



ORIGINAL

DERSR-B. A Brief Scale for Detection of Emotional Dysregulation Risk¹

DERSR-B. Una Escala Breve para la Detección del Riesgo de Desregulación Emocional

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Abstract

Emotional dysregulation (ED) is related to problems in understanding, perceiving, and regulating emotions. The aim is to find the psychometric properties of an instrument that measures ED and classifies the high/low ED group membership with the least possible error. For statistical purposes (factor analysis), two independent samples of males and females ($n_1 = 476$) and ($n_2 = 562$) were obtained, with ages sample 1 (15-19 years; $M = 15.8$; $SD = 0.71$) and sample 2 (15-19 years; $M = 15.6$; $SD = 0.69$). Three factors were formed by sex, males with 14 items and females with 13 items, each loading on a single factor (total $\alpha = 0.71 - 0.78$ $\omega = 0.67 - 0.79$ females; $\alpha = 0.70 - 0.79$ $\omega = 0.73 - 0.75$ males) and good fit indices. In sum, a validated cut version instrument (DERSR-B), a risk screening instrument, was obtained.

Keywords: Emotional dysregulation; Psychometric properties; Confirmatory factor analysis; Discriminant analysis; Brief version scale

Resumen

La desregulación emocional (DE) se relaciona con problemas para comprender, percibir y regular las emociones. Determinar las propiedades psicométricas de un instrumento que mide DE y que clasifica con el menor error posible la pertenencia de grupo alto/bajo de DE se propuso como el objetivo de este estudio. Para propósitos estadísticos (análisis factoriales) se obtuvieron dos muestras independientes de hombres y mujeres ($n_1 = 476$) y ($n_2 = 562$) respectivamente, con edades para muestra 1 (15-19 años; $M = 15.8$; $DE = 0.71$) y muestra 2 (15-19

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años; $M=15.6$; $DE= 0.69$). Se obtuvieron tres factores por sexo, hombres con 14 ítems y mujeres con 13 ítems cada uno cargando en un solo, un único factor (total $\alpha =0.71 - 0.78$ $\omega =0.67- 0.79$ mujeres; $\alpha=0.70 - 0.79$ $\omega=0.73-0.75$ hombres) y con índices de ajuste aceptables. Se obtuvo un instrumento válido en versión corta de detección rápida de riesgo de Desregulación Emocional (DERSR-B).

Palabras clave: Propiedades psicométricas; Desregulación emocional; Clasificación de pertenencia de grupo; Análisis factorial; Análisis discriminante; Escala versión corta

Emotional Dysregulation (ED) is related to the onset and development of maladaptive behaviors, in which the role of emotions is fundamental. According to Gratz and Roemer (2004), emotional regulation is the ability to understand, accept and modulate our emotional states in pursuit of goal-directed behaviors. Effective use of strategies for emotional regulation has been associated with improved psychological well-being and better functioning. Conversely, difficulties in understanding, perceiving, and regulating emotions can contribute to a wide range of adverse outcomes (Berking & Whitley, 2014; Yiğit & Guzey-Yiğit, 2019).

Aldao et al. (2010), Gross & Jazaieri (2014), and Gómez et al. (2014), among other authors, propose that ED is a transdiagnostic element (common element for the diagnosis of various psychopathologies) present in both anxiety disorders and depressive disorders.

Emotional Dysregulation (ED) allows for predicting short-term anxiety, social competence impairment, and cognitive impairment (e.g., Berkovits & Baker, 2014). However, in the long term and at early ages, ED increases the likelihood of anxiety, depression, risky eating behavior, and aggression, among other disorders (Kelly et al., 2016; Racine & Wildes, 2015).

Emotional Regulation (ER) strategies, on the other hand, are different and may be influenced by the self-perception of the emotion and by the stress of the environment in which they occur. For example, women have reacted more effusively and emotionally, while men appraise their emotions as more stressful and intense (Nolen-Hoeksema, 2012). In addition, Bender et al. (2012) found that adolescent

females in their study had, compared to males, higher rates of anxiety, difficulty regulating emotions, and less emotional clarity; adolescent males had lower rates of anxiety and more difficulty with emotional awareness.

One of the most widely used instruments in the assessment of ED and ER is the Dysregulation and Emotional Regulation Scale (DERS) developed by Gratz and Roemer (2004). The authors used Exploratory Factor Analysis (EFA) with the Principal Component extraction method with PROMAX rotation to determine the factor structure formed by 36 items distributed six factors: F1 non-acceptance of emotional responses (non-acceptance) $\alpha=0.85$; F2 difficulties in goal-directed behaviors when upset (goals) with an $\alpha=0.89$; F3 difficulties controlling impulsive behaviors when upset (impulsivity) $\alpha=0.86$; F4 limited access to perceived effective emotional regulation strategies (strategies) with an $\alpha=.88$; F5 lacks emotional awareness (awareness) with an $\alpha=0.80$, and F6 lacks emotional clarity (clarity) with an $\alpha=.84$.

Different authors in different countries applied the DERS replicating the six-factor structure reported for the original DERS (Gratz & Roemer 2004). Among these authors are Ruganci and Gençöz (2010), who applied the DERS in Turkey; Giromini et al. (2012) validated the DERS in Italy; Medrano and Trógo-lo (2014) adapted the DERS in Argentina; Gómez et al. (2014) validated the scale in Spain. In the USA (Bardeen et al., 2012), India (Snow et al., 2013), and Korea (Cho & Hong, 2013). In Chile, Guzmán-González, et al., (2014) conducted a study testing the validity and reliability of the DERS-E (report a five-factor structure). Other authors, such as Hervás and Jodar (2008), proposed an internal structure

based on five factors where the items of Impulse and Strategies were grouped into a single factor. It should be noted that these studies, except the last two, replicated the structure of the original DERS, and the values of the alpha coefficients resulted in similarities with a few exceptions (e.g., factor 4 from the application of Medrano & Trogolo, 2014); factor 5 from the application of Gómez et al. (2014). The original structure has also been replicated in adolescent samples, e.g., in the Dutch community (Neumann et al., 2016) and American communities (Perez et al., 2012). In Mexico, Marin et al. (2012) tested the psychometric properties of the Spanish format of the DERS (DERS-E) with a non-clinical population of adolescents. Participants were 455 high school students from a public high school (mean age=13.1). A Confirmatory Factor Analysis was applied, and in comparison, with the original version, they did not find the six-factor structure using the 36 items. The application of the EFA yielded a four-factor structure with 24 items; the DERS was validated using a CFA, the reliability of the factors was from: $\alpha=0.68$ to 0.85 , and the concurrent validity was significant ($r=.51$ to $.76$, $p \leq .05$).

The exposed results stated that DERS has good psychometric properties (validity and reliability) and cross-cultural validity in clinical and community samples. They also show the importance of emotion management and its impact on adolescence.

It is important to note that other studies conducted in different populations and sociocultural contexts do not replicate the factor structure of the original 6-factor DERS (Gratz & Roemer, 2004) but maintain adequate psychometric properties. These have been defined as short versions. Among them are DERS- 2F, 15 (Muñoz-Martínez et al., 2016). Factor Analysis showed that 15 of the original 36 items contributed significantly to 54% of the variance. However, the second factor was formed by only one item. The authors did not provide the factors' reliability or the overall scale. The DERS-16 was applied by Shahabi et al. (2020), and their internal consistency and validity were examined in clinical and community samples. The validity of the DERS-

16 was evaluated by comparing the relative strength of the association of the two versions of the DERS with measures of emotion regulation and related constructs, psychopathology, and clinically relevant behaviors theorized to stem from emotion regulation deficits. Results demonstrate that the DERS-16 has retained excellent internal consistency, good test-retest reliability, and good convergent and discriminant validity. Shahabi et al. (2020) applied the same scale (DERS-16) to extend the research by evaluating the reliability and validity of the Persian version in a university sample. The Persian DERS-16 demonstrated excellent internal consistency, test-retest reliability, and concurrent validity. Furthermore, confirmatory factor analysis (CFA) supported the proposed factor structure. Victor and Klonsky (2016) found that item-total correlations of DERS-18 ranged from .53 to .83, similar to those reported by Gratz and Roemer (2004). The mean inter-item correlations for each subscale and the overall score ranged from .53 to .75. The DERS-18 showed all of the high alpha values (.91). Powers, et al. (2014) reported a brief, self-report measure of emotion dysregulation EDS-Short 12 items that show good construct validity and provide significant predictive utility concerning psychopathology and resiliency factors. This brief scale showed good construct validity, relating to other measures of emotion dysregulation, and was highly correlated with the DERS, (e.g., Ehring & Quack, 2010). Contreras et al. (2018) applied the Emotional Dysregulation Scale (EDS-short), consisting of 12 items for Mexican children and adolescents; the scale presented adequate reliability a Cronbach's alpha of .90. The Portuguese version of DERS-SF 6 factors, 18 items, has good psychometric properties, an acceptable fit, good reliability, convergent validity, and a correlated six-factor structure to the original version. The results also suggested the invariance of the factor structure of the DERS-SF across genders (Gouveia, Ramos, Brito, Almeida & Cardoso, 2022).

The present research is a precedent in the study of emotional dysregulation, and its aim is to find the psychometric properties, structural validity (AFE, AFC, and models derived from), as well as to know

the discriminant probability functions (Discriminant Analysis) to classify the group membership, in addition to the membership criterion for the new cases. Furthermore, the internal consistency of this instrument, which corresponds to a brief scale of rapid detection of risk emotional dysregulation (DERSR-B) in Mexican high school students from public schools, is part of the goal of this study.

Method

Design and participants

We worked with instrumental design, distance data collection, and cross-sectional. For statistical purposes (analysis and factorial models), two independent non-probabilistic samples were obtained and distributed on five university campuses of study. Sample 1 (N1=476) 283 women and 193 men (15-19 years; $M = 15.8$; $SD = .71$) and Sample 2 (N2= 562) 378 females and 184 males (15-19 years; $M = 15.6$; $SD = .69$).

Instrument

The instrument was composed of two variable sections: A sociodemographic section with eight items exploring data such as age, work, parents' level of studies, and a Difficulties in Emotional Regulation Scale Section (DERS) (Gratz & Roemer, 2004). Gómez et al. (2014) based on the scales of Hervás and Jodar (2008); Marín et al. (2012) from Mexico, and Herrera et al. (2008) from Colombia, to obtain a version adapted to Spanish youth population with six factors and 28 items (with five response options ranging from never, to always).

Procedure

School principals were contacted to request the participation of their students in the study. The instrument

was uploaded to the platform of the five campuses in the study. Students who agreed to take part received a link to the research instrument by e-mail. To ensure compliance with ethical standards, informed consent was obtained from both the school authorities as legal guardians and the participants themselves. This study followed the General Health Law on Research, considering that it is research without risk, and was approved by the ethics committee of the Faculty of Psychology UNAM (FPCE_08032021_H_AC).

Statistical analysis

A frequency analysis was used to report the socio-demographic characteristics of the sample. The SPSS software V. 22 statistical package (IBM, Armonk, NY, USA) for Windows was used. The variability and normality of the responses were tested with a frequency analysis (Potthar, 1993). A t-test for independent samples was used to determine differences by sex; 14 of the 20 items showed statistically significant differences ≤ 0.05 , so we proceeded to run CFA by sex. Compliance with $KMO \geq .70$ and compliance with Bartlett Sphericity Test $X^2 p \leq .05$ (Kaiser, 1974) were evaluated. AFC was applied to sample 1 using the unweighted least squares method and varimax rotation (factor loadings $\geq .40$, number of items ≥ 3 for each factor). Discriminant analysis was performed to determine the percentage classification of the instrument (low and high risk) (Dimitrov, 2014). The CFA was applied to sample 2 using the maximum likelihood method with VARIMAX rotation, and the same criteria were followed as for the AFE; AMOS 21 software (Arbuckle, 2012) was used. The following goodness-of-fit index were considered: $\chi^2 / df \leq 3$, Root Mean Square error of approximation (RMSEA ≤ 0.05), goodness-of-fit index (GFI ≥ 0.90), adjusted goodness-of-fit index (AGFI ≥ 0.90), comparative fit index (CFI ≥ 0.95), non-normed fit Index (NNFI $\geq .90$) Standardized Mean Squared Residual (SMRR $\leq .05$) (Brown, 2015, Kline, 2016).

Results

Socio demographics Variables

Table 1
Characteristics of the AFC sample

	Men	Women
<i>Age</i>		
Average age (<i>SD</i>)	15.6 (0.82)	15.6 (0.69)
Range	15-19	15-19
<i>You are currently living with</i>		
Immediate family	75%	78%
Father or mother	24%	21%
Another	1%	1%
<i>Father's education</i>		
I do not have a father	16%	11%
Uneducated	1%	1%
Basic education	22%	29%
Middle education	34%	31%
Higher education	27%	28%
<i>Father's occupation</i>		
I do not have a father	16%	11%
Unemployed	-	3%
Informal economic activity	21%	32%
Formal economic activity	62.5%	54%
<i>Mother's education</i>		
I do not have a mother	1%	1%
Uneducated	--	
Basic education	26%	27%
Middle education	40%	39%
Higher education	31%	33%
<i>Mother's occupation</i>		
I do not have a mother	1%	1%
Unemployed	--	--
Informal economic activity	54%	54%
Formal economic activity	45%	45%
<i>Domestic violence:</i>		
Yes	16%	18%
No	84%	80%
<i>Types of violence:</i>		
Physical	28%	28%
Psychological	48%	50%
Economic	3%	7%
Verbal	21%	15%

Table 2
Index of Goodness of Fit

	X^2	Sig	RMSEA	CFI	TLI	SMRR
Men	2	0.001	0.06	0.91	0.90	0.06
Women	2	0.001	0.06	0.96	0.94	0.07

Confirmatory factor analysis

Results for the male sample, the values obtained were (KMO = 0.80) and Bartlett's test of sphericity $X^2(190) = 1208.98$; $p \leq .001$, with three factors (33% of variance explained, $\alpha = 0.82$, $\omega = 0.75$). The first factor (13% variance explained, $\alpha = 0.79$, $\omega = 0.79$) with five items related to Strategies. Second factor (11% variance explained, $\alpha = 0.78$, $\omega = 0.79$) with 4 items measuring Goals, and third factor (9% variance, $\alpha = 0.68$, $\omega = 0.67$) with 5 items related to Impulse. The goodness-of-fit indices for both models were adequate (see Table 2 and Figures 1 and 2).

The female sample was (KMO = .85) and Bartlett's test of sphericity $X^2(190) = 2440.502$; $p \leq .000$, with three factors (31% explained variance, $\alpha = .84$, $\omega = .75$). First factor (12% explained variance, $\alpha = 0.78$, $\omega = 0.78$) with 5 items related to Goals. Second factor (11% explained variance, $\alpha = 0.72$, $\omega = 0.73$) with 5 items related to Strategies, and Third factor (8% variance, $\alpha = 0.71$, $\omega = 0.73$) with 3 items measuring Impulse. The goodness of fit indices for both models were appropriate (See Table 2 and Figures 1 and 2).

Discriminant Analysis

A Discriminant Analysis (DA) was applied to the dysregulation instrument, using the stepwise method, obtaining the functions that classify the probability of group membership (high/low dysregulation) and the membership criterion for new cases. Before applying the DA, the data for each factor were classified into two groups, high/low dysregulation, using the 25th and 75th percentiles as cut-off points.

The discriminant analysis results showed that of the 14 items for men yielded by the CFA, only 7 of them were statistically significant; in the discriminant function of the 13 items, only 10 of them discriminated against women (Table 4).

It should be noted that in the case of women, the standardized coefficients show that the item that contributes most to differentiation is "I get angry easily" (0.52); while among men, the item that best discriminates is "When I am upset, I lose control" (0.50).

As for the canonical correlation (CR), a significant association was obtained between groups (low dysregulation / high dysregulation) with the predictor factors and R-values. For the women's group, a CR ≥ 0.93 was obtained (Table 5). The effect size determinant coefficients were ($R^2 = 0.86$). For men, a CR of 0.93 ($R^2 = 0.86$) was obtained. The centroid values (means) showed, in each case, good inter-centroid separations, indicating that the function adequately separates between low emotional dysregulation and high emotional dysregulation.

The discriminant function's predictive ability (correct classification) (and the criterion for membership of the new cases) was 100% for both the original grouping and the cross-validation.

Discussion

The objective of this study was to determine the psychometric properties and structural validity (AFE, AFC, AFC-Models) and conduct a discriminant analysis to determine the functions to classify the probability of group membership (high/low dysregulation) in addition to the membership criterion for the new cases. In addition, the internal consistency

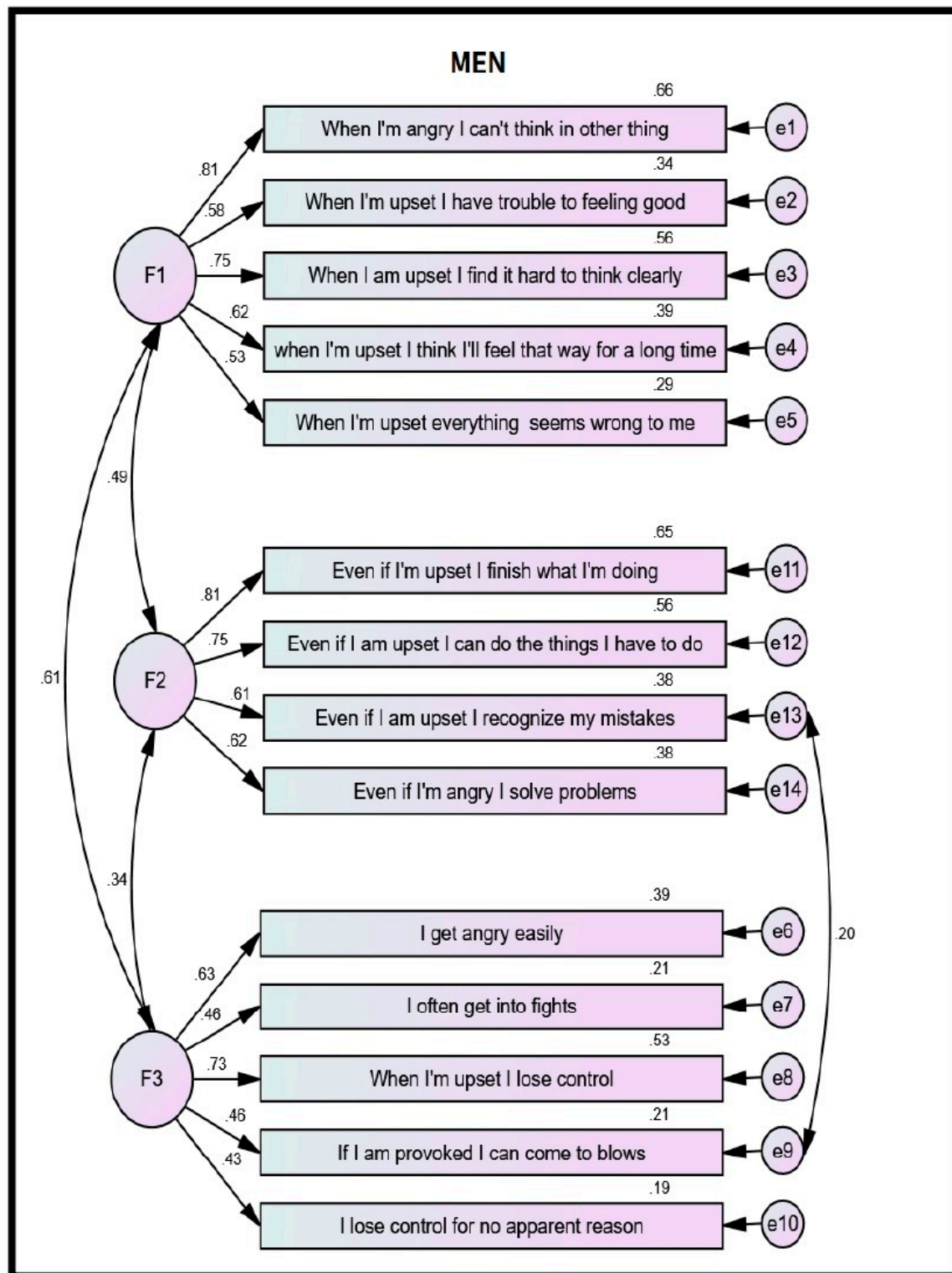


Figure 1. Confirmatory Model. Emotional dysregulation (men).

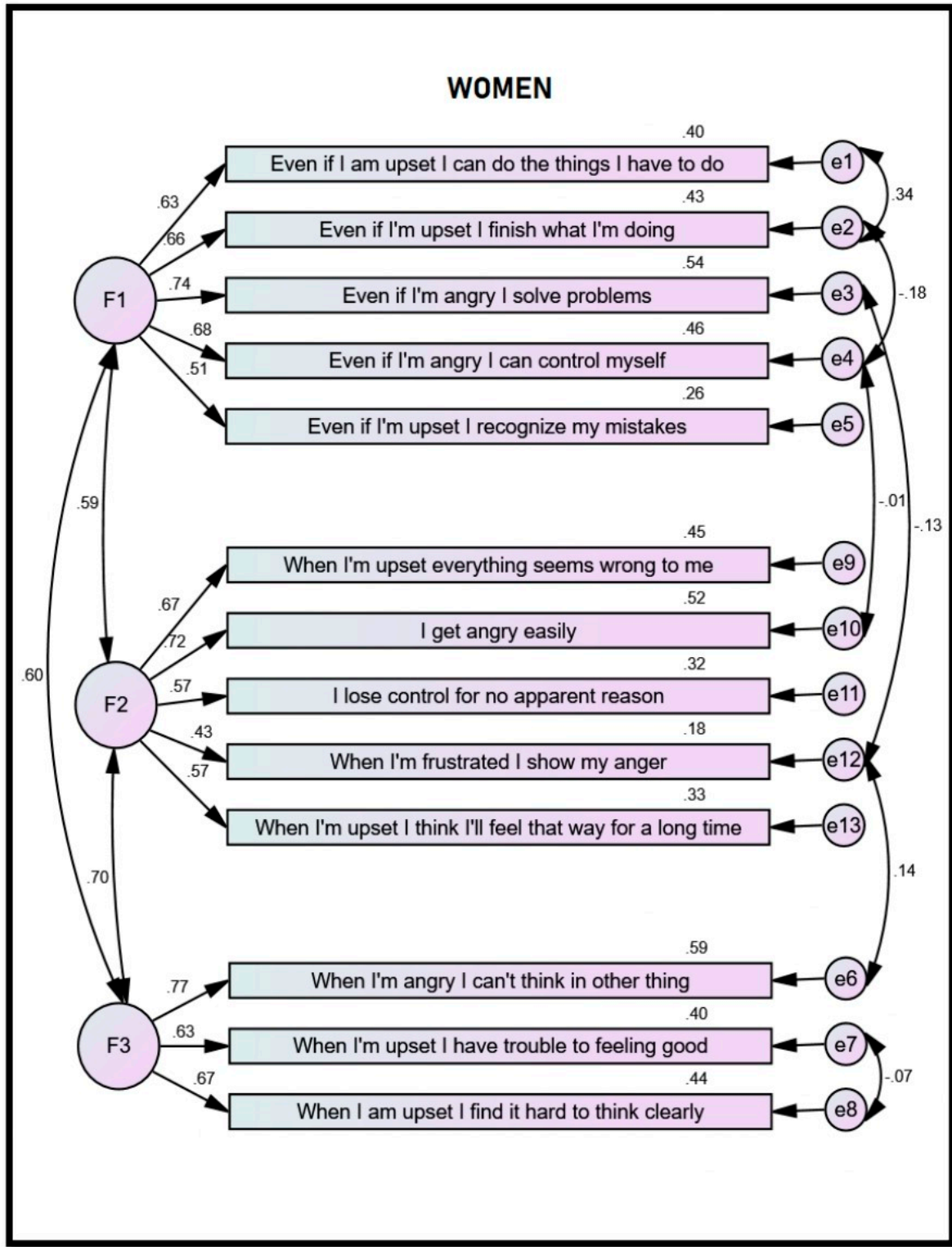


Figure 2. Confirmatory Model. Emotional dysregulation (women).

Table 3
Men. Summary of structural model data

Model	Factor	Name Factor	Correlations	Items	Factor Loads	Variance	α	ω
Men	Factor 1	Strategies	F1 – F2 0.49	1. When I'm angry, I can't think in other thing	0.81	0.66	0.79	0.79
				2. When I'm upset, I have trouble feeling good	0.58	0.34		
				3. When I'm upset, I find it hard to think clearly	0.75	0.56		
				4. When I'm upset, I think I'll feel that way for a long time	0.62	0.39		
				5. When I'm upset, everything seems wrong to me	0.53	0.29		
	Factor 2	Goals	F2 – F3 0.34	1. Even if I'm upset, I finish what I'm doing	0.81	0.65	0.68	0.67
				2. Even if I'm upset, I can do the things I have to do	0.75	0.56		
				3. Even if I'm upset, I recognize my mistakes	0.61	0.38		
				4. Even if I'm angry, I solve problems	0.62	0.38		
	Factor 3	Impulse	F3 – F1 0.61	1. I get angry easily	0.63	0.39	0.78	0.79
				2. I often get into fights	0.46	0.21		
				3. When I'm upset, I lose control	0.73	0.53		
				4. If I am provoked, I can come to blows	0.46	0.21		
				5. I lose control for no apparent reason	0.43	0.19		
TOTAL							0.82	0.75

of this instrument, which corresponds to a brief scale of rapid detection of emotional dysregulation (DER-SR-B-14-13) in Mexican high school students from public schools, was also part of the aim.

Our study's female and male samples were young students (15 to 19 years, $SD < 1.0$). Congruent with age and cultural customs, most of them lived with a nuclear family (father, mother, siblings). Slightly more than half of the fathers had high school and higher education, while slightly more than two-thirds of the mothers had the same levels of education. More than half of the fathers were engaged in some formal economic activity, while a little more than half of the mothers were engaged in informal commerce. Only

one-fifth of the sample perceived violence in the family environment, considering it mainly psychological and secondarily physical violence.

The final results of the factor analysis yielded two models (male/female) with three factors each and fourteen and thirteen items, respectively. Concerning the men's model and according to the names of the DERS factors (Gratz & Roemer, 2004), F1 grouped five items that measure strategies (ability to use emotion regulation strategies); the five items of F2 are related to Goals (commitment to goal-directed behaviors) and the four items of F3 to impulse control (control of impulsive behavior when experiencing negative emotions). In the women's model, the items

Table 4
Women. Summary of structural model data

Model	Factor	Name Factor	Correlations	Items	Factor Loads	Variance	α	Ω	
Women	Factor 1	Goals	F1 – F2 0.59	1. Even if I'm upset, I can do the things I have to do	0.63	0.40	0.78	0.78	
				2. Even if I'm upset, I finish what I'm doing	0.66	0.43			
				3. Even if I'm angry, I solve problems	0.74	0.54			
				4. Even if I'm angry, I can control myself	0.68	0.46			
				5. Even if I'm upset, I recognize my mistakes	0.51	0.26			
	Factor 2	Strategies	F2 – F3 0.70	1. When I'm upset everything seems wrong to m	0.67	0.45	0.72	0.73	
				2. I get angry easily	0.72	0.52			
				3. I lose control for no apparent reason	0.57	0.32			
				4. When I'm frustrated, I show my anger	0.43	0.18			
				5. When I'm upset, I think I'll feel that way for a long time	0.57	0.33			
	Factor 3	Impulse	F3 – F1 0.60	1. When I'm angry, I can't think in other thing	0.77	0.59	0.71	0.73	
				2. When I'm upset, I have trouble to feeling good	0.63	0.40			
				3. When I'm upset, I find it hard to think clearly	0.67	0.44			
	TOTAL							0.84	0.75

Table 5
Canonical discriminant functions

	Function	Eigenvalue	% of variance	% accumulated	Canonical Correlation
Men	1	6.472 ^a	100.0	100.0	0.93
Women	1	6.167 ^a	100.0	100.0	0.93

Note. The first canonical discriminant functions were used in the analysis.

measuring Goals formed the F1, the most important factor, since it explains the greatest variance, while in the men's model, F1 is related to Strategies. So, while for women, goals are more important (for example, even if I am angry. I do what I have to do, I finish my work.), for men, it is strategies (when I am upset. I cannot think of anything else. I have a

hard time thinking clearly.). In both models, the items in F3 were those that measure Impulse (when I am angry, I can't think of another thing). Goals and strategies formed the F2 for men and women, respectively. The models derived from the CFA of the male sample obtained a higher correlation between the factors: F1-F3 ($r=.61$); and moderate correlations

Table 6
Cross-validation of men and women

Classification results - Women					
		Dysregulation	Predicted group membership		Total
			1.00	2.00	
Original	Recount	1.00 (Low)	96	0	96
		2.00 (High)	1	103	103
		Ungrouped cases	102	77	179
	%	1.00	100.0	.0	100.0
		2.00	.0	100.0	100.0
		Ungrouped cases	57.0	43.0	100.0
Cross-validation	Recount	1.00	96	0	96
		2.00	0	103	103
	%	1.00	100.0	.0	100.0
		2.00	0	100	100.0
Classification results Men					
Original	Recount	1.00 (Low)	46	0	46
		2.00 (High)	1	46	47
		Ungrouped cases	64	27	91
	%	1.00	100.0	.0	100.0
		2.00	2.1	97.9	100.0
		Ungrouped cases	70.3	29.7	100.0
Cross-validation	Recount	1.00	46	0	46
		2.00	1	46	47
	%	1.00	100.0	.0	100.0
		2.00	2.1	97.9	100.0

between F1-F2 ($r=0.49$) and F2-F3 ($r = 0.34$). Between women the correlations were higher than those of men: F1-F3 ($r = 0.60$); F1-F2 ($r= 0.59$); F2-F3 ($r=0.70$).

As can be seen according to the above-reported text, the number of items composing the variety of “short version” scales of the DERS ranges from 12 to 18 and from one (unidimensional) to six factors. The validated scale of our study (DERSR-B-3-13) for the female model and (DERSR-B-3-14) for the male model obtained acceptable alpha values, three fac-

tors with 4 and 5 items each, with significant factor loadings and acceptable contribution of explained variance. Besides the measure problems of emotional dysregulation present in all the short version scales (goals, strategies, and impulsivity) with the absence of dysregulation items that have shown to have problems, especially those related to conscience or awareness (e.g., Bardeen et al., 2012; Hallion, et al., 2018; Muñoz-Martínez, et al., 2016). It is important to remark that the factors of both models showed well-adjusted fit indexes (Table 2).

It should be noted that the results of the discriminant analysis (DA) yielded a high and equal Canonical Correlation (CC) for each group (0.93). For this reason, we also observed an excellent coefficient of determination (0.86) (only 14 percent of the variance remains unexplained) which can also be interpreted as a high effect size (0.86) (predictor and type of dysregulation). It is interesting to note that this value is unusual, as low and moderate values are usually reported. Furthermore, among the most striking findings, it was found that among men and women, the items that discriminate best to achieve a classification of group membership with the lowest possible error are those related to loss of control, for example, among men “when I get angry, I lose control” and among women “I get angry easily”. Finally, it should be noted that the brief scale of emotional dysregulation for Mexican high school students in public schools showed a correct classification (belonging to the dysregulation group) of one hundred percent, that is, without error, in both the male and female groups.

Conclusion

The final product of our study conformed to our expectations. To have a validated instrument that measures emotional dysregulation in samples of Mexican adolescents from public high schools and that at the same time has a high probability of classifying, with the least possible error, the risk of belonging to the high or low-risk group of dysregulations. Three interpretable factors were obtained for each sex, males with 14 items and females with 13 items with each item loading on only one factor, with good internal consistency values and acceptable fit indices. An additional advantage is that our validated instrument belongs to the “short version” modality, i.e., a brief scale (it takes approximately no more than five minutes) of rapid detection of risk emotional dysregulation (DERSR-B). There is a need for short instruments of valid measurement that can be used in large-scale studies or used as a clinical screener to detect individuals who may require more precise and intensive diagnostic evaluation. DERSR-B was also able to achieve a

high percentage of variance explained or significant effect size (R^2) and a high probability of classification without group membership error.

The most critical limitation of the present study is the impossibility of generalizing the results to the Mexican high school student population since we worked with incidental and non-random samples. Likewise, it is necessary to investigate the relationship of the DERSR-B with other measures already tested to obtain the convergent/divergent validity that complements the validation process carried out in the present work.

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