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IX<sup>th</sup> INTERNATIONAL EURASIAN  
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behavioral, social, and emotional problems, lower academic achievement, and a weaker emotional bond with their parents (especially fathers) compared to children who grow up in families where marriages continue (Amato, 2014). Thus, increasing a much more in-depth understanding of why marriages end in divorce is essential. Booth et al. (1983) conceptualize ‘marital instability’ as one of the comprehensive concepts to understand the divorce process. Marital instability refers to the propensity that spouses will have a relationship termination, including the spouses’ thoughts and feelings on their relationship and their actions toward dissolution. The burgeoning literature on marital instability indicated that marital instability predicted one of the most prevalent mental disorders of major depression (Bartek et al., 2021). Marital instability (with self-esteem) was one of the strong predictors of depressive symptoms beyond other confounding variables (e.g., life stress, marital quality, and neuroticism) (Tong et al., 2021). Some researchers (Mohammadi et al., 2018) also emphasized significant relationships between marital instability, neuroticism, occupational stress, and perceived social support. Several family-of-origin variables (i.e., family triangulation) were also risk factors for marital stability (Song et al., 2022). Although terms conceptually overlap, marital instability may have been used interchangeably with other distinct processes such as divorce, dissolution of marriage, marital problems (low level), and marital quality. However, in some cases, these terms may refer to very different structures. For instance, low level of marital quality may indicate dysfunctional dyadic relationships depending on spouses’ relative evaluations of their intact marriages. More specifically, “many marriages of low quality remain intact, while some high-quality relationship are terminated” (Booth et al., 1983, p.387). On the other hand, marital instability does not directly refer to the marital dissatisfaction levels of couples or conceptualize this instability as an experience of spouses during the dissolution process of marriage. The concept further provides researchers with a structure to evaluate spouses’ divorce propensity or marital instability even when both or one of the couples has a high level of satisfaction with their relationship. Marital instability originates in three dimensions: affective statements, individuals’ cognitions, and actions toward divorce (Booth et al. 1983). The Marital Instability Index (MII; Booth, 1983) was developed to have a conceptually accurate instrument for marital instability and divorce proneness. Measurement tools that researchers and practitioners can use to evaluate the marital instability levels and divorce risks of spouses are also very limited for the Turkish community. We supposed that Turkish MII would contribute to assessing the

instability levels of marriages (and their divorce tendencies) in Türkiye. Therefore, the purpose of this study is to translate the MII into Turkish and assess its psychometric characteristics.

## **Method**

### ***Research Design***

The aim of the study was to investigate psychometric properties of the Turkish MII in a sample of married individuals. The current study was conducted as correlational (quantitative) research (Fraenkel et al., 2012); nevertheless, correlational studies may be needed further sophisticated correlational techniques (e.g., structural equation modeling). The study's overall design, which aims to validate the Turkish MII's original factor structure in a Turkish sample, is best captured using confirmatory factor analysis (CFA). The CFA is a robust, and statistical technique presents the “observed relationships among a group of indicators with a smaller set of latent variables structures” (Brown & Moore, 2012, p.2)

### ***Research Sample***

The study sample consisted of 190 married individuals (126 females, 66.3%; 64 males, 33.7%) from 32 different cities in Turkey using convenience sampling. The average age of the participants was 36.32 (SD=6.85), and their age range was between 22 and 56 years. 94 (49.5%) participants were university graduates, 46 (24.2%) were graduate or doctoral graduates, 28 (14.7%) were high school graduates, 12 (6.3%) were college graduates, and 10 (5.3%) were primary or secondary school graduates. Of 57 (30%) respondents '6-10 years', 47 (24.7%) '1-5 years', 38 (20%) '11-15 years', 35 (18.4%) '16 years and more', and 13 (6.8%) participants had marriage lengths ranging from '1-5 years'. 81 (42.6%) participants reported that they had 'two children', 61 (32.1%) participants had 'one child', 36 (18.9%) participants had no children, and 12 (6.3%) participants had 'three or more children'.

## **Instruments**

### ***Marital Instability Index (MII; Booth, 1983)***

The MII (see in Appendix A) assesses marital relationship instability using participants ‘thoughts’ and ‘actions’ on relationship stability with five items (5-point Likert type scale). "Have you or your spouse ever seriously suggested divorce to each other in the last three years?" can be given as an example of the items. Cronbach’s Alpha coefficient was .75, in the original study (Booth, 1983). Scores range from five to twenty-five. Higher scores indicate higher marital instability in marriages.

### ***Relationship Assessment Scale (RAS; Hendrick, 1988)***

The RAS evaluates marital satisfaction levels of individuals with seven items in a 7-point Likert-type. The scores range from seven to forty-nine, and two items (4 and 7) are reverse-coded. Higher scores reflect higher marital satisfaction level. Curun (2001) adapted the RAS to Turkish with .86 of Cronbach alpha coefficient. In the current study, both Cronbach alpha and McDonald's Omega coefficients were found .92. We included the RAS in the study for the convergent validity of the Turkish MII.

### ***Demographic Information Form***

A study-oriented information form was created for the study reflecting questions on the demographic characteristics of the participants (e.g., gender, age, city, educational status, number of children, and marriage duration).

### ***Procedure***

We obtained the ethical permission from Institutional Review Board of Ordu University Ethics Committee of Social and Human Sciences (approval number: 2022-07). The data set of the study was collected using the 'Marriage Instability Index' (Booth et al., 1983), the 'Relationship Assessment Scale' (Hendrick, 1988), and the Demographic Information Form. The criterion for participation in the study was being married. The study's sample was determined as the 'convenience sampling' method. We collected data only through Google Form. In this way, it was assumed that our participants' experiences, feelings, or thoughts regarding their divorce tendencies (or their marriage's stability) could be better portrayed when they answered the items anonymously. Hence, participants would feel more comfortable in their answers with the online data collection method. On the first page of the online questionnaire, we gave information about the purpose of the study including coordinator, content, and the average response time. Afterward, approval of a 'consent form' was requested from the participants. The researchers shared the announcement about the study on different social media accounts (e.g., WhatsApp, Instagram). After obtaining permission to adapt MII (to Turkish) from the responsible author, the scale's items were translated from English to Turkish by two researchers with doctorates in the fields of guidance and psychological counseling, and psychology. The researchers gave the final Turkish versions of the scale items.

### ***Data Analysis***

Prior to the CFA, we examined preliminary analysis (e.g., data screening, descriptive statistics, assumptions), bivariate correlations (for the convergent validity), reliability evidence, and a

multigroup CFA (for measurement invariance) using SPSS 22 (IBM Corp. Released, 2013) and JASP Team (2019). CFA was conducted with maximum likelihood estimation (MLE) to confirm the factor structure of Turkish MII in AMOS 24 (Arbuckle, 2016).

## Results

### *Data Screening and Assumptions*

Since it was necessary to reply to every question on the online survey form, there were no missing data sets. The sample size ( $n=190$ ) met the suggestions (Kline, 2011) that about 200 cases to have enough power conduct the CFA. The highest skewness (2.48) and kurtosis (6.07) values belonged to item 4 (Did you talk about consulting an attorney?) remaining items revealed lower than 1.73 (skewness) and 2.45 (kurtosis), as in the Table 1. We assumed univariate normality met Kline's (2011) suggestion that values lower than three were regarded as normal. The item 4 was open to outliers, we concluded the exceeding kurtosis value due to the item's content that investigates an extraordinary situation for most participants. Compared to others, item 4 appears to be the most important statement in which participants' thoughts on divorce are put into action. Mardia's (1985) coefficient (71.15,  $p<0.001$ ; multivariate kurtosis) revealed that the data was not multivariate normal. Thus, we applied Bootstrapping (Byrne, 2010) as a superior solution to multivariate non-normality. The data had only two cases of a multivariate outliers in examining Mahalanobis distances. We decided to keep these cases on Tabachnick and Fidell's (2013) suggestions indicating "Mahalanobis distance can either mask a real outlier or swamp a normal case" (p. 108). Multicollinearity and linearity assumptions were also met.

**Table 1**

*Descriptive Statistic for Individual Items of Turkish MII*

	N	Min.	Max.	M	SD	Skewness	Kurtosis	SMC
Item1	190	1	5	1.56	0.94	1.65	1.89	.77
Item2	190	1	5	1.54	0.92	1.73	2.45	.85
Item3	190	1	5	1.93	1.05	1.04	0.57	.63
Item4	190	1	5	1.43	0.91	2.48	6.07	.67
Item5	190	1	5	1.75	1.03	1.31	0.92	.83

*Note.* M=Mean, SD=Standard Deviation, Min=Minimum, Max=Maximum, SMC=Squared Multiple Correlation



### *Confirmatory Factor Analyses (CFA)*

One-factor Turkish MII indicated a good model fit. Chi-Square fit statistic was significant  $\chi^2$  (5,  $N = 190$ ) = 18.95,  $p = .002$ ; however, the normed chi-square value ( $\chi^2/\text{df}$  ratio = 3.79) was lower than the recommended (Schumacker & Lomax, 2004) value of 5. CFI = .98 and NNFI = .97 were higher than the suggested values of CFI  $\geq .95$ , NNFI  $\geq .95$  (Hu & Bentler, 1999). SRMR = .02 was lower than  $.00 \leq \text{SRMR} \leq .05$  (Brown & Cudeck, 1993). The fit indices findings revealed that the model produced a good one-factor structure. However, RMSEA = .12 (90% CI = .067-.182) produced above cutoff value of mediocre fit:  $.08 < \text{RMSEA} < .10$  (MacCallum et al., 1996). Kenny, Kaniskan and McCoach (2015) indicated that “for models with small df, the RMSEA can exceed cutoffs very often, even when the model is correctly specified” ( $p.501$ ), which our one-factor model’s df was 5.

**Table 2**

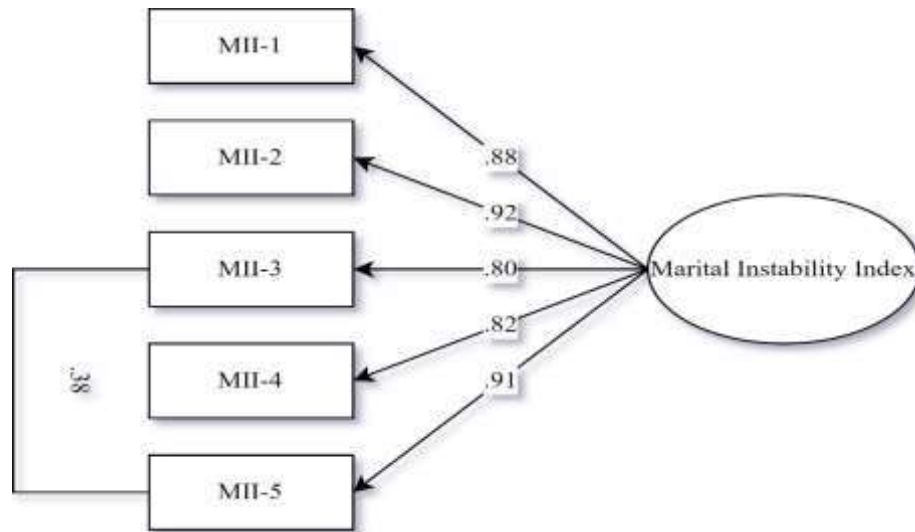
*Model Fit Indices of Confirmatory Factor Analyses*

	$\chi^2/\text{df}$	CFI	NNFI	SRMR	RMSEA
CFA	3.81	.98	.97	.02	.122 (90% CI = 0.067-0.182)
CFA (with modification)	.76	1.00	1.00	.01	.000 (90% CI = 0.000-0.097)

As a solution, we applied modification indices (items 3 and 5) as our model’s output suggested, and conducted a second CFA. In this second model of CFA, RMSEA = .000 (90% CI = .000-.097) revealed a perfect fit ( $.00 \leq \text{RMSEA} \leq .05$ ; Brown & Cudeck, 1993). Chi-Square fit statistic was not significant  $\chi^2$  (4,  $N = 190$ ) = 3.04,  $p = .551$ ; the normed chi-square value ( $\chi^2/\text{df}$  ratio = .76) was lower than the recommended (Kline, 2011) value of 2. CFI = 1.00, NNFI = 1.00, and SRMR = .01 also produced better fit indices than first model (See Table 2). Factor loadings of the Turkish MII’s items ranged between .80 and .92 in the second model (See Figure 1).

**Figure 1**

*CFA Analysis of Turkish Marital Instability Index (MII)*



**Measurement Invariance**

We examined Turkish MII’s measurement invariance on gender in four phases: configural, metric, scalar, and strict steps (Milfont & Fischer, 2010) in JASP Team (2019). Among goodness of the fit statistics, we inspected the Comparative Fit Indexes (CFI), Tucker-Lewis Index (TLI), Goodness of Fit Index (GFI), and Incremental Fit Index (IFI). The differences in all steps were not greater than -0.01 and 0.01 (Cheung & Rensvold, 2002) across groups (women/men), and we concluded that the measurement invariance for Turkish MII was met.

**Table 3**

*Measurement Invariance (Gender)*

	$\Delta$ CFI	$\Delta$ TLI	$\Delta$ GFI	$\Delta$ IFI
Configural	.96	.94	.97	.96
Metric	.97	.95	.97	.97
Scalar	.96	.95	.97	.96
Strict	.96	.96	.96	.96

**Reliability**

Cronbach’s alpha and McDonald’s Omega coefficients were both .94 in the current study, indicating a strong internal consistency for Turkish MII.

### ***Convergent Validity***

We found a strong negative association ( $r = -.69, p < .001$ ) between Turkish MII and Relationship Assessment Scale. In other words, as the satisfaction levels of married individuals from their marriage decrease, their tendency to divorce (or marital instability) increases.

### **Discussion**

Our research sought to find out about the Turkish MII's psychometric characteristics, which developed to evaluate married individuals' divorce tendency and marital instability levels, a psychological field in Türkiye that demands research attention due to the scarcity of research on divorce. More specifically, this study purposed to validate the Marital Instability Index (MII) for Turkish-speaking married individuals since the scale was initially developed in the US (Booth, 1983). The current study revealed that Turkish MII has a unidimensional factor structure that is congruent with the usage of the scale in samples such as Asia (Song et al., 2022) and Latin (Killoren, 2022) countries. Convergent validity analyses of the Turkish MII produced a strong negative association with RAS, indicating an expected direction between the two scales. The current results revealed that the Turkish MII has an excellent level of reliability considering Cronbach Alpha and McDonald's Omega coefficients of internal consistency. Furthermore, the results indicated that the Turkish MII provided measurement invariance in groups related to the gender variable in four steps (i.e., configural, metric, scalar, and strict). We concluded that Turkish MII had proved measurement invariance. We conclude that this finding suggests that the Turkish MII ensures a reliable assessment of married individuals' propensity to divorce, linked to their affective and cognitive statements. These findings produce strong support for the MII's structural validity and reliability in a Turkish married individual sample. These findings also contribute to the literature that psychometric properties of MII for Turkish culture might expand the number of future research that aim to investigate the reasons for spouses' divorce propensity and marital instability, comprehending the concept in a cross-cultural manner. Furthermore, family therapists may use Turkish MII in their professional practice to evaluate spouses' divorce propensity and marital instability levels for the therapeutic process planning.

## Conclusion

Our findings contributed to the literature on confirming first-ever results regarding the assessment of marital instability (or divorce propensity) among Turkish married individuals. Moreover, our study indicated that the Turkish MII is an excellently valid and reliable instrument in assessing marital instability (or divorce propensity) levels, which researchers and mental health professionals can confidently use for research and practice.

## Limitations and Recommendations

We noted several limitations regarding the current study. Our study solely investigated the psychometric properties, including structural validity and internal consistency reliability of the Turkish MII. We suggest future research should maintain evidences for test-retest reliability and incremental validity. Our study's data were gathered via self-report instruments, which have several limitations. Future studies should diversify the data collection with various qualitative (e.g., phenomenological) and quantitative (e.g., dyadic CFA) techniques. The current study's design also had a cross-sectional nature. We suggest longitudinal and experimental methods, including Turkish MII, to make causal inferences. The non-probabilistic convenience sampling and predominantly female participation in the sample were other limitations of the current study. We recommend for future research a more gender-balanced and probabilistic sampling.

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## Appendix A

### Evlilik İstikrarsızlığı Ölçeği

(Lütfen her bir ifadenin size uygunluğunu 5 dereceli ölçek üzerinde değerlendiriniz.)

	Hiç	Nadiren	Bazen	Sıklıkla	Çok sık
1) Sizin veya eşinizin son üç yıl içinde birbirinize ciddi olarak boşanmayı önerdiği oldu mu?	①	②	③	④	⑤
2) Boşanma ya da ayrılık fikrini yakın bir arkadaşınızla paylaştığınız oldu mu?	①	②	③	④	⑤
3) Eşiyle çok iyi geçinen insanlar bile bazen evliliklerinin yürüyüp yürümediğini merak eder. Evliliğinizin tehlikede olduğunu hiç düşündünüz mü?	①	②	③	④	⑤
4) Boşanmaya ilişkin yasal süreçleri araştırdığınız oldu mu?	①	②	③	④	⑤
5) Son üç yılda boşanma veya ayrılık fikrinin aklınızdan geçtiği oldu mu?	①	②	③	④	⑤