-SeRvE) into Turkish and to ensure its validity and reliability.

Participants in the study were those who applied to a University Training and Research Hospital and a State Hospital Psychiatry outpatient clinic, were diagnosed with depression, and had been treated for at least six months. Of these individuals, 150 outpatients satisfied the inclusion requirements and were

chosen using the unlikely sampling technique. Since Akgül stated that the number of items should be 5-10 times higher when determining the sample size,<sup>11</sup> 150 depressive patients were reached in this study, whose item number was ten times that of the items (15 items).

People who are over 18 years old, literate, have no acute physical illness, have been diagnosed with depression at least six months ago according to DSM-V, and have no known neurocognitive disorders were accepted into the study.

The data of the study were collected with the Personal Information Form created by compiling the literature, "The Spiritual Well-Being Scale,<sup>12</sup>" "The Mini Service User Recovery Evaluation Scale (Mini-SeRvE),<sup>13</sup>" "The Subjective Recovery Evaluation Scale (SubRAS)<sup>10</sup>" and "The Personal Information Form."

### Data Collection Tools:

**The Personal Data Form:** The personal data form consists of 15 items, including the sociodemographic characteristics of the participants and the characteristics of the disease/treatment.<sup>9,10,12,13</sup>

**The Spiritual Well-Being Scale:** The 29-item scale developed by Ekşi and Kardaş was prepared in a 5-point Likert type.<sup>12</sup> Scoring of the scale consists of three sub-dimensions. The total Cronbach's Alpha value (0.886) and the subscales (0.853-0.953) were determined for the original scale. In this study, the total Cronbach's Alpha value (0.886) and the sub-dimension values (0.776-0.949) were found.

**The Mini Service User Recovery Evaluation Scale (Mini-SeRvE):** Mini-SeRvE, developed by Barber et al., in a 5-point Likert type. It is a 15-item scale used to evaluate the recovery levels of individuals subjectively.<sup>13</sup> It includes three subscales. The total Cronbach's alpha value (0.852) and the subscales (0.756-0.848) were determined for the original scale. As a result of the Turkish validity and reliability study, Cronbach's alpha values for the subscales were found to be 0.773-0.953.

**The Subjective Recovery Evaluation Scale (SubRAS):** SubRAS, developed by Yıldız et al. to evaluate subjective recovery in schizophrenia patients, consists of 17 items.<sup>10</sup> The scale uses a 5-point Likert-type format, with a Cronbach's alpha coefficient of 0.98. The item-total score correlation coefficients were calculated to range between 0.83 and 0.94. In this study, the Cronbach's alpha coefficient of the scale was found to be 0.862.

**The Mini Service User Recovery Evaluation Scale: Turkish Adaptation, Validity and Reliability Process (Mini-SeRvE)**

**Language Validity:** The scale was initially translated from English to Turkish by two academicians to ensure language equivalence of the Mini-SeRvE

scale. The Turkish version of the form was then translated back into English by a linguistics expert fluent in both languages and cultures. The Turkish version was finalized after necessary corrections were made in consultation with the scale's developer. Formun Üstü

**Content Validity (CVI):** After confirming the Mini-SeRvE scale's language validity, the opinions of multiple experts were sought for content validity.<sup>14</sup> Following their recommendations, the CVI of all scale items was evaluated by 12 academics using the Davis technique<sup>15</sup>. The CVI scores for all items on the scale were found to be above 0.83, and no items needed to be removed from the scale.

**Pilot Study:** The final version of the scale was administered to a group of 20 individuals with characteristics similar to those of the main research sample but who were not part of the primary study. These participants were asked to assess the items for clarity, relevance, and readability. The final form of the scale was then adjusted as necessary based on their feedback.

**Construct Validity:** Construct validity is used to determine theoretical and practical compatibility.<sup>16</sup> In this study, the Kaiser-Mayer Olkin (KMO) index (0.817), Bartlett's test ( $\chi^2= 1202.267$ ,  $p= 0.000$ ), and anti-image correlations indicated that the data were sufficiently correlated and suitable for factor analysis.<sup>11</sup> Also, in the validity and reliability study of the Mini-SeRvE Scale, there was found statistically significant, positive, and moderate correlation with parallel form (the Spiritual Well-Being Scale) scores (Rho coefficient= 0.739,  $p< 0.05$ ) (r-value ranges: 0-0.49.9: low, 0.50-0.74.9: moderate, 0.75-1.00: high).

**Statistical Analysis:** SPSS 22.00 statistical package program and AMOS 24 were used to evaluate the research data. First, Bartlett's sphericity test and the KMO sampling adequacy test were employed to

gauge the sample size's suitability. The literature states that the KMO result must be over 0.50/0.60-1.00 for the sample to be considered legitimate, and the closer it is to 1, the more significant the finding.<sup>17-19</sup> Bartlett's sphericity test value for the correlation matrix should be  $p< 0.05$ , and the power analysis value for calculating the sampling power should be over 80%.<sup>20</sup> The Mini-SeRvE scale was first tested for validity. For this purpose, construct validity and criterion-related validity tests were conducted. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used to test construct validity.<sup>17</sup> Additionally, EFA was applied to the scale items. Also,  $p<0.05$  was accepted as a significance value. Model adequacy was assessed using the Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Standardized Root Mean Square Residual (SRMR), Mean Squared Error of Approximation (MSE), and chi-square statistics ( $\chi^2/df$ ) as acceptable indicators of fit.<sup>18,20,21</sup> For criterion-related validity, Spearman's Rho coefficient and Pearson product-moment correlation coefficient (r) were used for statistical analysis. For the reliability of the scale, the internal consistency of the scale and subscales were evaluated using item-total correlations and Cronbach's alpha reliability coefficient.<sup>22</sup>

**RESULTS**

Women agreed to participate in the study in 70% of cases. Among the participants, 34.7% were high school graduates, 63.3% were married, 64% had children, 59.3% of the participants did not have a diagnosed physical or chronic disease, and 49.3% rated the level of social support received from their family as "high". The mean time since diagnosis was  $67.14\pm 74.67$  months (Table 1).

**Table 1.** Descriptive Characteristics of Participants.

		<b>n (%)</b>
<b>Gender</b>	Female	105 (70)
	Male	45 (30)
<b>Level of Education</b>	Literate	7 (4.7)
	Primary School	24 (16)
	Middle School	21 (14)
	High School	52 (34.7)
	University	46 (30.7)
<b>Job</b>	Unemployed	83 (56.5)
	Officer	28 (19)
	Employee	21 (14.3)
	Self-employment	5 (3.4)
	Retired	10 (6.8)
<b>Habits</b>	Not using	77 (51.3)
	Alcohol	6 (4)
	Cigarette	54 (36)
	Substance use	1 (0.7)
	Both	12 (8)

Table 1. Continue.

<b>Marital Status</b>	Married		95 (63.3)
	Single		44 (29.3)
	His wife passed away		6 (4)
	Divorced		5 (3.3)
<b>Having Children</b>	Yes		96 (64)
	No		54 (36)
<b>Income Rate</b>	Low		35 (23.3)
	Middle		110 (73.3)
	High		5 (3.3)
<b>Diagnosed Physical or Chronic Illness</b>	Yes		61 (40.7)
	No		89 (59.3)
<b>Using a Source Other Than Medical Treatment</b>	Yes		22 (14.7)
	No		128 (85.3)
<b>Social Support From Family</b>	Low		35 (23.3)
	Middle		41 (27.3)
	High		74 (49.3)
<b>Social Support From Friends</b>	Low		22 (14.7)
	Middle		71 (47.3)
	High		57 (38)
<b>Social Support From Doctor</b>	Low		8 (5.3)
	Middle		75 (50)
	High		67 (44.7)
	<b>n</b>	<b>Min-Max</b>	<b>Mean</b>
<b>Age</b>	150	18.00-78.00	38.32±13.64
<b>Number of Children</b>	116	0-6.00	1.76±1.12
<b>Diagnostic Time</b>	150	6.00-420.00	67.14±74.67
<b>Treatment Time</b>	150	6.00-420.00	63.90±75.38
		*	

\*: The duration of treatment is given in months.

When Table 2 is examined, it is seen that the Mini-SeRvE scale consists of three sub-dimensions, similar to the original structure. The factor loads of all items of the scale are above 0.40, and the explained

variance is 61.724% for the Total Mini-SeRvE Scale. Therefore, no items were removed from the scale at this stage, and a 3-dimensional structure was accepted (Table 2).

Table 2. Factor Analysis of the Mini-SeRvE Scale.

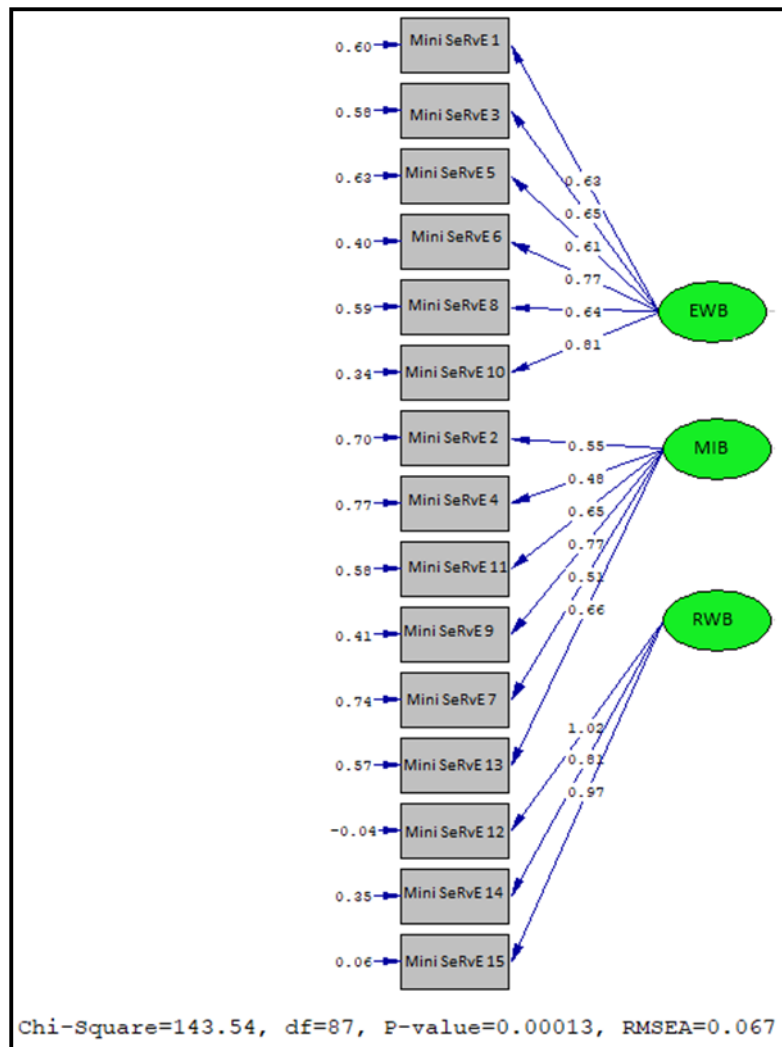
Item no	Items	Factor/Sub-Dimension		
		Existential Well-Being	Religious Well-Being	Mental Ill-Being
1.	I have hope for the future.	<b>0.706</b>	0.180	0.100
3.	I am confident I can cope with most things in life.	<b>0.524</b>	0.291	0.234
5.	I feel a sense of meaning and purpose in life	<b>0.757</b>	0.024	0.115
6.	I can find or create something beautiful in life	<b>0.845</b>	0.153	0.101
8.	I can accept myself	<b>0.503</b>	0.276	0.284
10.	I believe in my ability to overcome my problems	<b>0.724</b>	0.272	0.224
2.	I am upset by the stigma or shame of my problems	-0.003	0.046	<b>0.795</b>
4.	I feel agitated	0.269	-0.111	<b>0.558</b>
7.	I feel other people against me.	0.176	-0.039	<b>0.638</b>
9.	I have lost inner motivation	0.475	-0.114	<b>0.672</b>
11.	I feel isolated or cut off from others	0.195	0.328	<b>0.528</b>
13.	My faith/spiritual belief gives me difficult thoughts	0.033	0.403	<b>0.728</b>
12.	My faith/spiritual belief is helpful to me	0.284	<b>0.897</b>	0.076
14.	I find it helpful to attend religious services or do religious rituals.	0.144	<b>0.911</b>	-0.015
15.	I find it helpful to pray	0.238	<b>0.912</b>	0.038
Explained Variance (%)		22.424	20.377	18.923
Total Explained Variance (%)		<b>61.724</b>		

Structural equation modelling was then established with CFA to obtain more precise results after EFA. Based on the relevant fit index values, it was decided that the model was acceptable as it is (Table 3). The sub-dimensions of the Mini-SeRvE Scale and the factor loads of the items are presented in the form of a PATH diagram. As seen in Figure 1, the model was accepted in its original structure without

any modifications. The t-value for all items is above 1.96 (ranging from 2.49 to 10.90). No modifications were applied to improve the model (Figure 1). The distribution of the lowest and highest scores, mean scores, and Cronbach's alpha values obtained from the Mini-SeRvE Scale and its sub-dimensions are presented in Table 4.

**Table 3.** Adjustment Index Values, Normal and Acceptable Values for the Mini Service User Recovery Evaluation Scale.

Index	Normal value	Acceptable value	Value found
$\chi^2/SD$	<2	<5	1.65
GFI	>0.95	>0.90	0.96
AGFI	>0.95	>0.90	0.95
CFI	>0.95	>0.90	0.99
RMSEA	<0.05	<0.08	0.067
SRMR	<0.05	<0.08	0.084



**Figure 1.** PATH Diagram for the Factor Structure of the Mini-SeRvE Scale.

**Table 4.** Scores Received from the Mini Service User Recovery Evaluation Scale and its Sub-Dimensions.

	n	Min	Max	Mean	SD	Cronbach alfa
Existential Well-being	150	7.00	30.00	22.61	6.16	0.839
Mental Ill-being	144	6.00	30.00	22.96	5.93	0.773
Religious Well-being	144	3.00	15.00	13.10	3.11	0.953
Total of Mini SeRvE Scale	144	19.0	75.00	58.93	11.82	0.864
	0					

## DISCUSSION AND CONCLUSION

This part of the study discusses the findings on language validity, content validity, construct validity, and internal consistency of the Mini-SeRvE scale.

In this study, content validity was evaluated using the Davis method. A CVI value of 0.80 is considered the threshold.<sup>18</sup> After translating the scale into Turkish, the adapted scale items should be evaluated for content validity by at least 3 and up to 20 experts.<sup>23</sup> In this study, the CVI value exceeded 0.83, and no items were removed from the scale.

Construct validity evaluates the intangible qualities of a scale, including how accurately these qualities are measured, alongside its reliability and validity.<sup>24</sup>

A high level of construct validity indicates high agreement between items and their homogeneity.<sup>21,22</sup>

Prior to conducting factor analysis, it is essential to assess the adequacy of the sample size. In this study, KMO (0.817) and Bartlett's tests ( $\chi^2=1202.267$ ,  $p=0.000$ ) were performed for this purpose. Values above 0.50 are considered acceptable for anti-image correlation.<sup>19,25</sup> In this study, all anti-image correlation values were above 0.50. Upon evaluating the test results, it was observed that the sample follows a normal distribution, the data are consistent, and the sample is suitable for factor analysis.

As a result of the EFA of the Mini-SeRvE scale, it was found that the factor loads of the three sub-dimensions ranged from 0.503 to 0.912, and all item factor loads were higher than the accepted value of 1.96 ( $p < 0.05$ ).<sup>17</sup> Therefore, no items were removed from the scale. Furthermore, the total variance explained by the three-dimensional structure, 61.724%, indicates sufficient factor loads of the items and adequate variance explained, making the scale suitable for use in Turkish culture in its three-dimensional structure, similar to the original. These EFA results were found to be comparable to those of a study conducted in Australia.<sup>26</sup>

Confirmatory factor analysis (CFA) evaluates the significance level between observed variables and the proposed structure.<sup>20</sup> According to literature standards, the following values are expected: SRMR (values close to zero between 0 and 1), RMSEA (below 0.08), CFI (expected to be above 0.85-0.95), GFI and AGFI (good model indicators above 0.90), and  $\chi^2/df$  (should be below two, with values below five considered acceptable)<sup>27</sup>. In this study, the  $\chi^2/df$  value was 1.65, GFI was 0.96, AGFI was 0.95, CFI

was 0.99, RMSEA was 0.067, and SRMR was 0.084, confirming the adequacy of the model. This aligns with the acceptable range reported in previous studies conducted in Türkiye (GFI=0.98, AGFI=0.77, CFI=0.80, RMSEA=0.07)<sup>12</sup> and Australia (GFI=0.81, AGFI=0.77, CFI=0.80, RMSEA=0.08).<sup>26</sup> Therefore, it can be concluded that the 3-factor structure of the Mini-SeRvE scale, consisting of 15 items, is suitable for the model and demonstrates construct validity similar to its original version.

Internal consistency refers to the extent to which all subsections of the scale measure the same construct.<sup>28</sup> A Cronbach's alpha coefficient of 0.70 and above indicates reliability, with values of 0.80 and above indicating high reliability.<sup>17,19</sup> In this study, the Cronbach's alpha coefficient of the total scale (0.864), 'Existential Well-Being' sub-dimension (0.839), 'Mental Ill-being' sub-dimension (0.773), and 'Religious Well-Being' sub-dimension (0.953) were calculated. In the original version of the scale, the total Cronbach's alpha value (0.852) for "Existential Well-Being (0.848)", for "Mental Ill-being (0.761)", and for "Religious Well-Being (0.756)", sub-dimensions were similar.<sup>10</sup> Therefore, it can be concluded that the scale demonstrates high reliability.

Two different parallel forms were utilized: the "Subjective Recovery Evaluation Scale (0.739,  $p < 0.001$ )" for mental recovery and the "Spiritual Well-Being Scale (0.541,  $p < 0.001$ )" for spiritual recovery. These values indicate a satisfactory level of correlation between the two forms. Additionally, it was found that the total score of the Mini-SeRvE scale explained 61.724% of the variance. In a study where the parallel form was used in scale adaptation, a positive, moderately statistically significant relationship was found between the two scales used ( $r=0.686$ ,  $p < 0.001$ ).<sup>29</sup>

In conclusion, the Mini-SeRvE scale subjectively evaluates mental and spiritual recovery among patients, was successfully adapted to Turkish and validated as a reliable measurement tool suitable for Turkish culture. This research fills a significant gap in the Turkish literature concerning recovery and spirituality, providing a validated measurement tool. It serves as a foundational resource for future studies and applications in clinical settings.

**Ethics Committee Approval:** This study was approved by the Ordu University Clinical Research Ethics Committee (Date: 30.01.2020, decision no: 2020-15). This study was conducted by the principles of the Declaration of Helsinki.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Author Contributions:** Concept – ŞD, NG; Supervision – NG; Materials – ŞD; Data Collection and/or Processing – ŞD; Analysis and/or Interpretation – ŞD, NG; Writing –ŞD, NG.

**Peer-review:** Externally peer-reviewed.

**Acknowledgement:** We thank the participants in our study.

**Other Information:** This study was produced from the master's thesis entitled "Turkish Validity and Reliability of The Mini Service User Recovery Evaluation Scale". This study was presented as an oral presentation at the V. International X. National Psychiatric Nursing Congress, 20-23 Ekim 2021, İzmir.

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