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Portuguese Adaptation and Validation of the Fisher Divorce Adjustment Scale – Short Form to Assess Adjustment to Breakup During Emerging Adulthood

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ABSTRACT

The current study proposed to validate and to test psychometric properties of the Portuguese version of FDAS-SF in a 579 sample of emerging adults who had experienced a romantic breakup in the past year. Participants completed a survey that included sociodemographic information, Chilean version of FDAS-SF translated into Portuguese, and measures of depression, attachment, and differentiation of self. The results suggested a four-factor model: disentanglement from ex-partner, feelings of self-worth, anger, and social self-worth. The findings of reliability and validity ensured that Portuguese version of FDAS-SF can be used to evaluate adjustment to breakup both in research and clinical settings.

KEYWORDS

FDAS-SF; validation; emerging adulthood; romantic breakup; breakup adjustment

Introduction

The development of intimacy is one of the major normative tasks of emerging adulthood (Erikson, 1982). Forming and maintaining romantic relationships, as well as dealing with and learning from breakups, reveal one of the biggest challenges of human life (Lewandowski & Bizzoco, 2007; Perilloux & Buss, 2008; Snyder et al., 2006; Tashiro & Frazier, 2003). According to Arnett (2000), emerging adults experience multiple explorations, decision-making, and profound changes, marked mainly by many intimate relationships, which turn breakups into an inevitable experience and a major contribution to a stable foundation for core belief systems relating to the self and the world (Erikson, 1982). A breakup can be one of the most distressing events of individual life (Priest et al., 2009) and is linked to several aspects of psychosocial functioning (Sbarra et al., 2011). The dissolution of romantic relationships has been empirically associated with a multitude of negative physical and emotional responses, such as feelings of disappointment and insecurity (Davis et al., 2003), as well as loss of self-confidence (Ross, 1999, cited in

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Rajabi & Nikpoor, 2018). Breakups can also negatively affect the level of social integration, reduce social networks (Roos, 2018, cited in Yilmaz et al., 2021), and cause academic and professional difficulties (Ross, 1999 cited in Rajabi & Nikpoor, 2018). Literature suggests that individuals who have experienced a romantic separation exhibit lower levels of psychological well-being (Forste & Heaton, 2004; Verhallen et al., 2019) and higher levels of depression and anxiety, compared to those who are in a relationship or single (Sbarra & Emery, 2005). Breakups are considered one of the leading causes of suicide among young adults (Fordwood, 2007; Monroe et al., 1999).

In Portugal, the transition to adulthood seems to occur inside the family (Scabini et al., 2006; Soenens et al., 2007). Given the current precarious environment and the absence of social and governmental measures to promote emerging adults autonomy, Portugal has become the European Union (EU) country where young adults most tend to delay leaving the parental home. In 2021, the mean age of leaving the parental home for Portuguese young adult was 33.6 years old, more 14.6 years than Sweden that it is the EU country where young adults tend to leave their parental home earlier (Eurostat, 2022). Establishing a cultural connection seems feasible, as these young adults typically leave their parental home only when they get married and occasionally return after the end of a relationship (e.g., Aeby & Heath, 2020). As a collectivist society, the potential social pressure and expectations can make breakups process more complex because might be perceived as a deviation of the norms, leading to feelings of shame or stigma surrounding the end of a relationship (e.g., Hartman, 2021; Reimer & Estrada, 2020). The balance between personal desires and collective values influence individuals sense of identity, autonomy, and sense of capacity to establish romantic relationships (Arnett, 2000), which can impact both relationships dynamics and breakups process. Research has shown that relationship patterns and coping mechanisms can vary significantly among different cultures, which may impact the way individuals adjust to breakup (e.g., Chung et al., 2003; Wrape et al., 2016). For example, a recent study conducted by Rodrigues et al. (2019) showed that Portuguese individuals are less likely to mutually express their feelings, more prone to mutually blame each other, and less inclined to engage in mutual negotiation during relationship conflicts compared to Croatian individuals. The authors also showed a strongest negative association between commitment and the use of destructive strategies for Portugueses compared to Croatians. The ecological nature of interpersonal relationships imply that culture are crucial to understand young adults romantic breakups, emphasizing the importance of studying across multiple cultures. Having a validated measure of post-breakup adjustment specific to the Portuguese population will enable researchers to identify similarities and differences in breakup experiences, relationship patterns, and coping mechanisms among Portuguese individuals compared to other populations, contributing to a more

comprehensive understanding of breakup adjustment worldwide. On the other hand, understanding breakup adjustment in the Portuguese context has practical implications for intervention and support programs for young adults going through a breakup. Little is known about non-marital separation during emerging adulthood and mental health professionals can tailor their support systems to better meet the needs of this particular community, as well as to promote healthy development of romantic relationships.

Currently, there are few instruments to measure breakup effects during emerging adulthood. Many of them were originally developed in the divorce context for adult populations (e.g., Fisher Divorce Adjustment Scale, FDAS; Fisher, 1976, 1978). Divorce, characterized by legally recognized and enduring commitments, is a more widely acknowledged process within society. It often provides individuals with greater access to legal assistance, robust support systems, and resources that are not typically available to young adults experiencing breakups. Additionally, the life stage at which these events occur plays a crucial role. Young adulthood is marked by substantial personal and relational transitions, where individuals are still exploring their identities and may undergo more frequent changes in their romantic relationships. These transitions can significantly influence their perceptions and coping mechanisms during breakups, distinguishing them from individuals who have experienced divorce and are often in more stable life stages (Mark & Harvey, 2006). Although romantic dissolution may assume different forms, such as divorce and non-marital separation with or without cohabitation (Yilmaz et al., 2006), they all have the potential to cause significant social and emotional changes (Guzmán-González et al., 2017). For this reason, a multidimensional approach must be used, applying a set of general and indirect markers of positive or negative adjustment to changes that occur in different aspects of life after a breakup, including levels of anxiety and depression, subjective well-being, life satisfaction, and grief symptoms (Guzmán-González et al., 2017). In order to elevate and refine the assessment of post-divorce to a general post-separation adjustment, FDAS has been adapted and validated for a different population.

This instrument assumes some advantages, such as psychometric properties and a multidimensional approach, since it includes a wide range of psychological aspects involved in the post-breakup process (Guzmán-González et al., 2017). In contrast, one of the drawbacks is the length of this measure, which can lead to skewed results due to the time-consuming application and fatigue and stress caused by extensive protocols. In order to overcome this disadvantage, some researchers developed a shorter version of the FDAS (FDAS-SF). Guzmán-González et al. (2017) developed and validated a short version for the Chilean population, using 22 of the original 100 items. The convergent validity analyses revealed that FDAS-SF and each dimension were significantly correlated with measures of depression, anxiety, stress, and life satisfaction

(Guzmán-González et al., 2017). This instrument has been widely associated with indicators of psychological health. For example, the Persian version of the original scale showed that adjustment to divorce was positively correlated with life satisfaction and general health conditions, demonstrating an association between lower levels of FDAS and somatic symptoms, anxiety and insomnia, social dysfunctions, and severe depression (Asanjarani et al., 2018). In addition, Bevvino and Sharkin (2003) observed that disentanglement from ex-partner, as one dimension of FDAS, was positively correlated with psychological well-being in a sample who was going through a divorce process.

Current study

The purpose of the current study was to translate, adapt, and validate a Portuguese version of the Fisher Divorce Adjustment Scale – Short Form (adapted from Guzmán-González et al., 2017) using a sample of Portuguese emerging adults who had experienced a romantic breakup. More specifically, this study sought to evaluate the psychometric properties of FDAS-SF by examining the most appropriate factor structure in the Portuguese population, the reliability of the latent construct and each dimension, convergent, discriminant, and concurrent validity, as well as measurement invariance across gender, education level, and initiator status. Based on Guzmán-González et al. (2017), the following assumptions were examined: (1) The items of the Portuguese version of FDAS-SF would be clear and understandable; (2) Consistent with the original version, the factor analysis would indicate a five-factor solution; (3) Internal consistency would be excellent; (4) To ensure convergent and discriminant validity, FDAS-SF dimensions should be able to explain the latent construct, but in different ways; (5) To ensure concurrent validity, FDAS-SF would be negatively associated with adult attachment insecurity and depressive symptomatology, and positively associated with differentiation of self; (6) FDAS-SF would be invariant across gender (women and men), educational level (lower and higher education), and initiator status (initiators, non-initiators, mutual decision-makers).

Method

Procedure

This study received approval from the Ethics Committee at the Faculty of Psychology and Educational Sciences of the University of Porto (Ref. No. 2021/10-09b). Before administration, the original FDAS-SF entered into an adaptation process consisting of four phases. First, all items were translated into European Portuguese by four bilingual speakers, safeguarding the lexical, grammatical, and conceptual equivalence to the original scale. Second, three of

the four bilingual speakers discussed all the translated versions to identify any relevant language differences. Third, a final version was reviewed by the fourth speaker who was an expert in psychology research. Lastly, a pilot test was administered to a sample of 45 individuals from the target population and five clinical psychologists to evaluate the content validity of the instrument (see Content validity in the section Results). An application form was developed for participants to provide quantitative ratings on the clarity of each item, using a scale ranging from 1 to 5, as well as qualitative insights through open-ended questions, addressing potential ambiguities and biases in the instrument.

Different procedures were used to recruit the sample, including study advertisement through direct social media, as well as academic media social pages and youth organizations. Participants were invited to complete an online self-reported survey that was conducted on the LimeSurvey software. Eligibility criteria for participation were: (1) age between 18 and 35 years; (2) experience of a significant romantic breakup in the past year; (3) no children; (4) not living with a new partner. All participants provided informed consent online and received assurance of confidentiality and voluntary participation. Data collection was conducted between December 2021 and August 2022.

Participants

A total sample of 579 Portuguese emerging adults aged 18 to 35 years (M = 22.80, SD = 3.78) who had experienced a romantic breakup in the past year was recruited. The total sample comprised 435 female participants (75.9%) and 299 participants with higher education that corresponds to a college degree or more (51.6%). Approximately 67% of the participants were students, 16.1% were employed, 15.4% were student-workers, and 1.7% were unemployed. The majority of the participants ended an exclusive relationship (93.2%) without cohabitation (85.5%). The average period since the breakup was six months (M = 5.90; SD = 4.16) and the duration of the relationship ranged from one month to 12 years (M = 2.47; SD = 26.83). Nearly 13% of the participants are currently in a new relationship. The demographic characteristics of the participants are detailed in Table 1.

Measures

Fisher divorce adjustment scale – short form (FDAS-SF)

The FDAS-SF (Guzmán-González et al., 2017, originally developed by; Fisher, 1976, 1978) is a 22-item scale developed to measure the adjustment to a romantic separation in five dimensions: Factor 1, Feelings of Self-worth, is composed of four items (items 10, 13, 18, 19), while Factor 2, Disentanglement from Ex-Partner, is composed of six items (items 1, 7, 9, 12, 15, 17). Factor 3,

Table 1. Participants demographics (n = 579).

Variables	
Age, *M* years ± *SD* (min–max)	22.87 ± 3.81 (17–36)
Gender, *n* (%)	
Female	435 (75.1%)
Male	138 (23.8%)
Educational level, *n* (%)	
Lower education (≤ 12 years)	280 (48.7%)
Higher education (≥ Bachelor's degree)	299 (51.6%)
Professional situation, *n* (%)	
Employed	93 (16.1%)
Unemployed	10 (1.7%)
Student	386 (66.8%)
Student-worker	89 (15.4%)
Financial situation, *n* (%)	
Lower (Spends less money than receives)	391 (67.5%)
Medium (Spends all the money that receives)	144 (24.9%)
Higher (Spends more money than receives)	44 (7.6%)
Relationship status, *n* (%)	
Single	420 (72.5%)
Single with an undefined partner	84 (14.5%)
Dating	75 (13.0%)
Significant breakups lifetime, *M* years ± *SD* (min–max)	1.94 ± 1.26 (1–16)
Ex-relationship duration, *M* years ± *SD* (min–max)	2.47 ± 2.22 (.08–12.17)
Ex-relationship exclusivity (1 nothing − 5 totally), *M* years ± *SD*	4.72 ± .88
Cohabiting with ex-partner, *n* (%)	
Yes	84 (14.5%)
No	495 (85.5%)
Cohabiting Duration, *M* years ± *SD* (min–max)	2.24 ± 2.16 (0–11.92)
Contact with ex-partner, *n* (%)	
Never	200 (34.5%)
Rarely	153 (26.4%)
Sometimes	120 (20.7%)
Several times	65 (11.2%)
Always	41 (7.1%)
The initiator status, *n* (%)	
Initiator	209 (36.1%)
Non-initiator	265 (45.8%)
Both	105 (18.1%)
Time since separation, *M* months ± *SD* (min–max)	5.87 ± 4.16 (0–19)

Grief, is composed of four items (items 5, 8, 20, 22), as well as Factor 4, named Anger (items 2, 3, 4, 11) and Factor 5, named Social Trust (items 6, 14, 16, 21). The original version consists of 100 items and evaluates adjustment to romantic separation in six dimensions: Self-worth (25 items), Disentanglement from the Ex-Partner (22 items), Anger (12 items), Grief (24 items), Social Trust (8 items), and Social Self-worth (9 items). The Self-worth subscale includes aspects of self-confidence and feelings about oneself (e.g., "I feel able to face and deal with my problems."). The Disentanglement from the Ex-Partner subscale assesses the emotional investment and feelings of love for the ex-partner (e.g. 'I am constantly thinking about my ex-partner.'). The Anger subscale involves anger directed toward the ex-partner and the end of the

romantic relationship, as well as desire to get even or to assign blame (e.g. 'I hope my ex-partner is suffering as much or more than I am.'). The Grief subscale involves relationship loss and feelings out of control, demonstrated through emotional expression (crying, depression, loneliness, fear, insecurity) and physical changes (exhaustion, changes in eating and sleeping habits). The Social Trust subscale is related to how comfortable the person feels with emotional closeness and with expressing sexuality in a new relationship (e.g. 'I am afraid to get emotionally involved with another person.'). The Social Self-Worth subscale assesses the willingness to share with others that the relationship was ended, as well as to engage in new social situations and to reconnect with former friends (e.g. " I feel comfortable telling people that I am separated from my ex-partner.") (Fisher, 1978). Participants are asked to read each statement and state how often it applies to their current feelings and attitudes concerning their romantic breakup. Items are scored on a five-point scale ranging from 1 ("almost always") to 5 ("almost never"), with higher scores indicating better separation adjustment. The original scale reported high internal consistency scores (above .70).

Experiences in close relationships – short form (ECR-S)

The ECR-S (Paiva & Figueiredo, 2010; adapted from; Wei et al., 2007; originally developed by; Brennan et al., 1998) is a 12-item scale designed to assess anxious and avoidant adult attachment in close relationships. Participants are asked to indicate how they feel in romantic relationships in general (e.g. "I need a lot of reassurance that I am loved by my partner."). Items are scored on a seven-point scale ranging from 1 (strongly disagree) to 5 (strongly agree), with lower scores indicating a secure attachment. The Portuguese original scale reported high internal consistency, with a Cronbach's alpha of .86 for the anxiety subscale and .88 for the avoidance subscale. The original version (Wei et al., 2007) also reported high internal consistency, with Cronbach's alphas of .78 and .84, respectively. The current sample reported Cronbach's alphas of .72 for anxiety and .75 for avoidance.

Patient health questionnaire (PHQ-9)

The PHQ-9 (Monteiro et al., 2013; originally developed by; Kroenke et al., 2001) is a 9-item scale developed to assess depressive symptomatology. Participants are asked to score each item according to their feelings (e.g. "Feeling bad about yourself or that you are a failure or have let yourself or your family down."). Items are scored on a four-point scale ranging from 0 ("never") to 3 ("almost every day"), with higher scores indicating a higher frequency of depressive symptoms. The Portuguese version obtained a Cronbach's alpha of .86 and the original version obtained

values between .86 and .89. The current sample obtained a Cronbach's alpha of .89.

Differentiation of self inventory – short form (DSI-SF)

The DSI-SF (Drake et al., 2015; originally developed by; Skowron & Friedlander, 1998) is a 20-item scale used to evaluate the differentiation of self in four subscales: Emotional Cutoff (EC), Emotional Reactivity (ER), Fusion with Others (FO), and I-Position (IP). Participants are asked to rate the level they identified in each statement (e.g. "I'm overly sensitive to criticism.," "I'm fairly self-accepting."). Items are scored on a six-point scale ranging from 1 ("not at all true of me") to 6 ("very true of me"), with higher scores indicating higher levels of differentiation of self. In the short version, Cronbach's alpha internal consistency coefficients were above .70, and in the current sample, the range of Cronbach's alphas varied between .69 and .87.

Data analysis

Data analysis was performed using the SPSS (version 25) and AMOS (version 26) software. Missing data were verified using Little's Missing Completely at Random (MCAR) Test, assuming that missingness data were completely random ($p > .005$). Multivariate outliers were identified by calculating the Mahalanobis distance. Nine outliers were excluded ($p < .001$). Based on Kline's (2015) criteria, normality distribution was confirmed by values of skewness smaller than 3 and kurtosis smaller than 8 to 10.

Evidence of structural validity were examined using factorial analysis. In order to determine the adequate factor solution, an Exploratory Factor Analysis (EFA) using a Maximum Likelihood Estimation method with Promax Rotation was performed. The Kaiser criterion (eigenvalues greater than 1) was used to determine the number of factors. Furthermore, the correlation matrix, sampling adequacy measures, anti-image matrices, communalities, scree plot, and rotated component matrices, as well as a parallel analysis based on the Monte Carlo simulation, using O'Connor (2000) SPSS syntax, were examined to confirm the final solution. Items were eliminated with communality values smaller than .40, greater than 1 or negative, as well as with differences between factors saturation equal to or smaller than .10 (Hair et al., 2017). In order to validate the latent structure, a Confirmatory Factor Analysis (CFA) was performed using several fit indices: χ^2/df, Comparative Fit Index (CFI), Standardized Root Mean Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA). According to Kline (2015), the model fit is considered acceptable if: $\chi^2/df < 5$; CFI $\geq .90$; and RMSEA and SRMR $< .10$.

Evidence of internal consistency of the latent construct and each dimension were examined using McDonald's omega (McDonald, 1999). The

omega reliability coefficient evaluates the extent to which the observed variance in a set of items accurately reflects the underlying latent construct. Unlike Cronbach's alpha, which assumes that all items contribute equally to the construct, omega considers the varying factor loadings of items. In essence, omega provides a more nuanced understanding of how well the items collectively capture the construct's essence, accounting for differences in their contributions. The resulting value of omega ranges between 0 and 1, considering acceptable values equal to or greater than .70 (Hayes & Coutts, 2020). Convergent validity was evaluated by calculating the average variance extracted (AVE > .50), while discriminant validity was evaluated by the maximum shared variance (MSV) that compares the intercorrelation of the subscales to the square root of the AVE of each subscale (Fornell & Larker, 1981). Concerning concurrent validity, Pearson's correlation coefficients were assessed between FDAS-SF and its dimensions and the ECR-S, PHQ-9 and DSI-SF measures, considering significant correlations as an indicator of validity ($p < .005$). Finally, measurement invariance across gender, education level, and initiator status were evaluated using multigroup analysis. Measurement invariance evaluates whether a measurement tool assesses the same concept when applied to different groups or populations. Four measurement invariance models were conducted. First, configural invariance was tested to determine if the factor structure was similar across groups. Metric invariance was tested to determine if the factor loadings are uniform between groups. Scalar invariance was tested to determine if both factor loadings and item intercepts remain invariant between groups. Finally, strict or residual invariance was tested to determine if factor loadings, intercepts, and measurement errors are uniform between groups. Differences between CFI values (ΔCFI) equal to or smaller than .01 and RMSEA (ΔRMSEA) equal to or smaller than .05 were used to accept measurement invariance (e.g., Cheung & Rensvold, 2002). Differences between two groups were assessed using t-tests for independent samples, while differences among three groups were assessed using univariate analysis of variance (one-way ANOVA).

Results

Content validity

The majority of the participants of the pilot test pointed out the items as unambiguous (92%). However, some participants suggested little reformulations in a few items. For example, item 8 was reformulated because the content of the construct was seen as subjective (44%). Finally, two professionals suggested that "romantic feelings" should be better specified to enhance clarity, but no modifications were made because romantic feelings

can vary between individuals. Based on these results, the final version of the instrument was concluded and confirmed to be used in the Portuguese context.

Structural validity

An Exploratory Factor Analysis (EFA) using Maximum Likelihood Estimation and a Promax rotation method with Kaiser normalization was conducted. Results of the initial EFA with 22 items identified four factors with eigenvalues greater than one. However, two items (items 5 and 19 in the original Chilean version) showed low communality. Based on standard guidelines (Hair et al., 2017), these items were removed and a factor structure of 20 items was analyzed. The scree plot appeared to support a retention of four to five factors. For that reason, a parallel analysis was performed and, in this final EFA, four factors were confirmed (eigenvalue cutoff 0.61), explaining 64% of the total variance. As the distribution of the items was similar to the FDAS-SF original version, the labels of the factors were maintained in the Portuguese version (see Table 2). Appointed as Disentanglement from Ex-partner, Factor 1 accounted for 40% of the variance (rotation sum of 7.09). Factor 2, nominated as Feeling of Self-worth, and Factor 3, as Social Trust, explained 8% of the variance (rotation sums of 5.53 and 5.06, respectively). Factor 4, appointed as Anger accounted for 7% (rotation sum of 4.15). All the factor loadings were in the very good to excellent range (ranging from 0.43 to 1.03; see Table 2). Bartlett's test of sphericity [$\chi^2(190) = 7727.73$, $p < .001$] and the Kaiser-Meyer-Olkin criteria (KMO = .92) suggested the adequacy of the factor analysis.

Because the EFA indicated that a four-factor structure was the best solution, a CFA was conducted with the 20 selected items. The assessment of construct validity was evaluated in the AMOS software. First, the factor loading of the indicators was examined. Based on Kline (2015), all the items meet the criteria and remained in the Portuguese version of the FDAS-SF. Second, the fit indices used for this study were examined. As the initial model showed a non-adequate fit [$\chi^2(164) = 978.28$, $p < .01$, $\chi^2/df = 5.97$, CFI = .89, RMSEA = .09, SRMR = .08], it required seven correlations between error terms in order to reach a good fit value [$\chi^2(157) = 648.14$, $p < .01$, $\chi^2/df = 4.13$, CFI = .94, RMSEA = .07, SRMR = .08]. The factor loadings of this model with correlated error terms are present in Figure 1.

Table 2. Standardized factor loadings of Portuguese items of FDAS-SF.

Items *(Portuguese items)*	F1	F2	F3	F4
Disentanglement from Ex-partner				
7. I believe if we try, my love-partner and I can save our love-relationship (Acredito que, se ambos tentássemos, poderíamos salvar a nossa relação)	**.822**			
8. My abdomen feels empty and hollow (Sinto um vazio dentro de mim)	**.564**	.320		
9. I have feelings of romantic love for my former love-partner (Ainda tenho sentimentos românticos pelo/a meu/minha ex-parceiro/a)	**1.027**			
12. I become upset when I think about my love-partner having a love-relationship with someone else (Fico perturbada quando penso que o/a meu/minha ex-parceiro/a possa estar envolvido/a com outra pessoa)	**.683**			.211
15. I feel emotionally committed to my former love-partner (Sinto que ainda estou emocionalmente ligado/a ao/à meu/minha ex-parceiro/a)	**.919**			
17. I can't believe our love-relationship is ending (Não consigo acreditar que a nossa relação chegou ao fim)	**.729**			
Feeling of self-worth				
10. I can make the decisions I need to because I know and trust my feelings (Sinto-me capaz de tomar s decisões que preciso porque sei que posso confiar nos meus sentimentos)		**.781**		
13. I feel capable of facing and dealing with my problems (Sinto-me capaz de enfrentar e lidar com os meus problemas)		**.873**		
18. I feel I have a normal amount of self-confidence (Sinto-me autoconfiante)		**.796**		
20. I feel emotionally insecure. (Sinto-me emocionalmente inseguro/a.)		**.638**		
22. I feel like I am going crazy. (Sinto que estou a enlouquecer.)	.205	**.428**		.227
Social Trust				
6. I feel uncomfortable even thinking about dating (Sinto-me desconfortável só de pensar em novas relações ou encontros românticos)	.205		**.582**	
14. I am afraid of becoming sexually involved with another person (Tenho receio de me envolver sexualmente com outra pessoa)			**.992**	
16. I am afraid of becoming emotionally close to another love-partner (Tenho receio de me envolver emocionalmente com outra pessoa)		.151	**.579**	
21. I feel uncomfortable even thinking about having a sexual relationship (Sinto-me desconfortável só de pensar em ter um novo relacionamento sexual)			**.961**	
Anger				
2. I feel like unloading my feelings of anger and hurt upon my former love-partner (Tenho vontade de descarregar os meus sentimentos de raiva e dor no meu/minha ex-parceiro/a)				**.759**
3. I hope my former love-partner is feeling as much or more emotional pain than I am (Espero que o/a meu/minha ex-parceiro/a esteja a sofrer tanto ou maus do que eu)				**.797**
4. I easily become angry at my former love-partner (Fico facilmente zangado/a com o/a meu/minha ex-parceiro/a)				**.754**
11. I would like to get even with my former love-partner for hurting me (Tenho vontade de me vingar do/a meu/minha ex-parceiro/a)				**.809**

Reliability, and convergent and discriminant validity

Concerning internal consistency, McDonald's omega coefficients were excellent for each dimension ($\omega > .83$), as well as for latent construct ($\omega = .92$). The values of the average variance extracted (AVE) and maximum shared variance (MSV) ensured the convergent and discriminant validity (see Table 3).

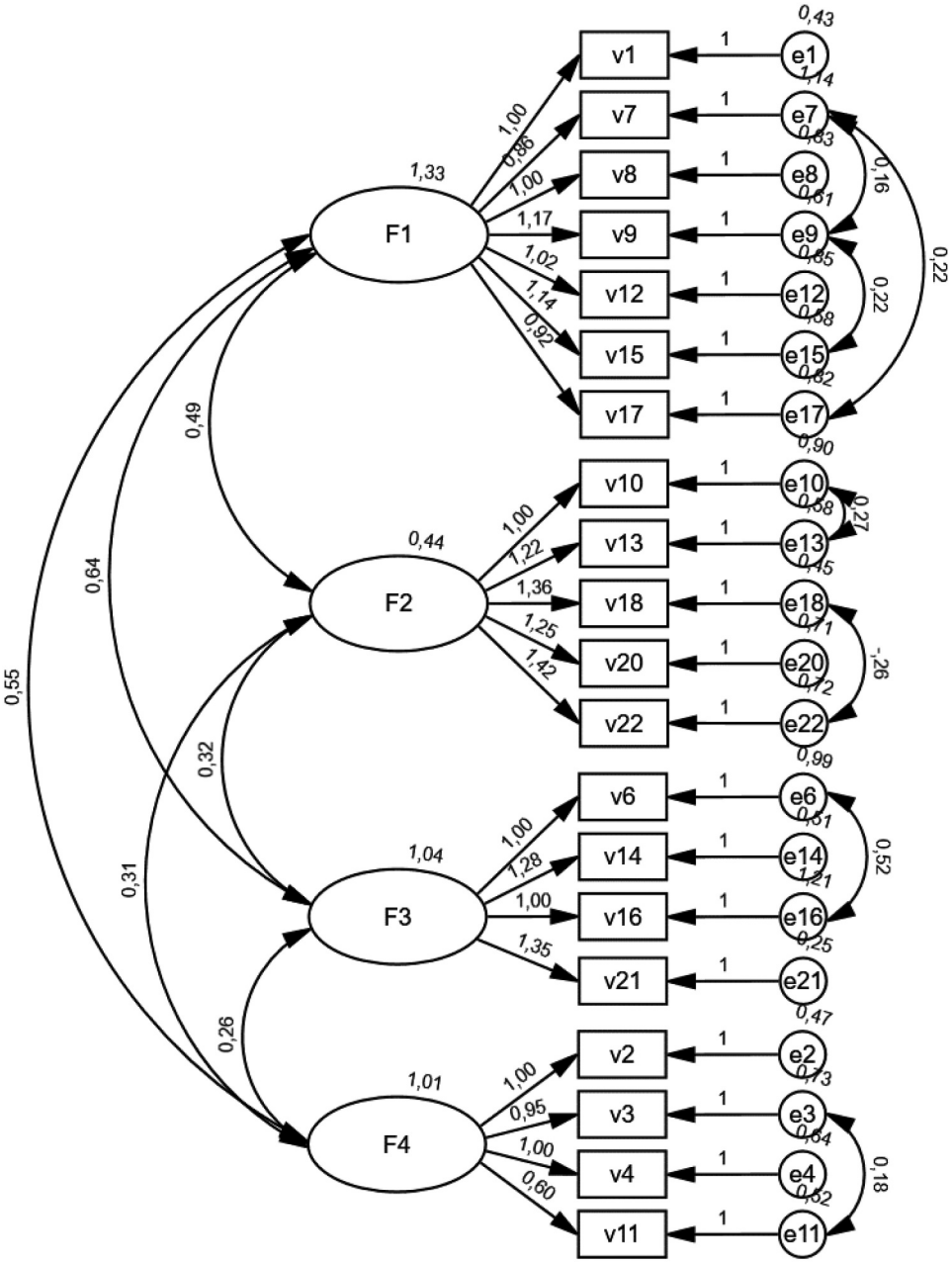

Figure 1. CFA with standardized regression weights and measurement error terms for the Portuguese version of FDAS-SF. Note. F1 – disentanglement from ex-partner; F2 – feeling of self-worth; F3 – social trust; F4 – anger.

Concurrent validity

Concurrent validity was evaluated by using Pearson correlations between adjustment to breakup and scales of attachment, depression, and differentiation of self. As presented in Table 4, the results showed a negative

Table 3. Reliability, convergent and discriminant validity of FDAS-SF.

	Reliability (ω)	AVE	F1	F2	F3	F4
F1 – Disentanglement from ex-partner	.93	.65	**.80**			
F2 – Feeling of self-worth	.83	.51	.64	**.84**		
F3 – Social Trust	.89	.66	.55	.47	**.73**	
F4 – Anger	.85	.57	.45	.47	.25	**.75**

Note. AVE – average variance extracted; Reliability (ω) – McDonald's Omega; Maximum shared variance (MSV) is presented on the diagonal in bold, while correlations between factors are presented on the lower diagonal.

Table 4. Concurrent validity using correlations between FDAS-SF and scales of attachment (ECR-S), depression (PHQ-9), and differentiation of self (DSI-SF).

	6	7	8	9	10	11	12	13	14
1. FDAS-SF	−.404**	−455**	−.139**	−548**	.429**	−433**	.288**	.056	.399**
2. FDAS_F1	−.232**	−.334**	.000	−.402**	.217**	.268**	.108*	−.087	.253**
3. FDAS_F2	−.453**	−.471**	−.198**	−.583**	.577**	.604**	.435**	.139**	.440**
4. FDAS_F3	−.307**	−.293**	−.164**	−.425**	.306**	.262**	.180**	.120**	.302**
5. FDAS_F4	−.361**	−.360**	−.175**	−.357**	.355**	.287**	.296**	.120**	.306**
6. ECR-S	-	.780**	.725**	.461**	−.561**	−.360**	−.421**	−.481**	−.438**
7. ECR_Anx		-	.133**	.460**	−540**	−.406**	−.444**	−.112*	−.542**
8. ECR_Avo			-	.237**	−.298**	−.126**	−.182**	−.643**	−.99*
9. PHQ-9				-	−.509**	−.468**	−.352**	−.225**	−.419**
10. DSI-SF					-	.800**	.821**	.394**	.849**
11. DSI_IP						-	.533**	.103*	.563**
12. DSI_FO							-	.193**	.631**
13. DSI_EC								-	.141**
14. DSI_ER									-

Note. i. FDAS-SF – Adjustment to breakup; FDAS_F1 – Disentanglement from ex-partner; FDAS_F2 – Feeling of self-worth; FDAS_F3 – Social Trust; FDAS_F4 – Anger; ECR-S – Insecure attachment; ECR_Anx – Anxious attachment; ECR_Avo – Avoidant attachment; PHQ-9 – Depressive symptoms; DSI-SF – Differentiation of self; DSI_IP – I-Position; DSI_FO – Fusion with others; DSI_EC – Emotional Cutoff; DSI_ER – Emotional Reactivity. *ii.* *$p<.05$; **$p<.001$.

moderate correlation between the latent construct of this study and the scales of attachment and depression, and a positive moderate correlation between adjustment to breakup and differentiation of self. Indicators of adjustment to breakup were also negatively correlated to depression and attachment, with exception of disentanglement from ex-partner and avoidance attachment ($r = 0$, $p = .996$). Differentiation of self and its dimensions were positively correlated to the indicators of adjustment to breakup, with exception of emotional cutoff (EC) and disentanglement from ex-partner ($r = -.09$, $p = .05$), as well as EC and total scale of the latent construct ($r = .06$, $p = .207$).

Measurement invariance

Testing measurement invariance illustrates the psychometric equality of the latent construct across different groups. In this study, measurement invariance was evaluated among participants' gender, education level, and initiator status, according to the criteria proposed by Cheung and Lau (2012). Concerning measurement invariance across gender, the results of the multigroup analyses in the AMOS software demonstrated a good model fit for

Table 5. Model fit of the invariance on FDAS-SF Portuguese version across gender, education, and initiator status.

	Model	CFI	RMSEA	ΔCFI	ΔRMSEA
Gender	Configural Invariance	0,930	0,055	-	-
	Metric Invariance	0,928	0,054	0,002	0,001
	Scalar Invariance	0,928	0,053	0,002	0,002
	Residual Invariance	0,921	0,054	0,009	0,001
Education	Configural Invariance	0,933	0,053	-	-
	Metric Invariance	0,933	0,052	0	0,001
	Scalar Invariance	0,932	0,051	0,001	0,002
	Residual Invariance	0,930	0,050	0,003	0,003
Initiator status	Configural Invariance	0,936	0,042	-	-
	Metric Invariance	0,934	0,041	0,002	0,001
	Scalar Invariance	0,931	0,041	0,005	0,001
	Residual Invariance	0,925	0,042	0,011	0

Note. i. The measurement invariance across gender is the average of the invariance analysis between female (n = 435) and male (n = 138) groups; The measurement invariance across education level is the average of the invariance analysis between lower (n = 280) and higher education (n = 299) groups; The measurement invariance across education level is the average of the invariance analysis between initiators (n = 209), non-initiators (n = 265), and mutual decision (n = 105) groups. *ii.* CFI – Comparative fit index; RMSEA – Root mean square error of approximation; Δ – change from the previous model.

both female and male groups [$\chi^2(314) = 847.08$, $p < .01$, $\chi^2/df = 2.70$, CFI = .93, RMSEA = .06]. The results of the ΔCFI and ΔRMSEA test showed non-significant differences in the three assessment models in comparison with the configural model, suggesting structure invariance for both groups (see Table 5).

The results of the comparison tests revealed significant differences between male and female groups. Overall, male participants scored slightly higher levels of adjustment to breakup than female participants [$t(571) = -2.14$, $p = .033$, *Cohen's d* = .21]. More particularly, men reported greater adjustment than women on the social trust ($p < .001$) and anger ($p = .011$) subscales. No other significant differences were found between women and men ($p > .346$), as depicted in Table 6.

In order to measure the invariance concerning education level, the total sample was divided into two groups: (1) lower education that includes primary and secondary education (≤ 12 years) and (2) higher education that includes bachelor, master, and doctoral levels. The multigroup results showed a good model fit for both groups [$\chi^2(314) = 831.05$, $p < .01$, $\chi^2/df = 2.65$, CFI = .93, RMSEA = .05] and did not reveal any significant problems of invariance across education level (see Table 5). These results guaranteed that the instrument evaluates the same construct in both groups and it ensures that comparisons between education groups can be performed. In this study, no significant differences were found between lower and higher education on the FDAS-SF and its dimensions ($p > .101$; see Table 6).

Concerning measurement invariance across initiator status, the results of the multigroup analyses indicated a good model fit for the three groups: initiators, non-initiators, and those who mutually decided to end the relationship [$\chi^2(405) = 815.14$, $p < .01$, $\chi^2/df = 2.01$, CFI = .94, RMSEA = .04]. The

Table 6. Independent group t-test results comparing gender and education level groups.

	Gender								Education							
	Female (n = 435)		Male (n = 138)						Lower (n = 280)		Higher (n = 299)					
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	*d*	*M*	*SD*	*M*	*SD*	*t (df)*	*df*	*p*	*d*
FDAS-SF	68.33	17.29	71.94	17.19	−2.14	571	**.033**	.21	70.17	16.59	68.41	17.96	1.23	576.90	.223	-
FDAS_F1	23.02	8.75	23.29	8.06	−.32	571	.751	-	23.74	8.34	22.57	8.78	1.64	576.88	.101	-
FDAS_F2	16.97	4.41	17.40	4.96	−.89	210.09	.376	-	17.22	4.44	16.98	4.64	.63	577	.530	-
FDAS_F3	12.16	5.16	14.11	4.64	−4.20	253.24	**<.001**	.58	12.71	5.06	12.60	5.15	.25	577	.805	-
FDAS_F4	16.16	3.82	17.14	4.19	−2.54	571	**.011**	.44	16.27	3.84	16.27	4.01	.74	577	.457	-

Note. i. FDAS-SF – Adjustment to breakup; FDAS_F1 – Disentanglement from ex-partner; FDAS_F2 – Feeling of self-worth; FDAS_F3 – Social Trust; F4 – Anger. *ii.* Significant values are depicted in bold ($p < .05$). *ii. d* – Effect size using Cohen's *d*.

Table 7. One-way ANOVA results comparing initiation status groups.

	Initiator status										
	Initiators[a] (*n* = 209)		Non-initiators[b] (*n* = 265)		Mutual[c] (*n* = 105)						
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*dfb, dfw*	*p*	η^2_p	*Post-hoc*
FDAS-SF	76.46	15.45	63.18	16.95	70.29	16.16	39.15	2, 576	**<.001**	.12	a>c>b*
FDAS_F1	27.0	7.40	20.19	8.65	22.85	7.64	42.02	2, 576	**<.001**	.13	a>c>b*
FDAS_F2	18.36	4.35	16.02	4.32	17.29	4.84	16.37	2, 576	**<.001**	.05	a>b*, b<c*
FDAS_F3	13.62	4.96	11.61	5.16	13.36	4.80	10.59	2, 576	**<.001**	.04	a>b*, b<c*
FDAS_F4	17.49	3.18	15.36	4.31	16.79	3.62	19.02	2, 576	**<.001**	.06	a>b*, b<c*

Note. i. FDAS-SF – Adjustment to breakup; FDAS_F1 – Disentanglement from ex-partner; FDAS_F2 – Feeling of self-worth; FDAS_F3 – Social Trust; F4 – Anger. *ii*. Column headings letters (a, b, c) were used to indicate significant differences in the post-hoc column. *iii*. Significant values are depicted in bold (*$p < .05$). *iv*. η^2_p – Effect size using partial eta squared.

results of the ΔCFI and ΔRMSEA test showed non-significant differences in the three assessment models in comparison with the configural model, suggesting structure invariance between the groups (see Table 5).

The results of one-way ANOVA revealed significant differences between groups as illustrated in Table 7. Overall, participants who initiated the breakup scored slightly higher levels of adjustment to breakup compared to participants who mutually decided to end the relationship, and both groups scored higher levels than non-initiators participants [$F_{(2,\ 576)} = 39.15$, $p < .01$, $\eta^2_p = .12$], particularly in disentanglement from ex-partner [$F_{(2,\ 576)} = 42.02$, $p < .01$, $\eta^2_p = .13$]. In the other dimensions, no significant differences were found between initiators and those who mutually decided to breakup ($p > .107$).

Discussion

The current study sought to translate and adapt the short version of the FDAS into Portuguese, in order to validate the structure and psychometric properties of the FDAS-SF in independent samples of emerging adults who had experienced a romantic breakup in the past year, as well as to evaluate the invariance of this measure across gender, education level, and initiator status of the participants. This study is the first to provide and validate a Portuguese version of the FDAS.

The validity of the FDAS-SF was supported by a number of findings. The results of the content validity indicated that the translated items were understandable and relevant from the participants' perspective. The results of structural validity showed a four-factor model with high internal consistency and good fit indices. This structure differs from the results of the Chilean version study (Guzmán-González et al., 2017) and previous validation studies (Yasumitsu & Satoko, 2020; Yilmaz et al., 2021). The exclusion of the Grief subscale was unexpected, since the romantic separation process can involve

aspects similar to loss and complicated grief (Davis et al., 2003; H. O. Prigerson & Jacobs, 2001). This result can be explained by the population target used for this study. Grief can be more culturally interpreted as an important dimension of adjustment to divorce or to bereavement rather than to the adjustment to breakup in young adults. The Turkish version showed that FDAS-SF pointed out invariance at a weak level across divorced and separated participants (Yilmaz et al., 2021). Grief responses to a breakup in young adults can be associated with other dimensions related to the normative development of intimacy, since it is a period of multiple explorations and changes (Arnett, 2000). It also should be noted that the most widely used instrument in breakup research among emerging adults is the Breakup Distress Scale (BDS: Field et al., 2009), an instrument based on the Inventory of Complicated Grief (ICG; H. G. Prigerson et al., 1995). This result reinforces that the use of this instrument can lead to ambiguous conclusions because the ending of romantic relationships is also associated with increased physical and emotional distress, such as feelings of rejection or longing for lost closeness and companionship (Agnew, 2000, cited in Slotter et al., 2010), as well as exaggerated attempts to restore the relationship (Taylor & Bryant, 2007). Individuals going through this process may express different responses compared to those who are in bereavement, highlighting the importance to assume a multidimensional approach.

The presence of good adjustment indices ensures that this version effectively evaluates the construct. The values reported in the current study are similar to those reported in the original short version study (Guzmán-González et al., 2017). Evidence for convergent validity indicated that the four dimensions are correlated with each other, suggesting that they may converge to evaluate a common factor. Despite the significant proportion of common variance, discriminant validity indicated that the four dimensions evaluate distinct aspects of the global construct. These results confirm that the dimensions do not evaluate the same aspects of the adjustment to breakup.

This study establishes important evidence regarding concurrent validity. The positive correlation between FDAS-SF and depression has been well documented in previous studies (e.g., Asanjarani et al., 2018; Boelen & Reijntjes, 2009; Field et al., 2009; Guzmán-González et al., 2017; Stoessel et al., 2011). This study also found a positive association between FDAS-SF and attachment. This finding aligns with the previous studies (Davis et al., 2003; Moller et al., 2003; Saffrey & Ehrenberg, 2007; Sbarra & Ferrer, 2006), demonstrating that attachment styles shape not only the emotional reaction to separation, but also the adjustment process (Mikulincer & Shaver, 2021). For example, Saffrey and Ehrenberg (2007) revealed that young adults with a predominantly anxious attachment style in their interpersonal relationships tend to report signs of negative adjustment. Furthermore, individuals with insecure attachment tend to evaluate stressful events (e.g., loss,

separation) as more threatening than individuals with secure attachment. They use less constructive cognitive, emotional, and behavioral coping strategies, and self-evaluate themselves as less competent to cope with these events (Davis et al., 2003).

Another finding is that FDAS-SF is negatively associated with differentiation of self. This finding is consistent with that Moral et al. (2021) found. In a sample of divorce individuals, the authors found that DSI-SF subscales were associated with and predicted loneliness and negativity after a separation. In contrast, a romantic separation was also associated with reduced self-concept clarity (e.g., Slotter et al., 2010).

The results of the measurement invariance showed that the FDAS-SF is invariant across gender, two levels of education, and three levels of initiator status suggesting that it can be used for gender, education, and initiator status comparisons. The lack of variation in the short FDAS structure also gives important evidence for the robustness of this measure. Similar results have been found in previous studies (Yilmaz et al., 2021). As expected, we found men reported higher levels of adjustment to breakup than women, more particularly on the anger and social trust subscale (e.g., Bevvino & Sharkin, 2003; Yilmaz et al., 2021). Moreover, the findings showed no significant differences between lower and higher education levels. These findings were expected because seem to suggest that breakups are a difficult event with constraints and challenges regardless of education. Concerning initiator status, the literature has shown contradictory findings mainly due to the diverse range of instruments used to evaluate breakup outcomes, emphasizing the importance of a universal validated tool for this population. Nevertheless, the results of the current study were in accordance with the predominant trend in research, indicating that non-initiators tend to report more negative outcomes in comparison to initiators and mutual decision-makers (Yıldırım & Demir, 2015).

The current study offers a significant contribution to the literature by providing the first validation of the short version of the FDAS-SF for evaluating the adjustment to breakup among Portuguese emerging adults. One of the strengths of this study consists in highlighting the multidimensional approach to romantic separation. In our understanding, breakups must be a wide study taking into account the different aspects of loss and the particular context such as emerging adulthood. Another strength of this study consists in the invariant structure across gender, education level, and initiator status. The lack of measurement variance ensures that men and women, youth with lower and higher education levels, as well as initiators, non-initiators, and mutual decision-makers attribute the same meaning to the latent construct. This measure may help psychologists and counselors understand the factors involved in the development of non-adjustment following a romantic breakup and promote early identification of adjustment problems after a breakup.

This study also has some limitations. First, the original version was developed for adjustment to divorce. Future research should further explore homogenous samples of emerging adults, or even create and develop a feasible and multidimensional tool to be used in this context. Second, besides the sample being collected using a nonrandom and non-paired sampling procedure, the sample was restricted to a certain group given the aim of the current study: emerging adults (almost all female participants) who had experienced a romantic breakup in the past year. Future research could consider and compare couples and different groups of age and time since separation. Third, because of the cross-sectional nature of this study, causal conclusions cannot be drawn from the current results. Longitudinal studies are necessary to examine the stability of the measurement over time and the directional association between adjustment to breakup and depression, attachment, and differentiation of self. Fourth, future research may consider the application of Item Response Theory (IRT) analysis to further enhance the precision of measurement and explore item-level characteristics of the FDAS-SF, such as item difficulty and discrimination parameters. In general, future research should further fully establish the psychometric properties of the FDAS-SF within the Portuguese population and across different cultures.

Conclusions

In conclusion, the current study revealed that the Portuguese translation of the FDAS-SF had good psychometric properties in a Portuguese sample of emerging adults who had experienced a romantic breakup in the past year. The results of the EFA and CFA support a four-factor model with excellent internal consistency, and convergent and discriminant validity. The concurrent validity was supported by the positive correlation between FDAS-SF and depression and attachment, as well as the negative correlation between FDAS-SF and differentiation of self. Furthermore, the measurement invariance results confirmed that the instrument can be applied to compare samples of women and men, lower and higher education, as well as initiators, non-initiators, and mutual decision-makers. This study indicates that this measure could be used as a highly valuable tool for researchers and clinical practitioners to evaluate the adjustment to breakup among Portuguese emerging adults.

Disclosure statement

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Data availability statement

The data are available upon reasonable request from the corresponding author JGF.

Authors contributions

JGF, MVM: conceptualization and methodology. JGF, AH: formal analysis, investigation, writing – original draft. JGF, MVM: writing – review and editing. JGF: funding acquisition. MVM: supervision.

References

Aeby, G., & Heath, S. (2020). Post break-up housing pathways of young adults in England in light of family and friendship-based support. *Journal of Youth Studies*, *23*(10), 1381–1395. https://doi.org/10.1080/13676261.2019.1679358

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469–480. https://doi.org/10.1037/0003-066X.55.5.469

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

Bevvino, 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

Boelen, P. A., & Reijntjes, A. (2009). Negative cognitions in emotional problems following romantic relationship break-ups. *Stress & Health: Journal of the International Society for the Investigation of Stress*, *25*(1), 11–19. https://doi.org/10.1002/smi.1219

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). Guilford.

Cheung, G. W., & Lau, R. S. (2012). A direct comparison approach for testing measurement invariance. *Organizational Research Methods*, *15*(2), 167–198. https://doi.org/10.1177/1094428111421987

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modelling*, *9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Chung, M. C., Farmer, S., Grant, K., Newton, R., Payne, S., Perry, M., Saunders, J., Smith, C., & Stone, N. (2003). Coping with post-traumatic stress symptoms following relationship dissolution. *Stress and Health*, *19*(1), 27–36. http://doi.org/10.1002/smi.956

Davis, D., Shaver, P. R., & Vernon, M. L. (2003). Physical, emotional, and behavioral reactions to breaking up: The roles of gender, age, emotional involvement, and attachment style. *Personality and Social Psychology Bulletin*, *29*(7), 871–884. https://doi.org/10.1177/0146167203029007006

Drake, J. R., Murdock, N. L., Marszalek, J. M., & Barber, C. E. (2015). Differentiation of self inventory—short form: Development and preliminary validation. *Contemporary Family Therapy*, *37*(2), 101–112. https://doi.org/10.1007/s10591-015-9329-7

Erikson, E. (1982). *The life cycle completed*. W. W. Norton & Company.

Eurostat. (2022). *Age of Young People Leaving Their Parental Household*. Publications Office of the European Union. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Age_of_young_people_leaving_their_parental_household

Field, T., Diego, M., Pelaez, M., Deeds, O., & Delgado, J. (2009). Breakup distress in university students. *Adolescence*, *44*(176), 705–727.

Fisher, B. F. (1976). *Identifying and meeting needs of formerly-married people through a divorce adjustment seminar*. University of Northern Colorado.

Fisher, B. F. (1978). *Rebuilding: When your relationship ends*. Colorado: Family Relations Learning Center.

Fordwood, S. R. (2007). *A longitudinal model of suicidality among outpatient youth: Effects of previous suicidality, psychopathology, and gender*. University of California.

Fornell, C., & Larker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.1177/002224378101800104

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

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. Sage publications.

Hartman, T. (2021). Male breakup trauma. *Qualitative Psychology*, *8*(2), 255–263. https://doi.org/10.1037/qup0000204

Hayes, A. F., & Coutts, J. J. (2020). Use Omega Rather than Cronbach's Alpha for Estimating Reliability. But. *Communication Methods and Measures*, *14*(1), 1–24. https://doi.org/10.1080/19312458.2020.1718629

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. T. G. Press.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Lewandowski, G. W., & Bizzoco, N. M. (2007). Addition through subtraction: Growth following the dissolution of a low quality relationship. *The Journal of Positive Psychology*, *2*(1), 40–54. https://doi.org/10.1080/17439760601069234

Mark, A., & Harvey, J. H. (2006). *Handbook of divorce and relationship dissolution*. Routledge. https://books.google.pt/books?hl=en&lr=&id=wGZlAgAAQBAJ

McDonald, R. P. (1999). *Test theory: A unified treatment*. Lawrence Erlbaum.

Mikulincer, M., & Shaver, P. R. (2021). An attachment perspective on loss and grief. *Current Opinion in Psychology*, *45*(101283), 1–5. https://doi.org/10.1016/j.copsyc.2021.11.003

Moller, N. P., Fouladi, R. T., McCarthy, C. J., & Hatch, K. D. (2003). Relationship of attachment and social support to college students' adjustment following a relationship breakup. *Journal of Counseling & Development*, *81*(3), 354–369. https://doi.org/10.1002/j.1556-6678.2003.tb00262.x

Monroe, S. M., Rohde, P., Seeley, J. R., & Lewinsohn, P. M. (1999). Life events and depression in adolescence: Relationship loss as a prospective risk factor for first onset of major depressive disorder. *Journal of Abnormal Psychology*, *108*(4), 606. https://doi.org/10.1037//0021-843x.108.4.606

Monteiro, S., Torres, A., Pereira, A., Albuquerque, E., & Morgadinho, R. (2013). 2077 – preliminary validation study of a Portuguese version of the patient health questionnaire (PHQ-9). *European Psychiatry*, *28*(S1), 1. https://doi.org/10.1016/S0924-9338(13)76982-7

Moral, M. A., Chimpén-López, C. A., Lyon, T. R., & Adsuar, J. C. (2021). The relationship between differentiation of self and psychological adjustment to separation. *Healthcare*, *9*(6), 738. https://doi.org/10.3390/healthcare9060738

O'Connor, 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, & Computers*, *32*(3), 396–402. https://doi.org/10.3758/BF03200807

Paiva, C., & Figueiredo, B. (2010). Study of validation of the Portuguese version of the inventory «Experiences in close relationships». *International Journal on Personal Relationships*, *4*(2), 237–270. https://doi.org/10.5964/ijpr.v4i2.51

Perilloux, C., & Buss, D. M. (2008). Breaking up romantic relationships: Costs experienced and coping strategies deployed. *Evolutionary Psychology*, *6*(1). https://doi.org/10.1177/147470490800600119

Priest, J., Burnett, M., Thompson, R., Vogel, A., & Schvaneveldt, P. (2009). Relationship dissolution and romance and mate selection myths. *Family Science Review*, *14*(1), 48–57. https://doi.org/10.26536/IKBU1957

Prigerson, H. O., & Jacobs, S. C. (2001). Traumatic grief as a distinct disorder: A rationale, consensus criteria, and a preliminary empirical test. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 613–645). American Psychological Association. https://doi.org/10.1037/10436-026

Prigerson, H. G., Maciejewski, P. K., Reynolds, C. F., III, Bierhals, A. J., Newsom, J. T., Fasiczka, A., Frank, E., Doman, J., & Miller, M. (1995). Inventory of complicated grief: A scale to measure maladaptive symptoms of loss. *Psychiatry Research*, *59*(1/2), 65–79. https://doi.org/10.1016/0165-1781(95)02757-2

Rajabi, S., & Nikpoor, N. (2018). Comparison of the effectiveness of the transactional analysis training and emotion regulation on the improvement of love trauma syndrome: Dealing with the problems caused by the separation and love break up. *Archives of Psychiatry and Psychotherapy*, *20*(4), 17–28. https://doi.org/10.12740/APP/99970

Reimer, J. E., & Estrada, A. R. (2020). College students' grief over a breakup. *Journal of Loss and Trauma*, *26*(2), 179–191. https://doi.org/10.1080/15325024.2020.1757992

Rodrigues, D. L., Huic, A., Lopes, D., & Kumashiro, M. (2019). Regulatory focus in relationships and conflict resolution strategies. *Personality and Individual Differences*, *142*, 116–121. https://doi.org/10.1016/j.paid.2019.01.041

Saffrey, C., & Ehrenberg, M. (2007). When thinking hurts: Attachment, rumination, and postrelationship adjustment. *Personal Relationships*, *14*(3), 351–368. https://doi.org/10.1111/j.1475-6811.2007.00160.x

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., & Ferrer, E. (2006). The structure and process of emotional experience following nonmarital relationship dissolution: Dynamic factor analyses of love, anger, and sadness. *Emotion*, *6*(2), 224. https://doi.org/10.1037/1528-3542.6.2.224

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

Scabini, E., Marta, E., & Lanz, M. (2006). *The transition to adulthood and family relations: An intergenerational perspective*. Psychology Press.

Skowron, E. A., & Friedlander, M. L. (1998). The differentiation of self inventory: Development and initial validation. *Journal of Counselling Psychology*, *45*(3), 235–246. https://doi.org/10.1037/0022-0167.45.3.235

Slotter, E. B., Gardner, W. L., & Finkel, E. J. (2010). Who am I without you? The influence of romantic breakup on the self-concept. *Personality and Social Psychology Bulletin*, *36*(2), 147–160. https://doi.org/10.1177/0146167209352250

Snyder, D. K., Castellani, A. M., & Whisman, M. A. (2006). Current status and future directions in couple therapy. *Annual Review of Psychology*, *57*, 317–344. https://doi.org/10.1146/annurev.psych.56.091103.070154

Soenens, B., Vansteenkiste, M., Lens, W., Luyckx, K., Goossens, L., Beyers, W., & Ryan, R. M. (2007). Conceptualizing parental autonomy support: Adolescent perceptions of promotion of independence versus promotion of volitional functioning. *Developmental Psychology*, *43*(3), 633–646. https://doi.org/10.1037/0012-1649.43.3.633

Stoessel, C., Stiller, J., Bleich, S., Boensch, D., Doerfler, A., Garcia, M., & Forster, C. (2011). Differences and similarities on neuronal activities of people being happily and unhappily in love: A functional magnetic resonance imaging study. *Neuropsychobiology*, *64*(1), 52–60. https://doi.org/10.1159/000325076

Tashiro, T., & Frazier, P. (2003). "I'll never be in a relationship like that again": Personal growth following romantic relationship breakups. *Personal Relationships*, *10*(1), 113–128. https://doi.org/10.1111/1475-6811.00039

Taylor, F., & Bryant, R. A. (2007). The tendency to suppress, inhibiting thoughts, and dream rebound. *Behaviour Research and Therapy*, *45*(1), 163–168. https://doi.org/10.1016/j.brat.2006.01.005

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), e0217320. https://doi.org/10.1371/journal.pone.0217320

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The experiences in close Relationship scale (ECR)-short form: Reliability, validity, and factor structure. *Journal of Personality Assessment*, *88*(2), 187–204. https://doi.org/10.1080/00223890701268041

Wrape, E. R., Jenkins, S. R., Callahan, J. L., & Nowlin, R. B. (2016). Emotional and Cognitive Coping in Relationship Dissolution. *Journal of College Counseling*, *19*(2), 110–123. http://doi.org/10.1002/jocc.12035

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

Yıldırım, B. 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

Yilmaz, A. E., Akyüz, Z., Bintaş Zörer, P., Erarslan İngeç, Ö., Öksüzler Cabılar, B., & Tulum Akbulut, S. (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. https://doi.org/10.1080/10502556.2020.1833291

Yilmaz, A. E., & Figiloglu, H. (2006). Psychometric properties of the fisher divorce adjustment scale in a Turkish divorced sample. *Journal of Divorce & Remarriage*, *45*(1/2), 149–169. https://doi.org/10.1300/J087v45n01_08