

Development of Marital Conflict Areas Index and the Conflict Styles Inventory: Reliability and Validity Studies

Evlilik Çatışma Alanları İndeksi ve Çatışma Çözme Stilleri Envanteri'nin Geliştirilmesi: Geçerlik ve Güvenirlik Çalışmaları

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ABSTRACT

The purpose of this study is to develop the Conflict Areas Index (CAI) to identify possible conflict areas that couples experience in their marriages and to develop the Conflict Styles Inventory (CSI) to assess how they deal with these conflicts. Exploratory (N=374) and confirmatory (N=152) factor analysis and test-retest (N=49) examinations were conducted with a sample of 575 married individuals in total. For the first scale, principal component analysis (PCA) was used to examine the construct validity of the CAI. According to the results, a single component giving frequency values for 15 different conflict areas was identified. In the criterion-related validity studies, the scale had a significant, negative, and strong correlation with the Relationship Assessment Scale (RAS) ($r=-.72$) and the level of satisfaction with the relationship ($r=-.67$). The Cronbach's alpha coefficient was found as .91. For the second scale, the construct validity of the CSI was examined using Exploratory Factor Analysis. The results revealed a three-dimensional structure named destructive, passive, and active conflict resolution styles. In the criterion-related validity studies, it was found significant and positive correlations between destructive ($r=.14$) and passive ($r=.18$) conflict resolution styles with CAI scores and a significant and negative correlation between active resolution style with CAI scores. In addition, there were significant and negative correlations between destructive ($r=-.15$) and passive ($r=-.12$) conflict resolution styles with the RAS scores and a significant and positive correlation between active conflict resolution style with the RAS scores. The Cronbach's alpha coefficients were .88, .87, and .87 for destructive, passive, and active conflict resolution styles, respectively. The correlation values between the scores of the CSI within a 14-day time interval were $\rho=.94$, $\rho=.91$, and $\rho=.83$ for destructive, passive, and active conflict resolution styles, respectively. These results indicated that CAI and CSI have sufficient psychometric properties that can be used to assess conflict areas and conflict resolution styles of married individuals.

Keywords: Conflict areas, conflict resolution styles, marital relationship, scale development

ÖZ

Bu çalışmanın amacı çiftlerin evlilik ilişkilerinde yaşadıkları olası çatışma alanlarını belirlemeye yönelik Çatışma Alanları İndeksi'nin (ÇAI) ve bu çatışmaları nasıl ele aldıklarını değerlendirmeye yönelik Çatışma Stilleri Envanteri'nin (ÇSE) geliştirilmesidir. Ölçme araçlarının açılımcı (N=374) ve doğrulayıcı (N=152) faktör analizi ile test-tekrar test güvenilirliği (N=49) incelemeleri toplam 575 kişiden elde edilen veriler üzerinden incelenmiştir. ÇAI'nin yapı geçerliğini incelemek için temel bileşenler analizinden yararlanılmış ve 15 farklı çatışma alanına yönelik sıklık puanı veren tek bir bileşen elde edilmiştir. Ölçüt bağımlı geçerlik çalışmaları kapsamında ÇAI'nin, İlişki Değerlendirme Ölçeği ile ($r=-.72$) ve ilişkiden duyulan memnuniyet düzeyi ile ($r=-.67$) kavramsal olarak kabul edilebilir ilişkiler gösterdiği belirlenmiştir. ÇAI'nin iç tutarlılık katsayısı $\alpha=.91$ 'dir. ÇSE'nin yapı geçerliği Açılımcı Faktör Analizi ile incelenmiş ve yıkıcı, pasif ve aktif çatışma çözme stilleri olarak adlandırılan üç faktörlü bir yapı elde edilmiştir. ÇSE'nin ölçüt bağımlı geçerlik çalışmaları kapsamında ÇAI puanları ile yıkıcı ($\rho=.14$) ve pasif ($\rho=.18$) çatışma çözme stilleri ile arasında anlamlı ve pozitif, aktif çatışma çözme stili ile anlamlı ve negatif yönde ($\rho=-.42$) korelasyonlar bulunmuştur. Ayrıca, İDÖ puanları ile ise yıkıcı ($r=-.15$) ve pasif ($r=-.12$) çatışma çözme stilleri arasında anlamlı ve negatif yönde ($r=-.42$), aktif çatışma çözme stili ile anlamlı ve pozitif yönde ($r=.50$) korelasyonlar elde edilmiştir. Yıkıcı, pasif ve aktif çatışma çözme stili şeklinde adlandırılan faktörlerdeki maddelerin iç tutarlılık katsayıları $\alpha=.88$, $\alpha=.87$ ve $\alpha=.87$ 'dir. ÇSE'nin 14 gün aralığı uygulanması sonucunda elde edilen veriler arasındaki korelasyon katsayıları ise yıkıcı, pasif ve aktif çatışma çözme stili için sırasıyla $\rho=.94$, $\rho=.91$ ve $\rho=.83$ 'dir. Elde edilen bu sonuçlar, ÇAI ve ÇSE'nin evli bireylerin çatışma alanlarını ve çatışma çözme stillerini değerlendirmede kullanılacak yeterli psikometrik özelliklere sahip olduklarını göstermiştir.

Anahtar sözcükler: Çatışma alanları, çatışma çözme biçimleri, evlilik ilişkisi, ölçek geliştirme

Introduction

Marriage is defined as an important social institution that provides closeness and support to individuals, increases individuals' life satisfaction, forms and holds families together, and contributes to public health by forming the foundation of society (Hayward and Zhang 2006, Canel 2013). Individuals strive to have a good marital relationship. In examining the determinants of marital satisfaction, it is found that the frequency of conflict between spouses, areas of conflict, and coping behaviors are cited as important predictors and have been researched for many years (Raush et al. 1974; Wheeler et al. 2010, Kağnıcı and Soylu 2015, Akgün and Ünal 2022).

Conflict is an unavoidable reality in marital relationships (Canary 2003). Conflict, defined as disagreements between spouses, can occur in a variety of areas and with varying frequency (Mackey et al. 2000). The areas of conflict in marital relationships are quite diverse. For example, conflict issues between spouses include many areas such as perceived inequality, power, infidelity, friendship, alcohol and drug use, domestic responsibilities, jealousy, financial issues, responsibilities regarding children, sexuality, extended family relationships, and relatives (Fincham 2003, Shrout et al. 2019). It is well known that these conflicts can lead to divorce, which is the most undesirable outcome of a marital relationship. According to the study on the reasons for divorce in Turkey (Aile ve Sosyal Politikalar Bakanlığı 2014a, 2014b), the reasons for divorce include various areas of conflict such as interference of close relatives in the marriage (40%), emotional relationship (38%), financial problems and violence (34%), lifestyle (25%) or values (20%), failure to fulfill domestic responsibilities (29%), or inadequate care of children (18%). The frequency and intensity of conflict in each area reduces marital satisfaction and increases the likelihood of divorce (Bradbury and Karney 1997, Chapin et al. 2001). Marital conflict has serious effects on mental, physical, and family health. Although married people are healthier on average than unmarried people, it has been highlighted that marital conflict is associated with certain diseases such as depression, anxiety disorders (Gladding 2017), cancer, heart disease, and chronic pain (Fincham 2003).

In examining the relevant literature, one finds that there are various measurement tools for identifying areas of conflict in marriage. Measurement instruments such as the Areas of Change Questionnaires (Weiss and Birchler 1975, Margolin et al. 1983), the Comprehensive Areas of Change Questionnaire (Mead and Vatcher 1985), and the Marital Comparison Level Index (Sabatelli 1984) are used to identify possible areas of conflict in marriage and the areas in which individuals expect their marital relationships to change. Similarly, the Marital Problems Questionnaire (Douglass and Douglass 1995) can also be used in the counseling process to identify possible problem areas that may lead to marital conflict. In Türkiye, the Marital Conflicts Questionnaire developed by Hatipoğlu (1993) can be used to identify the prevalence and frequency of conflicts between spouses.

Another issue that is as important as the presence of conflict in marital relationships is how that conflict is managed. Research shows that the factor that predicts relationship satisfaction is not only related to the presence of conflict, its nature, or its intensity (Kamp Dush and Taylor 2012). The coping/resolution strategies used by spouses to deal with conflict also emerge as an important issue that should not be ignored (McNulty and Russell 2010, Scheeren et al. 2014). Conflict management strategies, defined as repetitive patterns that an individual uses when faced with conflict, are divided into destructive and constructive strategies (Deutch 1973). The tendency to choose more sensitive, cooperative solutions to conflicts and to give constructive messages (Canary et al. 1995) refers to constructive strategies. The use of negative conflict resolution methods, including all types of aggression, results in the conflict being destructive to both parties (Johnson and Johnson 2000) and is classified as a destructive strategy. One of the classifications of conflict resolution styles widely used in the literature points to five types of conflict resolution behaviors: Coercion, Cooperation, Compromise, Avoidance, and Compliance (Thomas and Kilman 1974, Schmidt and Thomas 1976, Rahim 1983,). Coercion is the use of force and pressure on the other to enforce one's own demands. Cooperation refers to the effort to find a fair solution. In a compromise, both partners try to find a common path by giving up some of their demands. Avoidance usually means ignoring the conflict and not seeking a solution (Boardman and Horowitz 1994), while compliance means finding a solution that meets the other partner's desires (Johnson and Johnson 1994). In addition, a two-dimensional model of conflict has also been proposed, in which what matters is whether the individual is interested in the outcome that he or she will achieve or in the outcome that the other partner will achieve (Blake and Mouton 1964). Similarly, Vuchinich (1987) used the classifications of obedience, compromise, postponement, or withdrawal; Greef and Bruyne (2000) used the classifications of competition, cooperation, compromise, avoidance, and adaptation. Other classifications include styles such as authority, control, pressure, and manipulation (Bell et al. 1982); problem solving, persuasion, negotiation, and politics (Sheth 1974). When coercive, avoidant, and compliant behaviors are used during conflict, which are generally considered ineffective strategies, at least one of the partners is dissatisfied with the relationship and experiences

negative emotions as a result of that conflict, whereas couples experience positive emotions as a result of conflict managed with compromise and cooperative behaviors, which are considered constructive/effective strategies (Greeff and De Bruyne 2000). It is also known that marriages in which individuals engage in destructive conflict resolution behaviors are more likely to divorce than marriages with more positive conflict styles (Gottman 1993). This is confirmed by a limited number of studies conducted with married individuals in Turkey (Uğurlu 2003, Curun 2006, Soylu and Kağnıcı 2015, Uenal and Akguen 2022). In this context, it is not only important to determine the presence of conflicts and the areas of conflict, but also to assess how these conflicts are managed by the couples.

Previous studies have developed several measurement tools to assess conflict resolution styles in marital relationships. First, the Rahim Organizational Conflict Inventory- II (Rahim 1983) can be considered the most widely used scale in the related literature. Although the scale was developed to assess conflict resolution styles in organizations, it has also been used to assess conflict resolution styles of couples in romantic and marital relationships in terms of five styles: Integrating, Committing, Dominating, Avoiding, and Compromising. The scale consists of 28 items on a five-point Likert scale. The scale was adapted to the Turkish language by Gümüşeli (1994). Another scale is the Responses to Dissatisfaction in Close Relationships-Accommodation Instrument (Rusbult et al. 1991), which was developed to examine the effects of couples' reactions when they experience a problem. The scale, which originally consisted of twenty-four items, was later revised to 16 items by Kilpatrick et al. (2002). The scale is a nine-point Likert scale and was translated into Turkish by Taluy (2018). Similarly, the Conflict Resolution Styles Inventory (Kurdek 1994), which was developed to assess couples' conflict resolution styles, is a five-point Likert scale with 16 items. The scale has subscales for four different strategies: positive problem solving, conflict involvement, withdrawal, and yielding. The scale was adapted to the Turkish language by Dost Gozkan (2017) and was used to assess adolescents' conflict resolution styles in their relationships with their parents and friends. The Conflict Resolution Scales developed by Schneewind and Gerhard (2002) consist of two subscales. The positive conflict resolution style, which assesses constructive conflict resolution strategies, and the dysfunctional conflict resolution style, which includes useless attempts to end conflict. Each subscale consists of three items on a four-point Likert scale. There is no Turkish adaptation of this scale. The Conflict Tactics Scale (Straus et al. 1996), developed to assess the frequency and form of tactics couples commonly use to manage conflict in close relationships, has been revised to be used in various clinical and nonclinical groups (Chapman and Gillespie 2019). In the Turkish sample, Tezer (1996) developed a survey consisting of items such as competition, avoidance, adaptation, sharing, and cooperation to assess the behavior of individuals in many conflict situations. Also, another scale developed by Özen (2006) to assess conflict resolution styles of married couples includes four dimensions: positive and negative conflict resolution styles, subordination, and withdrawal. This scale with 25 items on a six-point Likert scale was found to be a valid and reliable measurement tool. Although there are several measurement instruments in the literature to determine areas of conflict and conflict resolution styles in marriage, the timing of measurement development of these scales should also be considered. It appears that more current and feasible measurement instruments for marital conflict are needed, especially when considering changes over time in conflict domains, which include developments and changes such as technology, knowledge, and values.

The cultural context of marriages and the fact that there may be cross-cultural differences in the potential sources of conflict in marriage (Henrich et al. 2010, Dillon et al. 2015) also indicate the need for an up-to-date, unique, and culturally specific measurement tool. Similarly, there is a need for measurement instruments that target married individuals and assess their conflict resolution styles using items related to dealing with potential marital conflict. In this regard, this study will contribute to the literature in many ways. First of all, two different measurement instruments for assessing the areas of conflict in marriages and the conflict resolution styles of married individuals in Turkish culture will be introduced to the relevant literature. Considering the fact that divorce rates are increasing in Türkiye (TUIK 2021), these measurement tools are likely to meet an important need for assessing the areas of conflict and conflict resolution styles of married individuals. On the other hand, based on the findings of the research on family structure in Türkiye (Aile ve Sosyal Politikalar Bakanlığı 2011) that the help-seeking behavior of couples in the divorce phase is low despite the increasing divorce rate, the measurement instruments developed in this study can also be used in further studies that support the self-help process to strengthen marriages.

Method

The purpose of the current study was to develop two different instruments to measure potential conflict areas and conflict resolution styles in marital relationships.

Participants

Different study groups were used in the different phases of the study. In the first phase, 374 participants (303 women, 81.0%; 71 men, 19%) living in different cities and from different occupational groups were recruited to test the factor structures of the Conflict Areas Index and the Conflict Styles Inventory. Age ranged from 21-66 (35.77 ± 8.35) and marriage duration ranged from 1-44 years (10.93 ± 8.64). Thirty-three (8.8%) participants had low socioeconomic status, 312 (83.4%) had medium socioeconomic status, and 29 (7.8%) had higher socioeconomic status. Eighty-eight participants (23.5%) had no child, 275 of them (73.6%) had 1-3 children, and 11 of them (2.7%) had 4 or more children. Criterion-related validity was also tested in this sample. In the second phase, the model discovered by exploratory factor analysis for CSI was analyzed by confirmatory factor analysis (CFA) to investigate whether the model also fit another sample. CFA was performed on 152 participants (75 women, 49.3%; 69 men, 54.4%; and 8 who did not report their gender; 5.3%). The age of participants in this sample ranged from 22 to 78 years (39.87 ± 10.93), and the duration of marriage ranged from 1 to 55 years (13.31 ± 11.65). Twenty-four participants (15.8%) had no children, 105 participants (69.1%) had 1-3 children, and 15 participants (10.1%) had four or more children. Eight participants (5.3%) did not report the number of their children. In the third phase, the test-retest reliability of CSI was tested at two-week intervals (14 days) with a sample of 49 participants (36 women, 13 men). Of the 49 participants aged 25-57 years with a marriage duration of 1-30 years, 43 had medium, 3 had low, and 3 had high socioeconomic status.

Measures

Demographic Form

Demographic Form developed by the researchers was used to elicit socio-demographic information about participants' gender, age, educational status, occupation, city, marital length, number of children, and marital satisfaction level.

Conflict Areas Index (CAI)

This index was developed to identify areas of conflict in marital relationships. In developing CAI, the relevant literature on marital conflict areas was reviewed and existing instruments were examined. Semi-structured interviews were conducted with 27 married individuals using open-ended questions developed based on this review. After the interviews were transcribed, considering both the literature review (Hatipoğlu 1993, Aile ve Sosyal Politikalar Bakanlığı 2011, 2014b, Shrouf et al. 2019) and the participants' statements in the interviews, the item pool was created. The item pool was discussed by the researchers in the research team both individually and in small groups. Later, the items were also discussed in panels involving all researchers. Thus, 15 different potential conflict areas such as children, financial issues, relationships with family and close relatives, education, and self-development were identified. Seven experts in the fields of marital and family counseling and measurement and assessment provided expert opinions on the content and grammatical appropriateness of the items and on the principles of measurement and assessment. Then the propositions were completed and cognitive interviews were conducted with five married individuals to assess the clarity of the items for the respondents. After that, data collection was started. Participants were asked to indicate the frequency of conflict in each domain in the past 6 months on a scale from "1=We never have conflict" to "5=We always have conflict." CAI Values ranged from 15 to 75.

Conflict Styles Inventory (CSI)

In developing the item pool of CSI, a similar approach was taken as in the development of CAI. First, the literature and existing measures of conflict management styles were reviewed. Based on this review, open-ended questions were developed and semi-structured interviews were conducted with five married individuals. Then, an item pool of 50 items was created as part of the literature review and interview findings. The items were discussed by the researchers both individually and in small groups. Later, the items were also discussed in panels involving all researchers. Seven experts in the fields of marriage and family counseling and measurement and assessment provided expert opinions on the content and grammatical appropriateness of the items and on the principles of measurement and assessment. The items were controlled based on the expert opinions, and cognitive interviews were conducted with five married individuals to assess the clarity of the items for the respondents. CSI was rated on a 7-point Likert scale (1= Not at all true of me, 7= Very true of me).

Relationship Assessment Scale (RAS)

Participants' level of marital satisfaction was measured using a 7-point scale developed by Hendrick (1988).

Higher scores indicated higher relationship satisfaction, whereas lower scores indicated lower relationship satisfaction. The single-factor scale correlated positively with variables such as love, sexual attitudes, self-disclosure, commitment, and investment. The internal consistency coefficient was .86 (Henrick 1988). RAS was adapted to Turkish culture by Curun (2001). Similar to the original study, factor analysis yielded a factor with an internal consistency coefficient of .86. RAS was used in this study to test the convergent validity of each scale. The internal consistency coefficient of RAS was found to be .81 in this study.

Procedure

Prior to data collection, ethical approval was obtained from the Hasan Kalyoncu College Human Ethics Committee (28/09/2018/14). Next, both the paper-pencil and online survey forms (i.e., Google Forms) were prepared. These forms were checked by the researchers in terms of layout, readability, clarity of the items, accessibility of the survey link, etc., and tested by some participants. Based on the suggestions given, the final versions of the forms were prepared. Random and snowball collections were conducted to collect data from married individuals who had been married for at least one year. Paper and pencil surveys were conducted in person in envelopes and Google forms were announced online through various social media platforms (Whatsapp and Twitter, etc.). Participants were informed about the aim of the study, the research team, the purpose of data use, and voluntary participation in the study. Informed consent was obtained from participants prior to data collection. Data were collected between November 2020 and March 2021.

Statistical Analysis

Before testing the psychometric properties of the scales, the data for analysis were established. For this purpose, the rows were checked to see if there were any random values or patterns. Missing values, outliers, and the assumptions of the analyzes were also checked. No problems were found in the data set used to test the psychometric properties of CAI. It was decided to keep one row in each data set that was answered 1=We never have conflicts or 5=We always have conflicts. There were no missing data in the online form because all items had to be answered. There were also no missing data in the paper-pencil forms. The standardized z-scores of the total score of CAI ranged from [-3, +3] with only one exception with a standardized z-score of +3.12. Since one outlier was considered acceptable, this case was left in the data set. Mahalanobis distances were calculated to detect multivariate outliers, and 10 cases were removed from the data set that exceeded the critical value. Consequently, the psychometric properties of CAI were analyzed in a data set with 374 participants. The same preliminary analyzes were performed in the other data set to test the psychometric properties of CSI. In addition to two cases with standardized z-scores of -3.85 and +3.68, 18 cases that exceeded the critical value of Mahalanobis distance were removed from the dataset (Akbaş and Koğar 2019). The final dataset included 356 participants. The construct validity of CAI was examined using principal component analysis (PCA), and the construct validity of CSI was examined using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). In deciding the number of factors, while the extraction method was the main axis, in addition to eigenvalues that were greater than one, the factors' contributions to the results of explained variance, scree plot, parallel analysis (Watkins 2000), and the conceptual framework as a whole were considered (Akbaş et al. 2019). For an item to be included in the scale, care was taken to ensure that the factor loading was at least .32 (Tabachnick and Fidell 2013) and that the differences between loadings under different factors were above .10 (Büyüköztürk 2021). In cases where multiple factors were found, the axes were rotated using the promax method.

Criterion-related validity was tested by calculating correlations between the scores of CAI and RAS and CSI and RAS. Normality was tested using skewness and kurtosis values, histograms, and Kolmogorov-Smirnov tests. The scatter plot was also tested for linearity. Relationships between variables were analyzed using either the Pearson correlation coefficient (r) or the Spearman rank correlation coefficient (ρ), taking into account whether or not assumptions were met. Item-total correlations were used to test how well the items discriminated, and the Cronbach α -coefficient was used as an estimate of internal consistency.

Results

Psychometric Properties of Conflict Areas Index

Analyzes performed before PCA showed that KMO was .92 and Bartlett sphericity test was significant ($\chi^2=2451.43$, $df=105$, $p<.01$). These results show that the data are suitable for PCA.

According to the initial PCA results, the first eigenvalue was 6.54, the second eigenvalue was 1.38, and the others were less than one. It was found that the variance explained by the first component was 43.63% and the variance explained by the second component was 9.22%. According to the scree plot, the slope is greatly reduced after the first component. The first two eigenvalues obtained by parallel analysis are 1.36 and 1.28, respectively (Watkins 2000). These results indicate that the scale consists of at most two components. Considering that the proportion of variance explained by the first component is sufficient for social sciences, the contribution of the second component is relatively small, the slope of the scree plot decreases rapidly, and the difference between the second eigenvalue obtained by the parallel analysis and the eigenvalue obtained from the data set is very small (Akbaş et al. 2018, Bueyuekoeztuerk 2020).The PCA was repeated for one component. The factor loadings and item-total correlations are shown in Table 1.

Table 1. Factor loadings and item-total correlations (ITC) of Conflict Areas Index items		
Items	λ	ITC
I1. Future plans	.80	.75
I2. Our personality traits	.78	.74
I3	.73	.70
I4	.73	.70
I5	.73	.69
I6	.71	.68
I7	.66	.63
I8	.63	.62
I9	.63	.59
I10	.59	.57
I11	.58	.55
I12	.57	.54
I13	.50	.49
I14	.50	.47
I15	.42	.41

According to Table 1, the item-total correlations of the CAI items are above the recommended cutoffs for the social sciences (Tabachnick and Fidell 2013). In addition, the coefficient $\alpha = .91$ indicates that the CAI has a high degree of internal consistency (Baykul 2000).

Criterion-Related Validity

The criterion-related validity of CAI was examined by correlating the total scores of CAI with the relationship rating scale (RAS) and the level of satisfaction with the relationship (How satisfied are you with your marriage? 1: Not at all satisfied, 10: Very satisfied). Since the total scores for relationship satisfaction and RAS have left-skewed distributions, calculations were performed using the Spearman rank correlation coefficient. It was found that there was a negative correlation between the scores of CAI and RAS ($\rho = -.72$, $p < .01$) and satisfaction with the relationship ($\rho = -.67$, $p < .01$) gave.

Psychometric Properties of Conflict Styles Inventory

Exploratory factor analysis (EFA) was performed to analyze the construct validity of the CSI. The KMO value (.89) and Bartlett's sphericity test results ($\chi^2 = 8892.08$, $df = 1225$, $p < .01$) indicate that the data are suitable for factor analysis.

According to the results of the first EFA, 10 factors with eigenvalues greater than one were identified. The eigenvalues of the first three factors were 8.69, 8.20, and 4.68, respectively, and the other seven eigenvalues were less than 2. While the explained variances by the first three factors were 16.53%, 15.53%, and 8.44%, respectively; the other seven factors contributed to a total explained variance of 11.31%. According to the scree plot, the slope decreases after the third factor and approaches zero after the fifth factor. The results of the parallel analysis also suggest that at most five factors can be extracted (Watkins 2000). In such cases, it is recommended to conduct different analyzes and compare the results considering the conceptual framework

(Field 2018, Akbaş et al. 2019). Five, four, and three-factor analyzes were performed and the results were compared. It was found that the best solution was obtained for three factors.

The KMO value obtained for the three-factor solution was .87, and Bartlett's test for sphericity was statistically significant ($\chi^2=3132.32$, $df=153$, $p < .01$). The variance explained by the factors with eigenvalues of 4.58, 3.86, and 2.82 was 23.14%, 19.05%, and 13.25%, respectively, and the total variance explained was 55.44%. The factor loadings and item-total correlations obtained are shown in Table 2.

Items	Pattern matrix			Structure matrix			ITC
	λ_1	λ_2	λ_3	λ_1	λ_2	λ_3	
Item 1. I persist until conflicts are resolved the way I want.	.84	-.01	-.05	.85	-.05	-.22	.78
Item 2. In conflicts, I force my partner to accept what I want.	.82	.05	-.04	.83	.00	-.21	.76
Item 3	.76	-.06	-.02	.77	-.11	-.18	.72
Item 4	.72	.05	-.11	.74	.02	-.27	.68
Item 5	.67	-.01	-.01	.67	-.05	-.15	.63
Item 6	.63	.01	.15	.59	-.04	.02	.55
Item 7. I don't object to what my partner says in arguments so that we don't get upset.	-.01	.81	-.05	-.05	.82	-.12	.75
Item 8. I keep quiet when I feel that a conflict is about to break out.	-.04	.76	-.08	-.07	.77	-.14	.72
Item 9	-.12	.74	.16	-.20	.74	.13	.66
Item 10	-.00	.73	.05	-.06	.73	-.02	.67
Item 11	.09	.69	.02	.04	.68	-.06	.62
Item 12	.08	.64	-.10	.06	.65	-.17	.60
Item 13. In conflicts, I use methods that both of us can win.	.05	.04	.80	-.12	-.03	.78	.72
Item 14. I cooperate with my partner to resolve conflicts.	-.02	-.01	.78	-.19	-.08	.78	.72
Item 15	.05	-.13	.75	-.10	-.19	.75	.69
Item 16	.04	-.12	.75	-.11	-.19	.75	.68
Item 17	-.08	.09	.75	-.25	.04	.76	.70
Item 18	-.06	.08	.54	-.18	.03	.55	.50

The item-total correlations of the CSI items are above the recommended cutoffs for the social sciences (Tabachnick and Fidell 2013). When the items under the three factors were assessed in the context of the conceptual framework, it was deemed appropriate to label the first factor as "destructive conflict resolution style," the second factor as "passive conflict resolution style," and the third factor as "active conflict resolution style."

Confirmatory factor analysis (CFA) was used to test the goodness of fit of the three-factor model with data from a different sample. For this purpose, the CSI, which consists of 18 items, was applied to another group of 152 participants. The result of the analysis was that the factor loadings for all items were significant and the model fit could be improved by some modifications. After associating some error variances for the items in the same factor, the indicators of model fit ($\chi^2/df= 218.93/125=1.75$, CFI =.91, TLI=.90, RMSEA=.07 (90% CI: [.06; .09]) were found to be acceptable (Hu and Bentler 1999, Kline 2005). The correlation coefficients between the CSI and ISS total scores to examine criterion-related validity are shown in Table 3.

As can be seen in Table 3, conceptually expected and acceptable correlations were obtained between the factors that make up CSI. Similarly, it can be said that the CSI factors also have expected correlations with ISS scores. Finally, the reliability of CSI in terms of stability was investigated by test-retest applications performed at 14-day intervals. Because the data obtained from 49 participants were left-skewed for destructive, active, and passive conflict resolution styles, the Spearman Rank Order Correlation Coefficient was calculated. Correlations for destructive, active, and passive conflict resolution styles were .94, .91, and .83, respectively ($p < .01$).

Table 3. Correlations between Conflict Styles Inventory (CSI) and criterion scores^φ

Score	Mean	Standard deviation	1	2	3	4
1. CSI - <i>destructive</i>	20.65	8.52	1			
2. CSI - <i>passive</i>	19.54	8.74	-.02	1		
3. CSI - <i>active</i>	32.13	7.13	-.21**	-.14**	1	
4. CAI	36.40	12.10	.14**	.18**	-.42**	1
5. RAS	25.50	5.81	-.15**	-.12*	.50**	-.72**

^φSpearman Rank Order Correlation, * $p < .05$, ** $p < .01$; CAI: Conflict Areas Index; RAS: Relationship Assessment Scale

Discussion

Due to the nature of relationships, marital relationships are also prone to conflict in many areas. Given the negative impact of marital relationship conflict on the physical and mental health of the individual, as well as the negative impact on the health of the family (Fincham 2003, Shrout et al. 2019), it is extremely important to examine the potential areas and sources of conflict in marital relationships and how couples manage these conflicts. Therefore, in response to this need, this study developed two instruments appropriate for Turkish culture to assess couples' marital conflict areas and conflict resolution styles.

First, in the validity studies of the instruments developed to assess the domains of marital conflict, the results of principal component analysis (PCA) showed that the scale had a unidimensional structure. According to the results, the factor loadings of the items were above .32 and the single component explained 43.63% of the total variance, indicating that the PCA results were adequate (Tabachnick and Fidell 2007). Consistent with these findings, the scale, referred to as the Conflict Areas Index, consists of 15 items indicating various areas of conflict: Children, Sexuality, Relationships with Family and Close Relatives, Self-Development, Communication, Holidays and Leisure, Housework and Division of Tasks, Future Plans, Work and Professional Life, Worldview, Beliefs, Values, Use of Technology and Social Media, Financial Issues, and Personality Traits. It was found that the measures obtained through this developed instrument are consistent with the fact highlighted in the relevant literature (Shrout et al. 2019) that various conflicts can occur in marriage, including physical, psychological, social, economic, and family conflicts. On the other hand, it was found that the tools for assessing the areas and/or sources of conflict in marriage are quite limited in the relevant literature. Existing instruments assess potential areas of conflict in marriage by asking couples open-ended questions (Schmaling et al. 1991), using observational techniques in studies conducted in a laboratory setting (Williamson et al. 2013), or using diaries kept separately by couples for approximately 14 days (Papp 2018).

Similarly, the Marital Conflict Questionnaire (Hatipoğlu 1993) was developed to assess the prevalence and frequency of marital conflict between couples, and the Areas of Change Questionnaire (Weiss and Birchler 1975, Margolin et al. 1983) and the Comprehensive Areas of Change Questionnaire (Mead and Vatcher 1985) were developed to assess the areas in which couples complain and expect change in their spouses or marriages. In addition, the Marital Comparison Level Index (Sabatelli 1984) is used to make a comparison to assess how much change an individual expects from his or her spouse and (from his or her perspective) how much change his or her spouse expects from him or her regarding some problem areas in the marriage, and the Marital Problems Questionnaire (Douglass and Douglass 1995) is used for intake interviews and assessment purposes in the psychological counseling process. It can be said that these instruments for assessing areas of marital conflict differ from the instrument developed in this study both in terms of their items and the areas they are designed to measure. In addition, these instruments have been criticized in the literature for either not covering the domains or sources of marital conflict completely or well enough (Douglass and Douglass 1995). More importantly, these instruments are outdated in the literature. On the other hand, even assuming that some basic issues such as children and family relationships are similar in terms of their potential to create areas of conflict in marriage, it can be said that the instrument developed in this study has unique and powerful aspects in terms of incorporating current issues such as technology and the use of social media, which can be an important source of conflict today. Given the role of culture in marital conflict and potential sources of conflict (Henrich et al. 2010) and considering the role of cross-cultural differences (Dillon et al. 2015), it can also be argued that a culturally sensitive instrument was developed in this study.

On the other hand, criterion-related validity indicated that the scale had a significant and negative relationship with relationship ratings and satisfaction scores. Fincham (2003) found that as the severity of marital conflict increases, the likelihood of divorce also increases. The negative association between areas of conflict and marital relationship ratings found in this study supports previous findings showing that recently divorced couples frequently experienced conflict in areas such as infidelity, communication difficulties, sexuality, economic

issues, and children prior to divorce (Shrout et al. 2019). Thus, the results of this study suggest that the presence of marital conflict and the diversity of conflict domains may predict marital satisfaction, and that both conflict domains and their diversity and marital satisfaction are related to marital quality (Kamp Dush and Taylor 2012). In summary, the Conflict Areas Index (CAI), developed in this study to assess marital conflict areas, is a valid and reliable measure due to its negative relationship with relationship evaluation and its high internal consistency (Baykul 2000).

As mentioned earlier, the way couples deal with conflict in a marriage is an important issue. Therefore, another measurement tool, the Conflict Styles Inventory, was developed to assess the conflict resolution styles of married individuals in this study. It can be said that this scale was developed with a relatively heterogeneous sample in terms of characteristics such as age, place of residence, and marital life cycle; therefore, the items of the scale have high factor loadings (.32 and above) and the variance explained by the model (55.44%) is also high. The construct validity studies showed that the scale has a three-factor structure. Each factor explained 23.14%, 19.05%, and 13.25% of the total variance, respectively. These factors were labeled destructive conflict resolution style, passive conflict resolution style, and active conflict resolution style. It could be argued that these dimensions are compatible with the two basic styles, constructive and destructive conflict resolution style (Deutch 1973), which are often highlighted in the literature. However, the structure revealed by the scale differs from the structure of the five basic conflict resolution strategies (Rahim 1983, 2000) commonly used in the literature: Coercion, Cooperation, Compromise, Avoidance, and Yielding. At this point, it can be said that participants perceived avoidance and yielding strategies as passive conflict resolution strategies and cooperation and compromise strategies as active conflict resolution strategies under a single style. In this context, it can be stated that the coercive conflict resolution style is perceived as a destructive style.

The scale developed in this study differs from other scales in the literature (Conflict Resolution Inventory-Hennig 2003, Conflict Resolution Styles Inventory-Kurdek 1994, Interpersonal Conflict Resolution Styles Scale-Rahim 1983) in that the items are specifically tailored to how they resolve potential conflicts that may arise in the marital relationship. Furthermore, it can be argued that this instrument differs from some of the existing instruments in that their psychometric properties have not been studied (Hennig 2003) or that they have been developed for a specific group such as a college sample (Pollina and Snell 1999) or LGBTI+ individuals (e.g., Kurdek 1994, Hennig 2003) by contributing to the relevant literature in the form of measuring with married couples and studying their psychometric properties.

The studies on the criterion-related validity of the conflict resolution styles scale have shown that destructive and passive conflict resolution styles are positively related to the index of conflict domains, while active conflict resolution style has a negative relationship. Accordingly, it can be said that couples who use destructive and passive conflict resolution styles more often have higher scores in the conflict domains. On the other hand, couples who resolve conflicts using active strategies based on compromise and cooperation have lower scores in the conflict domains. The results of the validity studies support previous findings that there is a negative relationship between positive coping style and the prevalence of marital conflict and a positive relationship between negative coping or withdrawal coping style (passive) and the prevalence of marital conflict (Kaplaner and Satan 2020).

Similarly, according to the results of criterion-related validity studies, couples who use destructive and passive conflict resolution styles evaluate their relationships more negatively, while couples who use the active style evaluate their relationships more positively. As noted earlier, how conflict is managed and resolved by couples is a critical factor in their happiness (Stanley et al. 2002). These findings from the criterion validity tests in this study are consistent with previous findings indicating that marital adjustment is positively related to positive coping styles and negatively related to negative coping styles (Özen 2006, Şengül Öner 2013). Thus, it can be said that these findings are to some extent consistent with previous findings that couples who use constructive conflict resolution styles in marriage have higher levels of marital quality than couples who use destructive conflict resolution styles (Li et al. 2019), and that couples who use withdrawal behaviors and destructive behaviors, especially in the early years of marriage, have higher divorce rates (Birditt et al. 2010). On the other hand, previous findings on passive conflict resolution styles are rather limited and contradictory. For example, in contrast to the results of this study, a positive significant relationship was found between avoidant conflict resolution style, which can be considered as passive conflict resolution style, and marital satisfaction (Stinson et al. 2017) and between submissive conflict resolution style and marital adjustment (Soylu and Kağnıcı 2015). Considering that passive conflict resolution styles include positive (e.g., altruism, waiting, appeasement, and empathy) and negative (e.g., submission, avoidance, emotional distance, and dissolution) substrategies, and research has shown that women's passive positive conflict resolution strategies and men's passive negative

coping strategies predict low marital satisfaction (Hojjat 2000), it seems necessary to examine passive style in more detail, including gender differences.

It should be noted, however, that this study has important limitations. The data in this study were collected during the COVID -19 pandemic, when there were intermittent curfews. Considering the findings that family members spend more time together and that family conflicts increase during the pandemic (Karaca et al. 2020, Özyürek and Çetinkaya 2021), it can be said that this situation will provide both valid results in measuring conflict areas and conflict resolution styles in this process and is a limitation. Therefore, it is recommended that this limitation be considered when collecting data after the pandemic using these instruments. In addition, most of the data were collected online during the development of the instruments. It should be considered that this may have reached married individuals who are inclined to participate in online research or, more importantly, have these capabilities. Also, as outlined in the demographic data, more individuals were reached who considered their income level to be moderate, so generalization of the instrument to a more heterogeneous group may be limited in terms of variables such as education level and socioeconomic level. In addition, we did not examine whether participants had a psychiatric diagnosis. In developing the instruments, it was assumed that participants had a normal distribution. However, it is recommended that this limitation be considered when using these instruments for an initial assessment in marriage and family counseling. Finally, the fact that both instruments are based on self-report brings with it the limitation of social desirability that other instruments of this type also have (Chan 2009).

Conclusion

In this study, two instruments were developed, namely CAI to assess marital conflict areas and CSI to assess conflict resolution styles. In this context, considering the relationships between conflict areas and conflict resolution styles with variables that ensure marital continuity, such as marital adjustment, satisfaction, and quality, it can be said that two important instruments were obtained to assess the current situation, especially for all efforts to maintain positive relationships in the marriage and to deal constructively with conflict. It is recommended that future studies test the measurement invariance of these instruments by collecting more heterogeneous data from larger populations by marital status, gender, education level, perceived socioeconomic status, and whether or not participants have a psychiatric diagnosis. In addition, as rapid normalization occurs after the COVID -19 pandemic, the validity and reliability of the instruments can be reexamined through various studies.

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