

Journal of Divorce & Remarriage

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/wjdr20>

Derivation and Psychometric Evaluation of the Fisher Divorce Adjustment Scale-Short Form in a Turkish Sample

Adviye Esin Yılmaz , Zeynep Akyüz , Pelin Bintaş Zörer , Özge Erarslan İnceç ,
Başak Öksüzler Cabılar & Sedef Tulum Akbulut

To cite this article: Adviye Esin Yılmaz , Zeynep Akyüz , Pelin Bintaş Zörer , Özge Erarslan İnceç ,
Başak Öksüzler Cabılar & Sedef Tulum Akbulut (2021) Derivation and Psychometric Evaluation
of the Fisher Divorce Adjustment Scale-Short Form in a Turkish Sample, Journal of Divorce &
Remarriage, 62:1, 41-65

To link to this article: <https://doi.org/10.1080/10502556.2020.1833291>



Published online: 04 Jan 2021.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)



Derivation and Psychometric Evaluation of the Fisher Divorce Adjustment Scale-Short Form in a Turkish Sample

Adviye Esin Yılmaz , Zeynep Akyüz , Pelin Bintaş Zörer ,
Özge Erarslan İngeç , Başak Öksüzler Cabılar , and Sedef Tulum Akbulut 

Department of Psychology, Dokuz Eylül University, İzmir, Turkey

ABSTRACT

The aim of this study was twofold. Study 1 was carried out to derive a subset of items from the Turkish version of the Fisher Divorce Adjustment Scale (FDAS) which is a 100-item instrument assessing the level of adjustment after divorce or separation. A total of 262 individuals were participated in Study 1 where statistical analyses including exploratory factor analysis and content coverage procedures were complementarily used to create the short form (FDAS-SF). The psychometric evaluation of the FDAS-SF was the focus of Study 2 including 230 participants. Confirmatory factor analysis revealed that a five-factor model provides good fit to data. Additionally, the dimensionality of FDAS was found to be invariant across gender and separation status (divorced vs. separated) groups. Apart from the reliability analyses indicating high consistency, the convergent validity of the FDAS-SF was also confirmed by significant correlations with the relevant psychological structures including satisfaction with life, psychological well-being, depression, anxiety, and stress. Examination of incremental validity showed that the FDAS-SF significantly predicted the levels of satisfaction with life and psychological well-being after controlling for psychological symptomatology. Overall, the FDAS-SF had satisfactory psychometric properties among not only divorced but also separated Turkish women and men.

KEYWORDS

Divorce; separation; adjustment; Fisher Divorce Adjustment Scale

Relationship dissolution between a couple may take different forms such as divorce, marital separation without divorce, breakup of a non-marital cohabitation or pre-marital relationship, and so on. Although divorce is widely considered to be the most stressful one amongst them (e.g., Booth & Amato, 1991; Holmes & Rahe, 1967), all uncoupling forms have a potential to exert significant difficulties on an individual's life due to interwoven changes to be adapted (Baxter, 1984; Mastekaasa, 1994). A pileup of evidence suggest that divorced/separated individuals confronted a series of stressors in emotional, psychological, social, and financial domains (Field et al., 2009; Kazan et al., 2017). Separation process from a love relationship may involve similar aspects to complicated grief as evident from intense emotions such as sadness, guilt,

CONTACT Adviye Esin Yılmaz  esin.yilmaz@deu.edu.tr  Department of Psychology, Dokuz Eylül University, İzmir, Turkey

shame, loneliness, anger (Emery & Wyer, 1987; Wallerstein, 1986), intrusive thoughts about the former partner/relationship, failure to accept the dissolution or denial the breakup, and declining trust and intimacy to other romantic relationships (Field et al., 2009). Moreover, a considerable amount of literature showed that after relationship dissolution, individuals experience higher levels of depression and anxiety (Doherty et al., 1989; Hope et al., 1999; Menaghan & Lieberman, 1986; Sbarra & Emery, 2005) and lower levels psychological well-being (Afifi et al., 2006; Forste & Heaton, 2004; Verhallen et al., 2019) in comparison to those who are married, in a romantic relationship, or single. It has also been well documented that relationship dissolution is associated with physical health problems and enhanced mortality rates (Field et al., 2009; Sbarra et al., 2011).

Termination of a partnership may also have a potential to negatively affect the social life by reducing the social network size and level of social integration (Roos, 2018). In particular, the process of divorce usually leads to ambiguity in continuing relationships with common friends and/or in-laws, eventually resulting in losing or weakening contact with them (Kramrei et al., 2007). Additionally, divorce disclosures may have disruptive effects on the structure and function of social networks and lead to fear of rejection or negative evaluation (Thomas & Ryan, 2008). Besides, a large number of studies have demonstrated that separation causes a decline in financial well-being (Forste & Heaton, 2004; Mikolai & Kulu, 2018), and regaining social and economic stability may be very challenging (Wallerstein, 1986).

Notwithstanding these adverse effects, divorce and separation rates have a global tendency to increase in parallel to the significant changes in partnership forms (Mikolai & Kulu, 2018; Thomson, 2014). Although laws pertaining to divorce vary considerably across countries, the crude divorce rates representing the number of divorces during the year per 1.000 people have been increasing in comparison to 1970s in many countries, accompanying to the decline in marriage rates (Organization for Economic Co-operation and Development, 2019). The figures show a similar incremental pattern over the years in Turkey, as well. Although still lower than many other countries, the 2014–2018 rates in Turkey are very close to those in Austria, Bulgaria, Croatia, Finland, Hungary, Italy, and Serbia (United Nations, 2019). In particular, the crude divorce rates in Turkey increased from 0.52 to 1.75 between 1997 and 2018 (Turkish Statistical Institute, 2001, 2019). Unfortunately, non-marital separation rates especially in terms of cohabitation which is a form of long-term partnership are not as clear as divorce rates, yet different forms of relationship dissolution should be taken into account in divorce statistics.

Given the global prevalence of this adverse experience, understanding the post-separation adjustment process and its components is attracting widespread research interest. It is common knowledge that the concept of divorce/separation adjustment has multifaceted and specific ingredients related to

repositioning oneself instead of being someone's partner (Kitson & Morgan, 1990). Sweeper and Halford (2006) have described adjustment to separation/divorce as an internal reconstruction process mainly concerned with resolving the emotional attachment to the ex-partner, dealing with post-separation loneliness and handling co-parenting conflict with the ex-partner. Thus, assessment of divorce/separation adjustment should exceed indirect and general indicators of positive and negative adjustment such as satisfaction with life, psychological well-being, levels of anxiety, depression, and stress. At this point, it is crucial to have a reliable and valid instrument designed specifically to evaluate the adjustment after divorce or separation from a love relationship.

The Fisher Divorce Adjustment Scale (FDAS; Fisher, 1976, 1978), which was originally designed to assess post-divorce adjustment, is one of the most widely used divorce/separation specific scales (e.g., Barutçu Yıldırım & Demir, 2015; Rohde-Brown & Rudestam, 2011; Steiner et al., 2015; Vukalovich & Caltabiano, 2008). Hensley (1996) suggests that it can also be used for evaluating the level of adjustment to non-marital separation. The FDAS is distinguished from the other divorce/separation adjustment tools as it provides a comprehensive assessment of adjustment by reflecting most of the consequences that an uncoupling process involves. As a multidimensional instrument, the FDAS includes 100 items evaluating the degree of adjustment that an individual has achieved in each of six subscales: (1) self-worth (25 items), (2) disentanglement from the relationship (22 items), (3) anger (12 items), (4) grief reaction (24 items), (5) trust and intimacy (8 items), and (6) social self-worth (9 items). The self-worth subscale includes feelings about the self and items related to the self-image. The disentanglement from the relationship was designed to evaluate emotional investment and extant feelings of love toward the ex-partner. While the anger subscale is related to anger directed toward the former love-partner, grief subscale refers to the loss of relationship, and measures the degree to which emotions are out of control by evaluating emotional expressions and physical changes. As for trust and intimacy subscale, it is about how comfortable one feels to express and experience emotional closeness and sexuality in a possible new relationship. Finally, the social self-worth subscale assesses the readiness to disclose the termination of relationship to others and whether the person has been involved in old and new social situations (Fisher, 1978).

The original version of the FDAS has been adapted into different languages such as Turkish (Yılmaz & Fişiloğlu, 2006), Russian (Slanbekova et al., 2015), Chilean (Guzmán-González et al., 2017), Persian (Asanjarani et al., 2018), and Japanese (Yasumitsu & Satoko, 2020). Unlike the six-dimensional structure in the original form, both the Turkish (Yılmaz & Fişiloğlu, 2006) and Chilean versions (Guzmán-González et al., 2017) have revealed a five-factor structure, concluding that the social self-worth dimension was not distinguishable. On the other hand, the six-factor structure remained the same in the Japanese version (Yasumitsu & Satoko, 2020) based on the results of the factor analysis. Although

the Russian and Persian versions also seemed to be composed of the same original six factors, these dimensions were not extracted using factor analytical procedures, and based only on the reliability values of the factors including the original items. Despite the contradictions on the number of factors, the reliability and validity of the FDAS were well-established across cultures.

Although the Turkish adaptation study of the full FDAS (Yilmaz & Fişiloğlu, 2006) revealed adequate psychometric properties for a sample of Turkish-divorced people, a further study focusing on the derivation of its short form would be valuable for some notable reasons. First of all, as a 100-item scale, an important disadvantage of the FDAS is its length. When the excessive distress during divorce and separation experience is also taken into account, shortening the full form would reduce the extra load on divorced or separated individuals participating in research and intervention programs. A brief form of the FDAS might also provide some advantages to researchers such as including a richer set of divorce-related variables within a single study context. Moreover, in studies where multiple measurements are required (e.g., longitudinal studies, treatment effectiveness studies, etc.), the use of the short form might facilitate the assessment procedures throughout the research process. Finally, the usefulness of the Turkish FDAS should be validated in separated individuals, as well. As such, the aim of the present study is to create the short version of the Turkish FDAS and to investigate its psychometric properties in divorced and separated analysis units. With this aim, two apart studies, one of which is for the derivation of the short form and the other is for the psychometric evaluation of this short form, were conducted.

Methods

Participants

In Study 1, a sample of 262 divorced and separated participants (177 [67.6%] women; 105 [40.1%] divorced or in divorce process; age 19–65 years, $M_{age} = 32.34$, $SD = 9.60$) completed online version of the full FDAS. Apart from being older than 18 years old, not any eligibility criteria were employed as we aimed to attain a sample representing the variability of the population in terms of divorce/separation-related characteristics such as the parental status, presence of a current romantic relationship, length of relationship, time since divorce/separation, etc. Of these 262 participants, 77 (29.4%) were parents and 91 (34.7%) had a current romantic relationship. While the length of the relationship with ex-partner ranged from 1 month to 33 years ($M = 4.85$, $SD = 5.41$ in years), the time since divorce/separation ranged between 0 month (for those who are in divorce/separation process) and 17 years ($M = 2.75$, $SD = 3.23$ in years). See [Table 1](#) for more detailed information regarding the general and divorce/separation-related demographic characteristics of the Study 1 participants.

Table 1. General and divorce/separation related characteristics of the Study 1 and Study 2 participants.

	Study 1 (N = 262)		Study 2 (N = 230)	
	n	%	n	%
General Characteristics				
Gender				
Women	177	67.6	176	76.5
Men	85	32.4	54	23.5
Education Level				
High school or below	19	7.2	29	12.6
University student or graduate	148	56.5	163	70.9
Graduate student or postgraduate	95	36.3	38	16.5
Employment Status				
Working	170	64.9	132	57.4
Nonworking	92	35.1	98	42.6
History of psychiatric/psychological help				
Yes	147	56.1	121	52.6
No	115	43.9	109	47.4
Time of the psychiatric/psychological help*				
Before or during marriage/relationship	86	32.8	73	31.7
During or after divorce/separation	89	33.9	61	26.5
Now	22	8.4	10	4.4
Divorce/Separation Related Characteristics				
Separation Status				
Divorced or in divorce process	105	40.1	78	33.9
Separated or in separation process	157	59.9	152	66.1
Parental Status				
Have children	77	29.4	68	29.6
Not have children	185	70.6	162	70.4
Initiator Status				
Initiator	126	48.1	116	50.4
Noninitiator	72	27.5	54	23.4
Mutual decision	64	24.4	50	21.7
Duration of relationship with ex-partner				
0–1 years	57	21.8	67	29.1
1.1–5 years	129	49.2	99	43.0
5.1–10 years	39	14.9	31	13.5
10.1 years or above	37	14.1	33	14.3
Duration of divorce/separation				
0–1 years	93	35.5	69	30.0
1.1–5 years	105	40.1	93	40.4
5.1–10 years	47	17.9	41	17.8
10.1 years or above	17	6.5	27	11.7
Current romantic relationship				
Yes	91	34.7	84	36.5
No	171	65.3	146	63.5

* Categories are not pure and includes participants reporting psychiatric/psychological help for more than one time category.

A total of 230 divorced and separated participants (176 [76.5%] women; 78 [33.9%] divorced or in divorce process; age 18–71 years, $M_{\text{age}} = 31.18$, $SD = 10.36$) were recruited for the second phase of the study and completed the newly created brief version of the FDAS, along with the other measures in the battery. Eligibility was the same that employed in Study 1. Of these 230 participants, 68 (29.6%) were parents and 84 (36.5%) had a current romantic relationship. The length of the relationship with ex-partner ranged between 1 month and 43 years ($M = 4.72$, $SD = 6.47$ in years), and the time since

divorce/separation ranged from 0 month (for those who are in divorce/separation process) to 44 years ($M = 3.86$, $SD = 5.29$ in years). See Table 1 for the demographic characteristics of the participants taking place in Study 2.

Instruments

Fisher Divorce Adjustment Scale (FDAS)

The FDAS was developed by Fisher (1978) to assess individuals' level of emotional and social adjustment to separation or divorce. It consists of 100 items and participants rate how often each item corresponded to their current feelings, thoughts and behaviors on a scale ranging from *almost always* (1) to *almost never* (5). The thirty-one of the items should be reversed so that higher scores indicate better adjustment to divorce or separation. The internal consistency of the FDAS was reported as .98 for the total score and it ranged between .87 and .93 for the subscales (Fisher & Bierhaus, 1994). In addition, the reliability of the scale is well-established in a number of studies administering it to a range of divorced/separated samples (e.g., Hensley, 1996; Koenig Kellas & Masunov, 2003; Rohde-Brown & Rudestam, 2011). It was adapted to Turkish by Yilmaz and Fişiloğlu (2006) and the Cronbach's Alpha coefficient was reported as .97 for the whole scale, while the Guttman split-half reliability for the subscales ranged from .85 to .94.

Satisfaction with life scale (SWLS)

The SWLS was developed by Diener et al. (1985) to assess life satisfaction levels of individuals. The 5-item measure uses a 7-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (7). Internal consistency was reported as .87 by Diener et al. (1985). In a study conducted by Pavot et al. (1991), the criterion-related validity of the scale was found to be .82. The scale was adapted to Turkish by Köker (1991) and the test-retest reliability coefficient was reported as .85. In the study conducted by Yetim (1993), the internal consistency coefficient of the scale was found to be .86 and the test-retest reliability was found to be .73. The total scores range from 5 to 35, and higher scores indicate greater quality of life.

Psychological well-being scale (PWB)

The PWB was developed by Diener et al. (2009); Diener et al. (2010)) to assess socio-psychological well-being. It consists of eight items measured by a 7-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (7). The scale was adapted to Turkish by Telef (2013). In the Turkish version of the scale, the Cronbach's Alpha coefficient was reported as .80 and the test-retest reliability coefficient was reported as .86. The total scores range from 8 to 56, and higher scores indicate an increase in psychological well-being.

Depression, anxiety, stress scale-21 items (DASS-21)

The DASS-21 was developed by Lovibond and Lovibond (1995) in order to assess depression, anxiety, and stress symptoms experienced over the past week. Each item is rated on a 4-point scale ranging between *did not applied to me at all* (0) and *applied to me very much* (3). Validity and reliability of the 21-item Turkish scale were assessed by Yılmaz et al. (2017). Similar to the long form, short form is also consisted of the depression, anxiety, and stress subscales and the Cronbach's alpha coefficients were .81, .82, and .76, respectively. The score range of each subscale is between 0 and 21. Higher scores point out more severe depression, anxiety, or stress situation.

Procedure

Ethical permission for the study was obtained from the Research Ethics Committee of the Faculty of Literature at Dokuz Eylül University. Before the administration of the full FDAS in the first stage, the expression of "former spouse" which implies divorce was replaced with "former partner" so that the scale could be used both for divorced and non-married populations. Participants were recruited through purposive and convenience sampling from various social media groups and were provided an online link to the survey set. Divorced and separated individuals who were interested in participation were initially asked for their informed consent to access the questions. In average, the administration of the instruments took 30 minutes, where in the first study including the full and in the second study including the short form of the FDAS along with the demographic information form, SWLS, PWB and DASS-21.

The first author of the study, who has been working as an associate professor in the field of clinical psychology, is one of the researchers who conducted the Turkish adaptation study of the long version of the FDAS. Other authors are specialized in clinical psychology and continue their doctoral education. Although the authors' fields of work vary, the entire team has a common interest in post-divorce adjustment and related factors. While one of the authors' doctoral dissertations is on post-divorce adjustment, the research team is working together on a project supported by The Scientific and Technological Research Council of Turkey, aiming to develop an intervention program to improve Turkish women's post-divorce adjustment and well-being. The development of the short version of the scale may be functional in terms of the studies that the authors are/will be carrying out, as well as contributing to the literature and researchers interested in the topic.

Data analysis strategy

In Study 1, following Widaman et al. (2011) recommendation, both statistical and content analysis procedures were simultaneously employed so that the

statistically compiled items are not providing redundant information about the factor, but rather represent breadth of the relevant theoretical domain across items. Statistically, two analyses were conducted in order to derive the best representative items to be in the short form of the FDAS using SPSS (version 25.0; IBM Corporation, 2017). First, an explanatory factor analysis (EFA) was undertaken on the full version to determine items with larger loadings on the focal factor and weaker loadings on the other factors. In performing the EFA, the maximum likelihood extraction method was preferred to principal component analysis since the latter does not partition unique variance from the shared variance, which results in an overestimation of the explained variance and inflated item loadings (Costello & Osborne, 2015). Second, an internal reliability analysis was conducted to investigate statistical power of the items and the change in Cronbach's alpha coefficient if items deleted. Finally, the author group who are all clinical psychologists practicing in divorce field evaluated the content of items when the loadings were statistically and semantically very close to each other.

In study 2, confirmatory factor analysis (CFA) with maximum likelihood discrepancy using AMOS SPSS (version 25.0; IBM Corporation, 2017) was performed in order to examine the factor structure of the final short version. Considering the sample size and the number of variables (Byrne, 2010), the reasonable fit of the model was evaluated using Chi-square tests (CMIN-should not be significant, and CIMIN/DF-should be below 2), the Comparative Fit Index (CFI-should be above .90), the Tucker-Lewis Index (TLI-should be above .90), and the Root Mean Square Error of Approximation (RMSEA-should be below .08).

Even though the FDAS is a measure developed not only for divorced but also for separated individuals, these two life events may have some different processes and properties. In addition, the gender ratio of the short FDAS sample was in favor of women. For these reasons, two measurement invariance tests were also conducted using gender and type of separation (divorced/during the divorce process vs. separation/during the separation process from a romantic relationship) as grouping variables to test if the factorial structure of the FDAS-SF is identical across these groups. Although we attached importance to addressing factorial invariance of the FDAS-SF across women vs. men and divorced vs. separated, the number of Study 2 participants in each group was limited for performing such a multi-group factor analysis. Thus, the Study 2 data were combined with that of Study 1 to attain a reasonable sample size enabling us at least preliminarily to perform these analyses. In this way, measurement invariance tests were conducted on 353 women vs. 139 men and 183 divorced vs. 309 separated participants. In testing for factorial equivalency of the FDAS-SF across gender and separation status groups, multigroup CFAs using Maximum Likelihood estimation were conducted using AMOS SPSS. This multistep method includes consecutive analyses of unconstrained

(configural) and constrained models (Byrne, 2004, 2010). Among constrained models, while weak (metric) model constrains only factor loadings (measurement weights) to equality, the strong (scalar) model additionally constrains intercepts and the strict model additionally constrains residuals (error variances) to be equal across comparison groups. A non-significant chi-square difference between a less restrictive model and a more restrictive model in the sequence of these nested models are accepted as evidence of invariance (Byrne, 2010). However, as a superior way to this sample size sensitive chi-square difference test, differences between CFI values (ΔCFI) smaller than or equal to $-.01$ also indicate that the hypothesis of invariance should be accepted (e.g., Cheung & Rensvold, 2002).

The internal consistency of the FDAS-SF was determined by calculating item-total correlation, Cronbach's Alpha, composite reliability, and test-retest coefficients. The correlations with life satisfaction, psychological well-being, depression, anxiety, and stress were examined for the convergent validity of the scale. Incremental validity was evaluated by conducting hierarchical regression analyses to observe whether the FDAS-SF subscales would predict levels of satisfaction with life and psychological well-being when controlling for gender, divorce-separation status, depression, anxiety, and stress. Finally, with descriptive purposes, a between-subject multivariate analysis of variance (MANOVA) was used to test whether the mean scores on the five FDAS-SF subscales differed as a function of gender, by avoiding Type I error inflation.

Results

Study 1- derivation of items for the FDAS-SF

Exploratory factor analysis, internal consistency, and content coverage

In Study 1, a hundred original items of the Turkish FDAS were subjected to an EFA with maximum likelihood method. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.92, and Bartlett's test of sphericity was significant ($df = 4950$, $p < .001$). The results, examined together with the scree test, indicated a four- to thirteen-factor structure with eigenvalues greater than one, which accounted for 61.69% of the variance. In order to underpin the decision on how many factors to retain for rotation, Horn (1965) parallel analysis (PA), which allows deriving eigenvalues from random data that parallel the actual data regarding the number of cases and items (O'Conner, 2000), was also performed. The PA indicated seven significant components to be extracted from the actual data set.

Considering these results, as well as the original six interrelated factors structure and the previous five-factor validation study of the Turkish FDAS, multiple maximum likelihood EFAs with a direct oblimin rotation were performed, setting the number of factors extracted at four, five, six, and seven. The results of these

analyses were examined by comparing the item loading tables in terms of a priori set of rules to be helpful not only for determining the best factor structure of the full FDAS but also for considering the potential subset of items to be included in the brief form. The rules included that items that loaded less than .50 on a factor would not be derived, as would be items having cross loading problems. In addition, no factors would include fewer than three items and items would have a theoretically meaningful distribution across factors. As a result, while the seven-factor solution resulted in a latent component including no items exceeding .50, the six-factor solution also revealed one latent dimension including only two items. The problem with the four-factor structure was that the items loaded on the factors could theoretically be separable. The resulting five-factor solution demonstrated the best fit to the data and seemed appropriate to be psychometrically validated in an abbreviated version. These five factors accounted for 44.78% of the total variance, with eigenvalues of 30.54, 6.06, 3.65, 2.55, and 1.97. This factor structure was in accordance with the previous Turkish adaptation study of the full FDAS (Yilmaz & Fişiloğlu, 2006). Considering the conceptual negative meaning of some of the subscales (such as an increase in grief reaction would not be an indicator of divorce/separation adjustment), the factors are named as lack of grief reaction, disentanglement from the relationship, lack of anger, trust, and intimacy, and self-worth (in the order of present EFA results).

Next, the results of the internal consistency analysis were closely examined in terms of item-total correlations, especially for the items having strongest loadings on their focal factor and weaker loadings on the other factors. In this way, item pools ranking from the strongest factor loadings and item-total correlations to the lowest ones were obtained for each factor. At this point, the author-judge group evaluated all eligible items for each factor, considering not only the statistical power but also the coverage of items so that the factors do not contain items with extreme levels of content overlap and redundant information. As a result, a total of 25 items (short form item numbers-original item numbers in box brackets: 1-[7], 2-[49], 3-[15], 4-[32], 5-[46], 6-[11], 7-[51], 8-[70], 9-[37], 10-[62], 11-[58], 12-[59], 13-[78], 14-[53], 15-[74], 16-[56], 17-[71], 18-[79], 19-[84], 20-[88], 21-[81], 22-[82], 23-[83], 24-[93], 25-[95]) containing five items in each factor were derived to the short FDAS. Although most of the selected items with strong factor loadings (over .50) on the complete form had also item-total correlations over .60-.70, theoretical consideration about the structure also paved the way to the items whose consistency with the whole scale was weaker. The items in the final 25-item short form were re-numbered considering not only the sequence in the original form but also nonsuccessiveness of the items representing the same factor. The reverse-scored items are grouped under the self-worth subscale. The total scores can range from 25 to 125, and higher scores indicate higher levels adjustment to divorce or separation.

Study 2: psychometric evaluation of the FDAS-SF

Confirmatory factor analysis

The initial CFA which was performed to examine the construct validity of the 25-item FDAS-SF resulted in goodness of fit indices as $\chi^2 = 544.90$, $df = 265$, $p < .001$, $\chi^2/df = 2.06$, CFI = .90, TLI = .89, and RMSEA = .07, indicating a marginal fit even if the Chi-square test which is very sensitive to the sample size was significant. Even though these indices were very near to be acceptable, the modification indices demonstrated improvements in the model fit by associating error variances between items 15 and 20, and between 20 and 25. Since these items were loaded on the same factor, a second CFA was run by allowing these theoretically consistent modifications. In this model (see Figure 1), the chi-square test remained significant ($\chi^2 = 511.01$, $df = 263$, $p < .001$), but the other indices exceeded the cutoff limits resulting in a reasonable fit to the data ($\chi^2/df = 1.94$, CFI = .91, TLI = .90, and RMSEA = .06). In addition, standardized estimates showed that all factor loadings were above .50 and significant. Based on these analyses, the five-factor construct validity of the FDAS-SF was confirmed.

Measurement invariance

The results of multigroup factorial invariance tests conducted for gender and separation status separately are depicted in Table 2. First of all, the unconstrained baseline model testing the configural factor structure of the FDAS-SF was found to be identical across women and men, and across divorced and separated participants. This result revealed that the conceptualization of the subscales of the FDAS-SF was the same and the constructs were measured by the same items across groups. In addition, both the non-significant differences in chi-square values and CFI difference tests indicated weak (metric) invariances across women and men, and across divorced and separated participants. This result suggested that the strength of the factor loadings of items

Table 2. Measurement invariance model fit indices and differences for gender and separation status ($N = 492$).

Models (M)	Model Fit					Model Difference				
	χ^2	df	χ^2/df	CFI	TLI	RMSA	ΔM	$\Delta \chi^2$	Δdf	ΔCFI
Gender										
M1: Unconstrained (configural)	989.91*	526	1.88	.940	.932	.042		-	-	-
M2: Weak (metric) invariance	1014.99*	546	1.86	.940	.934	.042	M2-M1	25.08	20	.000
M3: Strong (scalar) invariance	1105.47*	571	1.94	.931	.928	.044	M3-M2	90.48*	25	-.009
M4: Strict invariance	1171.58*	598	1.96	.926	.926	.044	M4-M3	66.11*	27	-.005
Separation Status										
M1: Unconstrained (configural)	1017.88*	526	1.94	.935	.926	.044		-	-	-
M2: Weak (metric) invariance	1040.02*	546	1.91	.935	.928	.043	M2-M1	22.14	20	.000
M3: Strong (scalar) invariance	1190.65*	571	2.09	.918	.914	.047	M3-M2	150.63*	25	-.017
M4: Strict invariance	1333.66*	598	2.23	.903	.903	.050	M4-M3	143.02*	27	-.015

* $p < .001$.

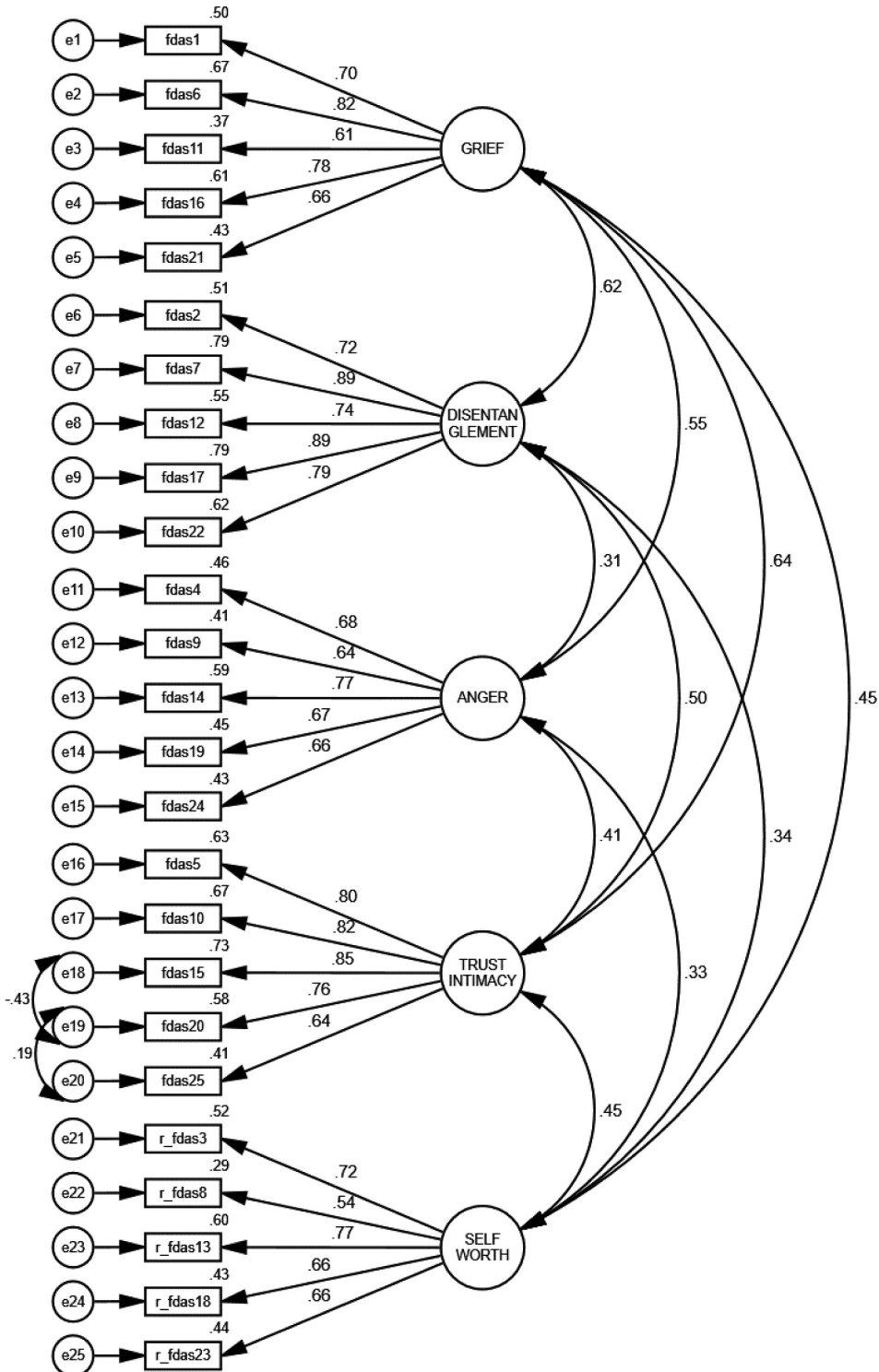


Figure 1. Confirmatory factor model of the FDAS-SF for the five-factor solution. *Note.* The number of items represents the reordered numbers in the FDAS-SF. The r in the variable names indicates reverse scored items.

was equivalent across these groups, indicating an identical response pattern and meaning between women and men, and between divorced and separated individuals. Since chi-square differences were significant for both strong (scalar) and strict invariance tests across both grouping variables, the CFI difference tests were examined. Results supported measurement invariance for the strong and strict models between genders ($\Delta\text{CFIs} \leq -.01$), while these models could not be acceptable for separation status. As strong model tests indicated, a comparison of subscale means could be possible for only between women and men, indicating that observed scores were related to the latent structure scores. Although not necessary for comparing invariance across groups, strict model tests demonstrated that the level of measurement errors was not the same for each item between divorced and separated groups.

Reliability

Analyses conducted on the study 2 sample demonstrated that the corrected item-total correlations for the total FDAS-SF ranged from .33 to .67. As for the individual subscales, they ranged from .56 to .72 for the lack of grief reaction factor, .68 to .83 for the disentanglement from the relationship factor, .54 to .67 for the lack of anger factor, .65 to .78 for the trust and intimacy factor, and .47 to .66 for the self-worth factor. These coefficients denoted that all items were acceptable as they are higher than the conventional level of .20 (Kline, 1986) and well associated with their respective subscales.

The internal consistency, composite reliability (CR), and the test-retest coefficients were also examined as the indicators of reliability. While Cronbach's Alpha coefficient for the total FDAS-SF was found to be .91, the coefficients for the lack of grief reaction, disentanglement from the relationship, lack of anger, trust and intimacy, and self-worth factors were found to be .84, .90, .81, .88, and .80, respectively. The calculations of CR using Raykov's formula (1997) were very close to these Cronbach's Alpha coefficients (.84 for the lack of grief reaction, .90 for the disentanglement from the relationship, .81 for the lack of anger, .87 for the trust intimacy, and .81 for the self-worth), providing a crosscheck for the factors' reliability.

Among the participants of the second stage, 23.48% ($n = 54$) were voluntarily approached to be retested with the short FDAS, and only 17 of them completed the scale for the second time. Considering unstable nature of the adjustment process, the retest interval ranged from 2 to 4 weeks. Since the size of the sample was small, test-retest reliability was calculated for only total FDAS-SF scores, as a preliminary investigation. The retest Pearson correlation for the whole scale was found to be .81 ($p < .01$). In addition, paired samples *t*-test revealed that the mean difference between the first ($M = 91.53$) and second ($M = 96.59$) administration was not significant for the FDAS-SF total scores ($t = -1.99, p = .063$).

Convergent validity

In order to evaluate the convergent validity of the FDAS-SF and its subscales, Pearson correlations among FDAS-SF total score, FDAS-SF subscales, SWLS, PWB, and DASS-21 were examined. Consistent with previous research findings, the correlations of divorce adjustment with these constructs were in the expected direction and ranged from moderate to strong (see Table 3). Accordingly, all adjustment measures were significantly and positively correlated with the levels of life satisfaction and psychological well-being (with only disentanglement from relationship not reaching significance) and negatively correlated with the levels of depression, anxiety, and stress.

Incremental validity

To test incremental validity of the FDAS-SF, two hierarchical regression analyses were performed in which satisfaction with life and psychological well-being were the criterion variables (as more generic indicators of adjustment in divorce-separation literature); gender and type of separation (divorce vs. separation) were on the first step (as prominent demographic control variables potentially affecting adjustment process); depression, anxiety, and stress were on the second step (as variables mostly used in place of specific divorce adjustment instruments in the literature, but in fact are only parts of the adjustment phenomenon); and the five FDAS-SF factors were on the last step (to see if they still explain a significant amount of variance in satisfaction with life and psychological well-being after controlling for all of the above variables).

As shown in Table 4, being woman and lower levels of depression accounted for a significant amount of the variance in satisfaction with life, at

Table 3. Intercorrelations and descriptive statistics for Study 2 variables ($N = 230$).

Variables	2	3	4	5	6	7	8	9	10	11	<i>M</i>	<i>SD</i>	Range	α
1. FDAS-SF	.82*	.73*	.67*	.78*	.61*	.39*	.46*	-.53*	-.45*	-.46*	95.53	18.61	31–124	.91
2. Lack of Grief	1	.56*	.47*	.56*	.39*	.42*	.50*	-.61*	-.52*	-.51*	18.87	4.85	5–25	.84
3. Disentanglement		1	.29*	.45*	.30*	.21*	.29*	-.34*	-.28*	-.26*	20.31	5.54	5–25	.90
4. Lack of Anger			1	.36*	.27*	.29*	.24*	-.32*	-.29*	-.37*	17.39	5.47	5–25	.81
5. Trust and Intimacy				1	.40*	.20*	.24*	-.29*	-.27*	-.24*	19.78	5.74	5–25	.88
6. Self-worth					1	.33*	.45*	-.39*	-.30*	-.33*	19.17	4.01	6–25	.80
7. Satisfaction with life						1	.61*	-.41*	-.30*	-.32*	20.90	6.42	5–35	.85
8. Psychological well-being							1	-.55*	-.47*	-.38*	43.16	7.99	13–56	.87
9. DASS-Depression								1	.70*	.73*	12.90	10.59	0–42	.86
10. DASS-Anxiety									1	.79*	10.77	9.94	0–42	.86
11. DASS-Stress										1	16.48	10.13	0–42	.85

Note. FDAS-SF = Fisher Divorce Adjustment Scale-Short Form, DASS = Depression, Anxiety, Stress Scale, α = Cronbach's Alpha Coefficient.

* $p < .01$.

Table 4. Statistics for the regression equation with satisfaction with life and psychological well-being regressed on gender, separation status, depression, anxiety, stress and divorce adjustment subscales ($N = 230$).

Variables	Dependent Variable: Satisfaction with Life				Dependent Variable: Psychological Well-Being			
	ΔR^2	ΔF	β	t	ΔR^2	ΔF	β	t
Step 1: Control Variables	.03*	3.73*			.01	1.05		
Gender			-.17	-2.57*			-.04	-.56
Separation Status			.08	1.22			-.08	-1.26
Step 2: DASS Variables	.19***	18.31***			.34***	38.49***		
Depression			-.39	-4.37***			-.50	-6.09***
Anxiety			.01	.12			-.30	-3.23**
Stress			-.07	-.67			.22	2.27*
Step 3: FDAS-SF Variables	.08***	5.06***			.09***	6.72***		
Lack of Grief			.22	2.33*			.26	3.08**
Disentanglement			-.03	-.35			-.03	-.51
Lack of Anger			.16	2.26*			.03	.44
Trust and Intimacy			-.06	-.84			-.09	-1.39
Self-worth			.16	2.33*			.25	4.17***

Note. Gender = 1: Women, 2: Men, Separation Status = 1: Divorced/in divorce process, 2: Separated from a romantic relationship/in separation process from a romantic relationship, DASS = Depression, Anxiety, Stress Scale, FDAS-SF = Fisher Divorce Adjustment Scale-Short Form.

* $p < .05$, ** $p < .005$, *** $p < .001$.

the end of the first two steps ($R^2 = .22$, $F [5, 224] = 12.82$, $p < .001$). As expected, the addition of FDAS subscales as a set made a further significant contribution to the explained variance ($R^2 = .30$, $F [10, 219] = 9.52$, $p < .001$). After controlling for the other factors, the lack of grief reaction ($\beta = .22$, $p < .05$), lack of anger ($\beta = .16$, $p < .05$), and self-worth ($\beta = .16$, $p < .05$) were the individual positive predictors of the satisfaction with life. However, disentanglement from relationship and trust and intimacy were not significantly associated with life satisfaction. In the second regression analysis, depression, anxiety, and stress variables emerged as significant in predicting psychological well-being, while none of the demographic controls were significant at the end of the first two steps ($R^2 = .35$, $F [5, 224] = 23.72$, $p < .001$). Again, the addition of FDAS variables as a set resulted in a significant increment in the explained variance ($R^2 = .41$, $F [10, 219] = 16.73$, $p < .001$). Among the FDAS-SF factors, only the lack of grief ($\beta = .26$, $p < .005$) and self-worth ($\beta = .25$, $p < .001$) were the individual predictors of psychological well-being.

Descriptive information

With descriptive purposes, Table 3 also shows means, standard deviations, range, and Cronbach's Alpha coefficients of study 2 measures. Because measurement invariance test suggested that unbiased comparison of divorce/separation adjustment means could be possible across gender, a MANOVA was conducted using the five factors of the FDAS-SF as dependent variables.

A non-significant Box's M test revealed that the covariance matrices of the FDAS subscales are equal across gender groups. As shown in Table 5, the overall result indicated that gender significantly affected the combination of these five adjustment variables (Wilk's $\Lambda = .90$, $F [5, 224] = 4.96$, $p < .001$, $\eta^2 = .10$). Follow-up univariate ANOVA post hoc tests using the Bonferroni adjustment ($p < .05/5 = 0.01$) for multiple comparisons indicated that gender groups had statistically non-significant differences on four out of the five FDAS-SF dimensions. However, the lack of anger scores of men was higher ($M = 19.8$) than that of women ($M = 16.64$), indicating more anger response for women ($F [1, 228] = 14.93$, $p < .001$, $\eta^2 = .061$). The eta squared value revealed that the effect size of this difference is medium ($> .06$).

Discussion

The main purpose of the present study was to create a short form of the Turkish FDAS based on the complete form that meets psychometric standards of the validity and reliability. Two apart studies both of which was conducted on a mixed sample of divorced/in divorce process vs. separated from a non-marital relationship served this purpose. While the specific aim of the first study was to determine the statistically sound and representative items to be included in the short form, the second study specifically focused on the psychometric properties of this brief form.

In study 1, the statistical and content coverage approaches were considered as two complementary ways to fulfil the item-selection purpose. Statistical approach was mainly based on the EFA and item-total correlation analysis. The EFA conducted for the full version revealed a five-factor structure named as lack of grief, disentanglement from the relationship, lack of anger, trust/intimacy, and self-worth. This finding is consistent with those of Guzmán-González et al. (2017) who found the same five-factor structure not including the social self-worth in a Chilean sample. In fact, an under-representative structure with only two-items evaluating the social self-worth

Table 5. MANOVA statistics for the mean differences between women and men on FDAS-SF subscales ($N = 230$).

Variables	Women ($n = 176$)		Men ($n = 54$)		df	F	Partial η^2
	M	SD	M	SD			
Overall test	-	-	-	-	5, 224	4.96*	.10
FDAS-SF (Total)	94.43	19.43	99.09	15.26			
1. Lack of Grief	18.75	5.03	19.28	4.24	1, 228	.49	.002
2. Disentanglement	20.36	5.63	20.17	5.29	1, 228	.05	.000
3. Lack of Anger	16.64	5.50	19.83	4.61	1, 228	14.93*	.061
4. Trust and Intimacy	19.38	5.99	21.09	4.63	1, 228	3.74	.016
5. Self-worth	19.31	3.89	18.72	4.39	1, 228	.88	.004

Note. FDAS-SF = Fisher Divorce Adjustment Scale-Short Form.

* $p < .001$.

in terms of the level of confidence in sharing the relationship breakdown with others (e.g., “I am comfortable telling people I am separated from my love partner”) was observed in the present study, yet due to a priori set of rules as no factors would include fewer than three items, a five-factor structure seemed to be validated in the short form. As for the other items of the social self-worth factor assessing the level of readiness for social interactions with others after separation (e.g., “I feel comfortable going to social events even though I am single”), they either poorly loaded on their original factor or were embedded in the self-worth factor. This result indicated one more time as in the previous Turkish study (Yılmaz & Fişiloğlu, 2006) that distinguishing the social self-worth as a unique factor from the self-worth could be difficult in a culture like Turkey where the individualistic and collectivistic values are jointly granted (Kağıtçıbaşı, 1996a, 1996b). In other words, the values of social self may seep into the values of individual self-evaluation. When we also consider that the social self-worth subscale is among the short (9 items) but homogenous subtests of the FDAS, this differentiation could be more difficult. Still, acceptance and disclosure of the relationship breakdown can be important buffering mechanisms for preventing separated individuals from social alienation, and thus should be particularly examined in divorce/separation adaptation studies performed in collectivist cultures where the risk of social rejection and stigmatization would be potentially high.

Based on this EFA results, items having larger loadings on their focal factor, having lower loadings on the other factors, and among them that had stronger item-total correlation coefficients were subjected to a content analysis considering the coverage of the focal construct to avoid biased selection of the items (i.e., as Widaman et al., 2011, p. 52] stated “failure to preserve the breadth of the domain across the items in the short form”). By not allowing items with repetitive meanings to be under the same factor, each item in a factor represented a different facet of the same construct. In addition, items having a social meaning was not allowed to be in the self-worth factor so that this construct was purely relevant to the self-worth. As a result, a total of 25 items representing five factors were derived for the FDAS-SF.

In study 2, the psychometric properties of the 25-item Turkish FDAS were evaluated on a new sample including divorced/separated individuals. As expected, the CFA confirmed that the five-factor structure for the short form had a good fit to the data and the items had strong factor loadings on their respective factors. It should be emphasized that associating error variances between the item 15 (“I am afraid of becoming emotionally close to another love partner”) and 20 (“I feel uncomfortable even thinking about having a sexual relationship”), and between 20 and 25 (“I am unable to perform sexually”) improved the model fit, indicating the meaning across these items are very close to each other. Such a covariation may be caused by a perception of interdependence between emotional and sexual closeness (Yoo et al., 2014)

which are the central themes cutting across these three items. Besides, although we made an effort for not including items with repetitive meanings under the same factor, this was especially difficult for the trust and intimacy factor since it is the shortest (8 items) subscale of the full FDAS including a homogenous set of items.

The configural invariance tests used as the first step to establish measurement invariance of the FDAS-SF indicated that both gender and separation status (divorced/in divorce process vs. separated from a non-marital relationship) groups conceptualized the subscales of the FDAS-SF in the same way. In other words, we can conclude that the basic five-factor structure of the FDAS-SF is the same not only for women and men but also for divorced and separated individuals. Complementary to this finding, the subsequent tests of weak (metric), strong (scalar), and strict models also indicated non-invariance across women and men, based on non-significant chi-square tests and/or differences in CFIs. However, measurement invariance tests pointed out invariance only at the weak level for separation status groups. Since weak invariance tests were satisfied for both grouping variables, it could be asserted that the magnitude of the factor loadings were statistically equal between women and men, and between divorced and separated groups. On the other hand, strong invariance tests indicated that the scores obtained from the FDAS-SF subscales was comparable only between women and men, but not between divorced and separated individuals. As Millsap and Kwok (2004) stated, not supported strict invariance model can give rise to different error rates (e.g., sensitivity, specificity), affecting screening decisions between divorced and separated individuals. On the other hand, this level of measurement invariance is rarely achieved in practice (e.g., Bialosiewicz et al., 2013; Byrne, 2010; Clench-Aas et al., 2011).

The reliability analyses with respect to internal consistency and composite reliability procedures conjugately supported high reliability for the FDAS-SF total and subscale scores, as parallel to the findings with its complete form (e.g., Asanjarani et al., 2018; Yilmaz & Fişiloğlu, 2006). Although a small subsample was retested, the correlation coefficient and test of difference between two applications indicated the temporal stability (2 to 4 weeks) of the FDAS-SF as a whole. Because the FDAS can be used multiple times to assess the adjustment improvement (Fisher, 1978), it is indeed expected to be prone to variation rather than being a trait measure. That is why we did not examine its stability over a 4-week interval and not find a study in the available literature to compare our results.

Confirming the convergent validity, results indicated that satisfaction with life and psychological well-being increased and psychological symptoms of depression, anxiety, and stress decreased when divorced and separated individuals reported higher levels of adjustment in terms of lack of grief, disentanglement, lack of anger, trust/intimacy, and self-worth. These findings were in line with studies reporting positive correlations of the FDAS with

satisfaction with life (e.g., Guzmán-González et al., 2017; Yasumitsu & Satoko, 2020) and psychological well-being (e.g., Bevvino & Sharkin, 2003; Steiner et al., 2015), and negative correlations with depression (e.g., Asanjarani et al., 2018; Guzmán-González et al., 2017), anxiety (e.g., Asanjarani et al., 2018; Guzmán-González et al., 2017), and stress (e.g., Guzmán-González et al., 2017; Plummer & Koch-Hattem, 1986). In addition, results of the regression analyses ascertained the incremental validity of the FDAS-SF. This analysis would show us the value of using divorce-separation-specific multidimensional instruments in research and practice since there was still a room for the FDAS-SF in explaining variance even when we control the effect of psychological symptomatology measurements on satisfaction with life and psychological well-being.

We also examined the mean differences between women and men on the FDAS-SF subscales and found that women feel more anger toward their ex-partner in comparison to men. However, women and men had comparable scores on the other factors of the FDAS. The present finding of non-significant group differences on the grief, disentanglement, trust, and intimacy, and self-worth subscales agrees with the findings of other studies in which the subscales of the full FDAS were compared across gender groups (e.g., Bevvino & Sharkin, 2003; Hensley, 1996, 2006). Although women and men may have different ways of coping with the breakup distress (e.g., Hensley, 2006; Steenbergen Richmond & Hendrickson Christensen, 2001), they experience similar levels of subjective adjustment difficulties following divorce/separation as emphasized by some of the previous research assessing the relationship termination adjustment in terms of overall distress in different cultural contexts (e.g., Hortacsu & Karanci, 1987; Kitson & Holmes, 1992; Sprecher, 1994). As for the present anger finding, it is consistent with those of Choo, Levine and Hatfiels' study (Choo et al., 1996) demonstrating that women were more likely to blame their partners following the breakup, if we associate blame with anger as an underlying mechanism. The more anger in the part of women might be evaluated as a confounding finding in a patriarchal culture like Turkey where people predominantly internalize traditional gender roles rather than the egalitarian ones (Boyacioglu et al., 2017). In fact, a number of studies have revealed that women are stereotypically expected to internalize their anger, whereas men are able to express their anger more directly (e.g., Biaggio, 1989; Fischer & Evers, 2011; Plant et al., 2000). That is to say, rather than the subjective experience, it is the expression style of anger that would differentiate women from men (Brody, 1999; Fischer & Evers, 2011). To illustrate, men might have directly expressed their anger prior to and/or in the process of separation or divorce, while women might have projected their unexpressed anger into an anonymous self-report measure in the present study. Additionally, women have shown as reporting more anger than men specifically in romantic relationship settings in response to unresolved conflicts (El-Sheikh et al., 2000). Complementarily, several interacting factors surrounding divorce/separation

experience such as initiator status, presence of children, duration of separation, having a new love-relationship, and so on should be taken into account to properly understand the underlying conditions leading to the observed differences and indifferences between women and men.

Several limitations of the study should be addressed, including the data collection procedures, representativeness of the samples in terms of gender and type of separation, and combination of the Study 1 and 2 samples for testing measurement invariances. As with online data collection procedures, self-selection bias and external validity problems are of concern. Limiting the generalizability of the results, divorced and separated individuals who do not adopt Internet services may have different characteristics that are not represented by the participants of the present study. Similarly, the ratios based on gender and separation status were in favor of women and non-marital separation groups, indicating that a more balanced representation of these groups would be valuable for future studies. In connection with these two limitations, the Study 1 and Study 2 data were to be assembled since the number of Study 2 participants in each group (gender and type of separation) was not sufficient for performing measurement invariance tests. Considering that the Study 1 participants completed the full version and in accordance with the short form, 25 out of 100 answers of these participants were used for the analyses, the results of the measurement invariance tests should be interpreted with caution. Therefore, we strongly encourage future studies focusing on the measurement invariance of the Turkish FDAS-SF in a more balanced and representative sample with respect to gender and separation status.

Notwithstanding these limitations, present results provide a short, practical post-separation assessment tool having adequate psychometric properties to be used in research and practice for divorced and/or separated women and men. We hope, this study opens the way for future studies considering creation or development of feasible and multidimensional assessment tools to be specifically used in post-separation research and practice. Accounting for the common and distinctive post-separation adjustment characteristics across cultures would be a valuable next research step following on from the current work revealing psychometric utility of the relevant measures in different cultures.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This research was supported by the Scientific and Technological Research Council of Turkey [TÜBİTAK], in the framework of the 1003- Primary Subjects R&D Funding Program (Project No: 218K458)

ORCID

Adviye Esin Yılmaz  <http://orcid.org/0000-0002-1372-2438>
 Zeynep Akyüz  <http://orcid.org/0000-0003-1335-6789>
 Pelin Bintaş Zörer  <http://orcid.org/0000-0003-1736-6909>
 Özge Erarslan İngeç  <http://orcid.org/0000-0001-5936-3066>
 Başak Öksüzler Cabılar  <http://orcid.org/0000-0003-0399-850X>
 Sedef Tulum Akbulut  <http://orcid.org/0000-0002-2098-1454>

References

- Afifi, T. O., Cox, B. J., & Enns, M. W. (2006). Mental health profiles among married, never-married, and separated/divorced mothers in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology*, 41(2), 122–129. <https://doi.org/10.1007/s00127-005-0005-3>
- Asanjarani, F., Jazayeri, R., Fatehizade, M., Etemadi, O., & de Mol, J. (2018). Examining the reliability and validity of the Fisher Divorce Adjustment Scale: The Persian version. *Journal of Divorce & Remarriage*, 59(2), 141–155. <https://doi.org/10.1080/10502556.2017.1402653>
- Barutçu Yıldırım, F., & Demir, A. (2015). Breakup adjustment in young adulthood. *Journal of Counseling & Development*, 93(1), 38–44. <https://doi.org/10.1002/j.1556-6676.2015.00179.x>
- Baxter, L. A. (1984). Trajectories of relationship disengagement. *Journal of Social and Personal Relationships*, 1(1), 29–48. <https://doi.org/10.1177/0265407584011003>
- Bevino, D. L., & Sharkin, B. S. (2003). Divorce adjustment as a function of finding meaning and gender differences. *Journal of Divorce & Remarriage*, 39(3–4), 81–97. https://doi.org/10.1300/J087v39n03_04
- Biaggio, M. K. (1989). Sex differences in behavioral reactions to provocation of anger. *Psychological Reports*, 64(1), 23–26. <https://doi.org/10.2466/pr0.1989.64.1.23>
- Bialosiewicz, S., Murphy, K., & Berry, T. (2013). *Do our measures measure up? The critical role of measurement invariance, demonstration session*. American Evaluation Association.
- Booth, A., & Amato, P. (1991). Divorce and psychological stress. *Journal of Health and Social Behavior*, 32(4), 396–407. <https://doi.org/10.2307/2137106>
- Boyacioglu, I., Akfirat, S., & Yılmaz, A. E. (2017). Gender differences in emotional experiences across childhood, romantic relationship, and self-defining memories. *Journal of Cognitive Psychology*, 29(2), 137–150. <https://doi.org/10.1080/20445911.2016.1216996>
- Brody, L. R. (1999). *Gender, emotion, and the family*. Harvard University Press.
- Byrne, B. M. (2004). Testing for multigroup invariance using AMOS graphics: A road less traveled. *Structural Equation Modeling: A Multidisciplinary Journal*, 11(2), 272–300. https://doi.org/10.1207/s15328007sem1102_8
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2 ed.). Routledge, Taylor & Francis Group.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5
- Choo, P., Levine, T., & Hatfield, E. (1996). Gender, love schemas, and reactions to romantic break-ups. *Journal of Social and Behavior and Personality*, 11, 143–160. (In R. Crandall (Ed.), *Handbook of gender research* [Special issue]) <https://psycnet.apa.org/record/1998-10075-011>.

- Clench-Aas, J., Nes, R. B., Dalgard, O. S., & Aaro, L. E. (2011). Dimensionality and measurement invariance in the satisfaction with life scale in Norway. *Quality of Life Research*, 20(8), 1307–1317. <https://doi.org/10.1007/s11136-011-9859-x>
- Costello, A. B., & Osborne, J. W. (2015). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1–9. <https://doi.org/10.7275/jyj1-4868>
- Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D. W., & Oishi, S. (2009). New measures of well-being. In E. Diener (Ed.), *Assessing well-being* (pp. pp. 247–266). Springer.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Doherty, W. J., Su, S., & Needle, R. (1989). Marital disruption and psychological well-being: A panel study. *Journal of Family Issues*, 10(1), 72–85. <https://doi.org/10.1177/019251389010001004>
- El-Sheikh, M., Buckhalt, J. A., & Reiter, S. L. (2000). Gender-related effects in emotional responding to resolved and unresolved interpersonal conflict. *Sex Roles*, 43(9/10), 719–735. <https://doi.org/10.1023/A:1007160709731>
- Emery, R. E., & Wyer, M. M. (1987). Child custody mediation and litigation: An experimental evaluation of the experience of parents. *Journal of Consulting and Clinical Psychology*, 55(2), 179–186. <https://doi.org/10.1037/0022-006X.55.2.179>
- Field, T., Diego, M., Pelaez, M., Deeds, O., & Delgado, J. (2009). Breakup distress in university students. *Adolescence*, 44(176), 705–727. <https://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?vid=5&sid=baa25442-1c23-45f8-a9c2-515919d5f2ed%40pdc-v-sessmgr04>
- Fischer, A. H., & Evers, C. (2011). The social costs and benefits of anger as a function of gender and relationship context. *Sex Roles*, 65(1–2), 23–34. <https://doi.org/10.1007/s11199-011-9956-x>
- Fisher, B. F. (1976). *Identifying and meeting needs of formerly-married people through a divorce adjustment seminar* [Unpublished doctoral dissertation]. University of Northern.
- Fisher, B. F. (1978). *Rebuilding: When your relationship ends*. Family Relations Learning Center.
- Fisher, B. F., & Bierhaus, J. (1994). *Facilitators manual for rebuilding when your relationship ends*. Fisher Publishing Company, Inc.
- Forste, R., & Heaton, T. B. (2004). The divorce generation: Well-being, family attitudes, and socioeconomic consequences of marital disruption. *Journal of Divorce & Remarriage*, 41(1–2), 95–114. https://doi.org/10.1300/J087v41n01_06
- Guzmán-González, M., Garrido, L., Calderón, C., Contreras, P., & Rivera, D. (2017). Chilean adaptation and validation of the Fisher Divorce Adjustment Scale–short form. *Journal of Divorce & Remarriage*, 58(2), 96–109. <https://doi.org/10.1080/10502556.2016.1268017>
- Hensley, R. (1996). Relationship termination and the Fisher Divorce Adjustment Scale: A comparative study. *Journal of Divorce & Remarriage*, 25(1–2), 139–150. https://doi.org/10.1300/J087v25n01_09
- Hensley, R. B. (2006). *The role of proximal and distal influences on relationship termination adjustment in college students* [Unpublished doctoral dissertation]. Iowa State University.
- Holmes, T., & Rahe, R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11(2), 213–218. [https://doi.org/10.1016/0022-3999\(67\)90010-4](https://doi.org/10.1016/0022-3999(67)90010-4)

- Hope, S., Power, C., & Rodgers, B. (1999). Does financial hardship account for elevated psychological distress in lone mothers? *Social Science & Medicine*, 49(12), 1637–1649. [https://doi.org/10.1016/S0277-9536\(99\)00251-8](https://doi.org/10.1016/S0277-9536(99)00251-8)
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30(2), 179–185. <https://doi.org/10.1007/BF02289447>
- Hortacsu, N., & Karanci, N. (1987). Premarital breakups in a Turkish sample: Perceived reasons, attributional dimensions and affective reactions. *International Journal of Psychology*, 22(1), 57–74. <https://doi.org/10.1080/00207598708246767>
- IBM Corporation (2017). *IBM SPSS statistics for windows*, Version 25.0. IBM Corp.
- Kağıtçıbaşı, Ç. (1996a). *Family and human development across cultures – A view from the other side*. Lawrence Erlbaum Associates.
- Kağıtçıbaşı, Ç. (1996b). Özerk-ilişkisel benlik: Yeni bir sentez. *Türk Psikoloji Dergisi*, 11(37), 36–43. <https://www.psikolog.org.tr/tr/yayinlar/dergiler/1031828/tpd1300443319960000m000275.pdf>
- Kazan, D., Calear, A. L., & Batterham, P. J. (2017). A systematic review of controlled trials evaluating interventions following non-marital relationship separation. *Journal of Relationships Research*, 8(e6), 1–11. <https://doi.org/10.1017/jrr.2017.7>
- Kitson, G. C., & Holmes, W. M. (1992). *Perspectives on marriage and the family*. Adjustment to marital breakdown. Guilford Press.
- Kitson, G. C., & Morgan, L. A. (1990). The multiple consequences of divorce: A decade review. *Journal of Marriage and the Family*, 52(4), 913–924. <https://doi.org/10.2307/353310>
- Kline, P. (1986). *A handbook of test construction*. Methuen.
- Koenig Kellas, J., & Masunov, V. (2003). What's in the story? The relationship between narrative completeness and adjustment to relationship dissolution. *Journal of Social and Personal Relationships*, 20(3), 285–307. <https://doi.org/10.1177/0265407503020003002>
- Köker, S. (1991). *Normal ve sorunlu ergenlerin yaşam doyumu düzeyinin karşılaştırılması* (Yüksek Lisans tezi). Ankara Üniversitesi Sosyal Bilimler Enstitüsü.
- Kramrei, E., Coit, C., Martin, S., Foggo, W., & Mahoney, A. (2007). Post-divorce adjustment and social relationships. *Journal of Divorce & Remarriage*, 46(3–4), 145–166. https://doi.org/10.1300/J087v46n03_09
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety stress scales*. Psychology Foundation.
- Mastekaasa, A. (1994). The subjective well-being of the previously married: The importance of unmarried cohabitation and time since widowhood or divorce. *Social Forces*, 73(2), 665–692. <https://doi.org/10.2307/2579825>
- Menaghan, E. G., & Lieberman, M. A. (1986). Changes in depression following divorce: A panel study. *Journal of Marriage and the Family*, 48(2), 319–328. <https://doi.org/10.2307/352399>
- Mikolai, J., & Kulu, H. (2018). Divorce, separation, and housing changes: A multiprocess analysis of longitudinal data from England and Wales. *Demography*, 55(1), 83–106. <https://doi.org/10.1007/s13524-017-0640-9>
- Millsap, R. E., & Kwok, O. M. (2004). Evaluating the impact of partial factorial invariance on selection in two populations. *Psychological Methods*, 9(1), 93–115. <https://doi.org/10.1037/1082-989X.9.1.93>
- O'Conner, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments and Computers*, 32(3), 396–402. <https://doi.org/10.3758/BF03200807>
- Organization for Economic Co-operation and Development. (2019). *Family database*. Retrieved February 14, 2020, from http://www.oecd.org/els/family/SF_3_1_Marriage_and_divorce_rates.pdf.

- Pavot, W., Diener, E. D., Colvin, C. R., & Sandvik, E. (1991). Further validation of the satisfaction with life scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, 57(1), 149–161. https://doi.org/10.1207/s15327752jpa5701_17
- Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The gender stereotyping of emotions. *Psychology of Women Quarterly*, 24(1), 81–92. <https://doi.org/10.1111/j.1471-6402.2000.tb01024.x>
- Plummer, L. P., & Koch-Hattem, A. (1986). Family stress and adjustment to divorce. *Family Relations*, 35(4), 523–529. <https://doi.org/10.2307/584513>
- Raykov, T. (1997). Estimation of composite reliability for congeneric measures. *Applied Psychological Measurement*, 21(2), 173–184. <https://doi.org/10.1177/01466216970212006>
- Rohde-Brown, J., & Rudestam, K. E. (2011). The role of forgiveness in divorce adjustment and the impact of affect. *Journal of Divorce & Remarriage*, 52(2), 109–124. <https://doi.org/10.1080/10502556.2011.546233>
- Roos, L. G. (2018). *The influence of emotion regulation on psychological distress and physiological functioning following a romantic breakup* [Unpublished doctoral dissertation]. The University of North Carolina.
- Sbarra, D. A., & Emery, R. E. (2005). The emotional sequelae of nonmarital relationship dissolution: Analysis of change and intraindividual variability over time. *Personal Relationships*, 12(2), 213–232. <https://doi.org/10.1111/j.1350-4126.2005.00112.x>
- Sbarra, D. A., Law, R. W., & Portley, R. M. (2011). Divorce and death: A meta-analysis and research agenda for clinical, social, and health psychology. *Perspectives on Psychological Science*, 6(5), 454–474. <https://doi.org/10.1177/1745691611414724>
- Slanbekova, G. K., Kabakova, M. P., Duisenbekov, D. D., Mun, M. V., & Kudaibergenova, S. K. (2015). Testing of the "Fisher Divorce Adjustment Scale" questionnaire for Russian sample in Kazakhstan. *Asian Social Science*, 11(6), 83–91. <http://dx.doi.org/10.5539/ass.v11n6p83>
- Sprecher, S. (1994). Two sides to the breakup of dating relationships. *Personal Relationships*, 1(3), 199. <https://doi.org/10.1111/j.1475-6811.1994.tb00062.x>
- Steenbergen Richmond, L., & Hendrickson Christensen, D. (2001). Coping strategies and postdivorce health outcomes. *Journal of Divorce & Remarriage*, 34(1–2), 41–59. https://doi.org/10.1300/J087v34n01_03
- Steiner, L. M., Durand, S., Groves, D., & Rozzell, C. (2015). Effect of infidelity, initiator status, and spiritual well-being on men's divorce adjustment. *Journal of Divorce & Remarriage*, 56(2), 95–108. <https://doi.org/10.1080/10502556.2014.996050>
- Sweeper, S., & Halford, K. (2006). Assessing adult adjustment to relationship separation: The psychological adjustment to separation test (PAST). *Journal of Family Psychology*, 20(4), 632–640. <https://doi.org/10.1037/0893-3200.20.4.632>
- Telef, B. B. (2013). Psikolojik iyi oluş ölçeği: Türkçeye uyarlama, geçerlik ve güvenilirlik çalışması. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(3), 374–384. <https://dergi.park.org.tr/en/download/article-file/87222>
- Thomas, C., & Ryan, M. (2008). Women's perception of the divorce experience: A qualitative study. *Journal of Divorce & Remarriage*, 49(3–4), 210–224. <https://doi.org/10.1080/10502550802222394>
- Thomson, E. (2014). Family complexity in Europe. *The ANNALS of the American Academy of Political and Social Science*, 654(1), 245–258. <https://doi.org/10.1177/0002716214531384>
- Turkish Statistical Institute. (2001). Divorce statistics, 1999. *State Institute of Statistics Prime Ministry Republic of Turkey Press*, Ankara.

- Turkish Statistical Institute. (2019). Marriage and divorce statistics, 2018. *Turkish Statistical Institute Newsletter*, 30698. Retrieved December 1, 2020, from <https://data.tuik.gov.tr/Bulten/Index?p=Evlenme-ve-Bosanma-Istatistikleri-2018-30698#>
- United Nations. (2019). *2018 demographic yearbook. Department of economic and social affairs.*
- Verhallen, A. M., Renken, R. J., Marsman, J. B. C., & Ter Horst, G. J. (2019). Romantic relationship breakup: An experimental model to study effects of stress on depression (-like) symptoms. *PloS One*, 14(5), 1–13. <https://doi.org/10.1371/journal.pone.0217320>
- Vukalovich, D., & Caltabiano, N. (2008). The effectiveness of a community group intervention program on adjustment to separation and divorce. *Journal of Divorce & Remarriage*, 48(3–4), 145–168. https://doi.org/10.1300/J087v48n03_09
- Wallerstein, J. S. (1986). Women after divorce: Preliminary report from a ten-year follow-up. *American Journal of Orthopsychiatry*, 56(1), 65–77. <https://doi.org/10.1111/j.1939-0025.1986.tb01543.x>
- Widaman, K. F., Little, T. D., Preacher, K. J., & Sawalani, G. M. (2011). On creating and using short forms of scales in secondary research. In K. H. Trzesniewski, M. B. Donnellan, & R. E. Lucas (Eds.), *Secondary data analysis: An introduction to psychologists* (pp. pp. 39–61). American Psychological Association.
- Yasumitsu, J., & Satoko, A. (2020). Reliability and validity of the Fisher Divorce Adjustment Scale: Japanese and Japanese short versions. *Journal of Divorce & Remarriage*, 61(7), 487–503. <https://doi.org/10.1080/10502556.2020.1768493>
- Yetim, Ü. (1993). Life satisfaction: A study based on the organization of personal projects. *Social Indicators Research*, 29(3), 277–289. <https://doi.org/10.1007/BF01079516>
- Yılmaz, Ö., Boz, H., & Arslan, A. (2017). Depresyon anksiyete stres ölçeğinin (DASS 21) Türkçe kısa formunun geçerlilik-güvenilirlik çalışması. *Finans Ekonomi ve Sosyal Araştırmalar Dergisi (FESA)*, 2(2), 92–104. <https://dergipark.org.tr/en/pub/fesa/issue/30912/323190>
- Yılmaz, A. E., & Fişiloğlu, H. (2006). Psychometric properties of the Fisher Divorce Adjustment Scale in a Turkish divorced sample. *Journal of Divorce & Remarriage*, 4(1–2), 149–169. https://doi.org/10.1300/J087v45n01_08
- Yoo, H., Bartle-Haring, S., Day, R. D., & Gangamma, R. (2014). Couple communication, emotional and sexual intimacy, and relationship satisfaction. *Journal of Sex & Marital Therapy*, 40(4), 275–293. <https://doi.org/10.1080/0092623X.2012.751072>