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PSYCHOMETRIC PROPERTIES OF THE FAMILY ALLOCENTRISM-IDIOCENTRISM SCALE WITH SPANISH ADOLESCENTS

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Abstract

Family allocentrism is defined as a specific collectivist attribute referring to the family in which family goals are given priority over personal ones. There is evidence that the relationship with the family contributes to psychological well-being. However, reliable measures for family allocentrism evaluation are needed. The objective of this study was to validate the Family Allocentrism-Idiocentrism Scale (FAIS; Lay et al., 1998) with Spanish adolescents and to examine its psychometric properties. A total of 695 students aged between 13 and 18 years participated. Confirmatory factor analysis supported the one-dimensional structure of the original model. The indices of internal consistency and test-retest reliability were adequate. The validity analyses showed positive and significant correlations with measures of collectivism, and negative or low correlations with measures of individualism and depression. Older adolescents were found to have lower levels of family allocentrism and general collectivism. No sex differences were found. This study validates an instrument to assess family allocentrism in a vulnerable population in the development of psychological problems.
KEY WORDS: *individualism-collectivism, family, FAIS, adolescents.*

Resumen

El colectivismo familiar se define como un atributo colectivista específico hacia la familia en el que se priorizan las metas familiares frente a las personales. Existen evidencias de que la relación con la familia contribuye al bienestar psicológico. Sin embargo, se carece de medidas fiables para evaluar el colectivismo familiar. El objetivo de este estudio fue validar con adolescentes españoles la "Escala de colectivismo-individualismo familiar" (FAIS; Lay *et al*., 1998) y examinar sus propiedades psicométricas. Participaron 695 escolares de entre 13 y 18 años de edad. El análisis factorial confirmatorio apoyó la estructura unidimensional del modelo original. Los índices de consistencia interna y fiabilidad test-retest fueron adecuados. Los análisis de validez ofrecieron correlaciones positivas y significativas con medidas de colectivismo, y negativas o bajas con medidas de individualismo y depresión. Se encontró que los adolescentes de mayor edad presentaban menores niveles de colectivismo familiar y colectivismo general. No se encontraron diferencias en función del sexo. Este estudio valida

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una herramienta dirigida a evaluar colectivismo familiar en una población vulnerable en el desarrollo de problemas psicológicos.
PALABRAS CLAVE: *familia, colectivismo-individualismo, FAIS, adolescentes.*

Introduction

The individualism-collectivism dimension refers to the level of independence of or cooperation with the group (Hofstede, 1980; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), and has been widely studied with the aim of determining cultural patterns (Chen & West, 2008). This dimension may vary between cultures and also between individuals (Triandis & Gelfand, 1998). A cultural group may be characterised by a certain level of individualism/collectivism, which may differ from the level of this dimension presented by each individual. In order to establish a conceptual difference between culture and individualism, Triandis (1989) called the individual level of collectivism "allocentrism", and the individual level of individualism "idiocentrism". Allocentrism is characterized by conformism, cooperation and the prioritization of group objectives and norms, whereas in idiocentrism, independence prevails and individual goals take precedence over group goals (Triandis, 1995; Triandis, Leung, Villareal, & Clack, 1985). Specifically, Lay et al. (1998) proposed the term *family allocentrism* to refer to a personal and specific collectivist attribute referring to the family. This phenomenon is defined as a high connection with the family, in which family norms and goals prevail over personal ones, and in which family relationships are characterized by warmth, closeness and support (Campos, Ullman, Aguilera, & Schetter, 2014).

The family constitutes an intermediary environment between society and the individual and is considered the most important group in the life and development of individuals (Georgas, 2006; Kagitçibasi, 1990). Although during the adolescence the family continues to be an important source of affection, trust and instrumental support (Lempers & Clark-Lempers, 1992), there is greater independence and autonomy from the family throughout this stage (Harter, 2006). In addition, adolescence is a critical period of development because 50% of mental health problems start before age 15, with a high probability of continuing into adulthood (Jaureguizar, Bernaras, Soroa, Sarasa, & Garaigordobil, 2015; Kim-Cohen et al., 2003).

Family allocentrism is related to psychological well-being, insofar as it facilitates closeness, perceived support and coping (Campos et al., 2014; Lay et al., 1998; Ptacek, 1996). A recent study conducted in Spain found that even in emerging adulthood, positive family relationships were associated with greater psychological adjustment (García-Mendoza, Parra, & Sánchez-Queija, 2017). A strong connection with the family acts as a buffer against the development of depressive symptoms (Smokowski & Bacallao, 2007; Stein, Gonzalez, Cupito, Kiang, & Supple, 2015) because there is an indirect relationship between the two variables (Campos et al., 2014). Li, Lis and Delvecchio (2016) found that high family allocentrism acted as a protective factor against depressive symptoms in Italian adolescents. Along the same lines, a strong family connection has been

related to positive aspects such as prosocial behaviour (Calderón-Tena, Knight, & Carlo, 2011) and well-being (Schwartz et al., 2010). In terms of gender, some authors believed that women might be more oriented towards maintaining family connections; however, after performing the analyses, no significant differences were found in terms of their family values (Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005).

There are some instruments to assess the relationship between the family and the individual. For example, the Interpersonal Assessment Inventory of Individualism-Collectivism (ICIAI; Matsumoto, Weissman, Preston, Brown, & Kupperbusch, 1997) evaluates this construct in terms of four groups: family, close friends, peers, and strangers. Similarly, the Individualism and Collectivism scale (INDCOL; Hui, 1988) offers scores according to six groups: spouse, parents/children, relatives, neighbours, friends and co-workers/classmates. Other scales developed to evaluate individualism-collectivism do so globally, without differentiating groups (Oyserman, Coon, & Kemmelmeier, 2002), for example, the Horizontal and Vertical Individualism-Collectivism Scale (INCOL; Singelis, Triandis, Bhawuk, & Gelfand, 1995). Although these scales are good approaches, and given that connection with the family is a specific variable, it is essential to understand and evaluate family allocentrism independently (Kirschner, 2009; Seidl-de-Moura, Ziviani, Oliva, Fioravanti-Bastos, & Ribas, 2013).

Based on the model of individualism-collectivism proposed by Triandis (1995), Lay et al. (1998) developed the Family Allocentrism-Idiocentrism Scale (FAIS) as a personal and specific measure of connectivity with the family, which presents good internal consistency in a sample of adult population in Canada (α= .84). Since its development, it has been widely used in different countries, promoting cross-cultural research (Sato, 2007; Seidl-de-Moura et al., 2013). Years after its development, Sato (2007) analyzed the validity and reliability of this unifactorial instrument in a Canadian adult sample (α= .84 and α= .93, internal consistency and test-retest, respectively). In terms of validity, high positive correlations were found between family allocentrism and the INCOL Collectivism subscales (Singelis et al., 1995), as well as negative or low relations between family allocentrism and Individualism subscales. These same links between the FAIS and the INCOL were found in a study conducted by Kirstchen (2009) with a university sample. In Brazil, the psychometric properties of the FAIS in Brazilian mothers have been studied (Seidl-de-Moura et al., 2013), but the authors proposed a two-factor structure. Recently, the scale has been validated in adolescent population in China and Italy (Li, Delvecchio, Lis, & Mazzeschi, 2018) obtaining acceptable indicators of goodness of fit for the unifactorial structure.

However, despite knowing the implications of allocentrism for psychological adjustment, few studies have been found that evaluate it in adolescent population, as most of them target adults (Li et al., 2016). In order to provide an empirical conceptualization and contribute to the generalization of the results, studies are needed to evaluate family allocentrism in different samples (Campos et al., 2014; Kirschner, 2009). In addition, it is essential to obtain consensus about instruments for the evaluation and operationalization of variables (Oyserman et al., 2002).

The FAIS is a one-dimensional instrument, widely used and made up of a small number of items, which has been shown to have good psychometric properties to evaluate family allocentrism. However, its properties in the adolescent population have hardly been studied and there are no studies aimed at determining the adequacy of the FAIS in the Spanish population or for Spanish-speakers. The objectives of this study consisted of: (1) analysing the psychometric properties of the FAIS in a sample of Spanish adolescents aged 13 to 18, including internal consistency, test-retest reliability, validity and factor structure; and (2) examining differences in family connectivity by gender and age. A good fit to the original one-factor model was expected, as well as good internal consistency, test-retest reliability and positive correlations with related measures, in accordance with previous studies (Kirstchen, 2009; Lay et al., 1998; Li et al., 2018; Sato, 2007). Because the need for independence and autonomy increases throughout adolescence, higher scores were expected in family allocentrism at earlier ages. However, no gender differences were expected.

Method

Participants

The sample was composed of 695 Spanish adolescents from two different geographic location in the province of Alicante. The participants (50.1% boys) were aged between 13 and 18 years (M= 15.18, SD= 1.22). The distribution by age was: 13 years (8.3%), 14 years (22.9%), 15 years (28.8%), 16 years (25.7%), 17 years (11.4%) and 18 years (2.9%). Of these participants, 91.5% were Spanish nationals, and 32.7% belonged to a low socioeconomic level, 39.4% to a medium level and 27.9% to a high level.

Instruments

a) *Family Affluence Scale III* (FAS-III; Torsheim et al., 2016). Back-translation procedure (Hambleton, 2005) was followed to translate this scale into Spanish. This scale is intended to assess the socio-economic status of the participants. It has been revised and updated to include current technological trends. Participants report how many cars, computers and bathrooms they have at home, whether they have a dishwasher and their own room and how many times they have travelled abroad (e.g., 'How many times did you travel abroad for holiday/vacation last year?'). The answers to these six questions provide a total score and distinguish between low (20%), medium (60%) and high economic affluence (80%) (Meinck, Cosma, Mikton, & Baban, 2017). The scale's validation included a wide geographical scope and yielded good psychometric properties.
b) *Family Allocentrism-Idiocentrism Scale* (FAIS; Lay et al., 1998). This scale consists of 21 items rated on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A higher score indicates higher family connection (allocentrism), whereas a lower score indicates higher idiocentrism. The psychometric properties of this scale in the original study were good (α= .84).

c) *Child Depression Inventory* (CDI; Kovacs, 1992). The Spanish version of this instrument was used (Del Barrio & Carrasco, 2004). This scale contains 27 items (e.g., item 1 'I'm always sad') that evaluate depressive symptoms (low self-esteem, depressed mood and social problems, among others). Response options indicate normality or absence of the symptom (0); some frequency or intensity (1); or unequivocal presence of the symptom (2). The maximum score is 54, indicating higher depressive symptomatology. The psychometric properties of this scale are good, obtaining adequate reliability in the present study (α= .86).

d) *Attitudinal Familism Scale* (AFS; Lugo-Steidel & Contreras, 2003). This scale was culturally adapted from the original version addressed to Latinos following the guidelines of Muñiz, Elosua and Hambleton (2013). This 18-item scale assesses beliefs and attitudes toward the family including family support, interdependence, family honour and subjugation (e.g., item 4 'A person should live near his or her parents and spend time with them on a regular basis'). The items are rated on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The maximum score is 90, and higher scores indicate a higher level of family interdependence. The internal consistency found in the present study was α= .83.

e) *Individualism and Collectivism Scale* (INCOL; Singelis et al., 1995). Although the scale originally consisted of 32 items, an adaptation to the adolescent population was made of the 16 items that showed a higher factorial load in the study carried out by Triandis and Gelfand (1998), following indications proposed by Muñiz et al. (2013). This scale is composed of four subscales (Vertical Individualism, Horizontal Individualism, Vertical Collectivism, and Horizontal Collectivism), each one including 4 items. The full 16-item scale is rated on a 9-point Likert scale (e.g., item 8 'It is my duty to take care of my family, even when I have to sacrifice what I want'). Internal consistency in the present study was: α= .48 (Horizontal Individualism), α= .72 (Vertical Individualism), α= .67 (Horizontal Collectivism), and α= .65 (Vertical Collectivism).

f) *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997). The Spanish version of the SDQ available at http://www.sdqinfo.org was used in this study. The SDQ is composed of five subscales and for this study the externalizing problems subscale was used. It is made up of 25 items rated on a 3-point Likert-type scale (e.g., item 5 'I get very angry and often lose my temper'): 0 (*Not true*), 1 (*Somewhat true*), and 2 (*Certainly true*). This tool evaluates four difficulties: hyperactivity, behavioral problems, emotional symptoms and peer problems, and one strength (prosocial behavior). The hyperactivity and behavioral subscales addition allows to obtain a score of externalizing problems. Internal consistency of the externalizing problems subscale was adequate (α= .70).

Procedure

A letter was sent to the principals of secondary schools informing about the purpose of the study and the implications of collaboration in it. After answering questions by telephone, the management teams confirmed their participation in the study. High schools provided written informed consent for the parents. In addition, the adolescents gave their written assent to participate in the study. No incentives were offered to the participants. The application of the self-reports was carried out collectively in groups of 10 to 33 adolescents during two 50-minute sessions during school hours, which favoured a high participation rate (96%). Two evaluators, previously trained in the application of the tests, remained in the classroom to assist the participants in any questions that might arise. The administration was carried out with the support of responsible researcher for the study. After analyzing the results coming from the CDI, if any adolescent manifested severe depressive symptomatology or possibility of suicide, the psychopedagogical team of the center was informed and carried out the pertinent actions. In addition, these young people were offered free psychological treatment. The ethics committee's approval for this study was provided by the Miguel Hernández University (DPS.JPE.01.18).

After obtaining the consent of the authors, the FAIS was translated from English into Spanish using the back-translation method suggested by Hambleton (2005). The scale was translated by two bilingual psychologists. One translated the scale into Spanish and then the other translated it back into English. The process was completed after correcting minor differences detected between the two versions.

Data analysis

Descriptive analyses were carried out for each item of the FAIS. Before performing the analyses, 3.79% of the missing values of the FAIS were replaced by the median. Reliability was estimated using the polychoric Cronbach alpha for ordinal data for the total scale. Because resources were limited, a subsample of 247 participants (35%) completed the questionnaire after eight weeks in order to test the temporal stability of the FAIS. Intraclass correlation coefficients (ICC) for the rest-retest reliability of the questionnaire were calculated. Acceptable values of ICC were set at .60 or above, as recommended by Baumgartner and Chung (2001). Equivalence in the FAIS, the INCOL, CDI, AFS, externalizing symptoms subscale of the SDQ and sociodemographic variables between participants who responded to the retest and those who did not was explored using *t*-test for quantitative data and cross-tab and the chi-square statistic for categorical data. Confirmatory factor analyses (CFA) was performed in *R* Studio environment (R Studio Team, 2016). The weighted least square mean and variance adjusted (WLSMV) was used, which is a robust estimator highly recommended when normality is not met and it provides the best option for modelling ordinal data (Brown, 2006). The goodness-of-fit of the data to the unifactorial model was established through the comparative fit index (CFI) and Tucker-Lewis index (TLI) with values ≥ .90, and the root mean square error of approximation (RMSEA) with

a value≤ .08 (Hu & Bentler, 1999). Because of the lack of normality of the sample distribution in the FAIS scores –confirmed through the Kolmogorov-Smirnov test (Steinskog, Tjøstheim, & Kvamstø, 2007)–, non-parametric correlations (Spearman's rho) were used to determine the criterion validity. Bivariate correlations between the FAIS and the INCOL subscales were calculated. Data analyses were performed with SPSS 25.0 (IBM Corporation, 2017) and Lavaan package in *R* Studio (Rosseel, 2011).

Results

Confirmatory factorial analysis

First, descriptive statistics were calculated for each item of the FAIS: item-test correlations, means and standard deviations (Table 1). CFA was performed to examine whether the structure of the FAIS in a sample of Spanish adolescents fit the one-dimensional model proposed in the original study. The results revealed a good fit for the single factor structure: $\chi^2_{(189)}$= 595.29, CFI= .93, TLI= .93, RMSEA= .05, 95% CI [.051, .061]. The contribution of item 18 was very low, so the fit to the model was analysed eliminating this item, obtaining the following fit indexes for the unifactorial model: $\chi^2_{(189)}$= 501.32, CFI= .95, TLI= .94, RMSEA= .05, 95% CI [.048, .058]. The factor loadings of all items exceeded the value of .30 (Table 2).

Table 1
Psychometric characteristics of the Family Allocentrism-Idiocentrism Scale (FAIS)

Item	*M*	*SD*	$r_{it}{}^{c}$	α-i
Item 1	3.58	0.06	.35	.80
Item 2	3.26	1.11	.40	.79
Item 3	2.81	1.17	.29	.80
Item 4	4.36	0.90	.42	.79
Item 5	3.93	0.93	.43	.79
Item 6	3.26	1.28	.37	.80
Item 7	4.18	0.90	.77	.77
Item 8	2.97	1.13	.52	.79
Item 9	4.08	0.92	.56	.78
Item 10	2.50	1.17	.45	.79
Item 11	4.06	1.01	.58	.78
Item 12	3.23	1.30	.60	.78
Item 13	3.19	1.13	.60	.78
Item 14	3.96	0.92	.37	.80
Item 15	2.65	1.25	.40	.79
Item 16	4.20	1	.65	.78
Item 17	3.01	1.30	.37	.80
Item 18	2.75	1.08	.05	.81
Item 19	3.92	1.10	.45	.79
Item 20	3.88	1.04	.48	.79
Item 21	2.87	1.02	.22	.80
ICC (CI)	.74 (0-68, 0.79)			

Note: $r_{it}{}^{c}$= corrected item-total correlation; α-I= ordinal alpha if the item is removed; ICC= intraclass correlation; CI=confidence interval.

Table 2
Confirmatory factor analysis: factor loadings (*N*= 695)

Item	SFL
1. I am very similar to my parents. *Me parezco mucho a mis padres.*	.86
2. I work hard at school to please my family. *Me esfuerzo en los estudios para complacer a mi familia.*	.88
3. I follow my feelings even if it makes my parents unhappy. *Hago lo que me dictan mis sentimientos aunque disguste a mis padres.*	.96
4. I would be honored by my family's accomplishments. *Me sentiría orgulloso por los logros de mi familia.*	.67
5. My ability to relate to my family is a sign of my competence as a mature person. *Mi capacidad para comprender a mi familia es un signo de mi madurez.*	.77
6. Once you get married your parents should no longer be involved in major life choices. *Una vez que te casas o te independizas tus padres ya no deberían implicarse en tus decisiones importantes de la vida.*	.93
7. The opinions of my family are important to me. *Las opiniones de mi familia son importantes para mí.*	.45
8. Knowing that I need to rely on my family makes me happy. *El hecho de aceptar que dependo de mi familia me alegra.*	.76
9. I will be responsible for taking care of my aging parents. *Yo seré responsable de cuidar a mis padres cuando sean mayores.*	.70
10. If a family member fails, I feel responsible. *Si un miembro de la familia fracasa en algo, me siento responsable.*	.84
11. Even when away from home, I should consider my parents' values. *Incluso cuando esté fuera de casa, debería tener en cuenta los valores de mis padres.*	.59
12. I would feel ashamed if I told my parents "no" when they asked me to do something. *Me sentiría avergonzado si les dijera a mis padres "no" cuando me pidieran que haga algo.*	.76
13. My happiness depends on the happiness of my family. *Mi felicidad depende de la felicidad de mi familia.*	.67
14. I have certain duties and obligations in my family. *Tengo ciertas responsabilidades y obligaciones en mi familia.*	.83
15. There are a lot of differences between me and other members of my family. *Existen muchas diferencias entre otros miembros de mi familia y yo.*	.95
16. I think it is important to get along with my family at all costs. *Creo que es importante llevarme bien con mi familia, cueste lo que cueste.*	.51
17. I should not say what is on my mind in case it upsets my family. *No debería decir lo que pienso si puede molestar a mi familia.*	.90
18. My needs are not the same as my family's. *Mis necesidades no son las mismas que las de mi familia.*	.98
19. After I leave my parents' house, I am not accountable to them. *Si me marcho de casa de mis padres, ya no les debo dar explicaciones sobre las cosas que me ocurren.*	.85
20. I respect my parents' wishes even if they are not my own. *Respeto los deseos de mis padres incluso si no coinciden con los míos.*	.78
21. It is important to feel independent of one's family. *Es importante sentirse independiente de la familia.*	.95

Note: SFL= standardized factor loadings.

Internal consistency and test-retest reliability

The internal consistency of the Spanish version of the FAIS was adequate (α= .80). Eight weeks after the first evaluation, the scale was again administered to a subsample of 247 participants (35%), of whom 51.4% were boys and the mean age was 15.49 years (*SD*= 1.07), obtaining a test-retest reliability index of .74. Adolescents who responded to the retest evaluation were equivalent to peers who did not respond in terms of gender (*p*= .59), nationality (*p*= .09), FAIS scores (*p*= .06), INCOL subscales (*p*> .05), CDI (*p*= .10), AFS (*p*= .07), externalizing symptoms subscale of the SDQ (*p*= .23), except for age ($p \leq .001$) and socioeconomic status ($p \leq .001$). The participants who responded to the retest were older than those who did not (*d*= .41), and a higher proportion of them belonged to a high socioeconomic level (*d*= .38) than those who did not respond to the retest.

Criterion validity

Spearman correlation coefficients were calculated between the FAIS, INCOL, AFS, externalizing problems subscale of SDQ and CDI in order to determine the validity of the scale (Table 3).

Table 3
Spearman correlations between the Family Allocentrism-Idiocentrism Scale (FAIS) and subscales of INCOL, AFS and CDI

Instruments/Variables	FAIS
Individualism and Colectivism Scale (INCOL)	
Horizontal individualism	-.05
Vertical individualism	.01
Horizontal collectivism	.30**
Vertical collectivism	.56**
Attitudinal Familism Scale (AFS)	.61**
Children Depression Inventory (CDI)	-.18**
Strengths and Difficulties Questionnaire (SDQ)	
Externalizing symptoms	-.25*

Note: *Correlation is significant at the .05 level (2-tailed); **Correlation is significant at the .01 level (2-tailed).

The correlations between the FAIS and related measures (AFS and the INCOL Horizontal and Vertical Collectivism subscales) were direct, moderate and significant. On another hand, the correlation between the FAIS and an unrelated measure (SDQ externalizing symptoms subscale) was negative and significant; while the correlation between FAIS and INCOL Horizontal and Vertical Individualism subscales were practically nil or negative but nonsignificant. In addition, a low negative correlation was obtained between family allocentrism and depressive symptoms (CDI).

Gender and age differences

Older participants tended to have lower scores in the FAIS (ρ= -.12, p= .001), INCOL Collectivism-Horizontal (ρ= -.13, $p\leq$ .001), and INCOL Collectivism-Vertical (ρ= -.10, p= .009), although they obtained a higher score on INCOL Individualism-Horizontal (ρ= .09, p= .01) and INCOL-Individualism-Vertical (ρ= .07, p= .04) than the younger participants. The effect size of the correlations was small. Regarding the gender, no significant differences were found in the studied variables (FAIS, INCOL subscales, AFS, CDI and the externalizing symptoms subscale of the SDQ) (Table 4).

Table 4
Mean and standard deviation by gender

Instruments/Variables	Total		Male		Female		M *vs.* F *t*-test
	M	*SD*	*M*	*SD*	*M*	*SD*	
FAIS	72.1	9.62	72.56	9.93	72.47	9.32	0.09
INCOL							
Horizontal individualism	24.11	5.36	24.04	5.44	24.18	5.29	-0.14
Vertical individualism	16.67	6.95	17.15	6.91	16.19	6.96	0.95
Horizontal collectivism	25.99	5.48	25.82	5.46	26.16	5.50	-0.34
Vertical collectivism	28.09	5.20	28.16	5.05	28.02	5.34	0.29
AFS	51.83	8.24	52.06	8.14	51.60	8.35	0.45
CDI	12.54	6.88	12.28	6.88	12.80	6.88	-0.52
SDQ- Externalizing symptoms	6.96	3.23	7.06	3.37	6.86	3.09	0.40

Note: FAIS= Family Allocentrism-Idiocentrism Scale; INCOL= Individualism and Collectivism Scale; AFS= Attitudinal Familism Scale; CDI= Children Depression Inventory; SDQ= Strengths and Difficulties Questionnaire.

Discussion

The objective of this study was to analyse the psychometric properties of the FAIS among Spanish adolescents aged between 13 and 18 years. An additional objective was to analyse possible differences in family allocentrism according to gender and age. The outcomes indicated good internal consistency of this instrument, acceptable test-retest reliability, good fit to the unifactorial model and adequate criterion validity. Significant differences were found by age, but not by gender.

Lay et al. (1998) proposed a one-dimensional measure of the FAIS to assess family allocentrism. Previous studies corroborated the one-factor model (Li et al., 2018) in Chinese and Italian adolescent samples. However, in the study with Brazilian mothers, the exploratory factor analysis generated a two-factor model (Seidl-de-Moura et al., 2013). The results found in our study provided a favourable fit to the original model. The contribution of Item 18 was very low. However, it was decided to maintain it because its elimination did not imply major improvements in internal consistency rates and goodness of fit. In addition, the maintenance of the original scale was justified by the possibility of further cross-

cultural studies. Only three total scale items correlated with the factor below .30. All the factorial loads obtained in the present study were moderate-high, and slightly higher than those of the study by Li et al. (2018).

The internal consistency obtained in this study was adequate and similar to that found in the original study by Lay et al. (1998) and to that found by Sato (2007). In the study conducted with a sample of Brazilian mothers (Seidl-de-Moura et al., 2013), this index was moderate. On another hand, the test-retest reliability index was acceptable, although lower than that obtained by Sato (2007). Differences in age and socioeconomic status between the participants in the total sample and the sample that participated in the retest evaluation may have influenced the temporal stability of the instrument. However, temporal reliability is moderate, according to Baumgartner and Chung (2001).

Data from the FAIS validity analysis were consistent with those found by Sato (2007) and Kirschner (2009). Adolescents with higher levels of family allocentrism (FAIS) also had a more collectivist orientation (INCOL). On another hand, adolescents with higher levels of individualism (INCOL) had less connection to the family (FAIS). In addition, higher levels of family allocentrism (FAIS) were found to be associated with lower depressive symptoms (CDI), and lower externalizing symptoms, such a behavioural problems or hiperactivity. Li et al. (2018) also found significant links between the FAIS and depressive symptoms and psychological difficulties. The positive correlation between the FAIS and another family connection scale (AFS) was the highest. These data support the validity of the instrument. On another hand, the mean score obtained in this study in family allocentrism (*M*= 72.51, *SD*= 9.62) was similar to that obtained in the study conducted by Sato (2007) in adult population (*M*= 69.47, *SD*= 10.59). Although they are not comparable because the samples involve different ages, the level of connection to the family is similar. In terms of gender, in line with the results found by Updegraff et al. (2005), no gender differences were found in connection to the family. However, it was possible to confirm that younger adolescents showed a tendency to have higher levels of family allocentrism, although the effect size was low.

Among the limitations of this work is that it was carried out with a non-random sample, which restricts the generalization of the results. On another hand, it is not known whether the FAIS is a valid and reliable instrument to evaluate family allocentrism in clinical population because it has only been studied in a community sample. Although the reliability data found are good, the samples that allowed obtaining a test-retest reliability index differed slightly in age and socioeconomic level. However, despite the limitations, the psychometric analyses carried out and the full analysis of the validity of the FAIS suggest that it is an appropriate instrument for the population studied. In order to determine possible changes over time, longitudinal studies would be necessary, as well as the participation of all the family members in order to obtain broader knowledge of family dynamics and possible relationships with psychological problems (Campos et al., 2014).

In conclusion, the results obtained indicate that the FAIS is an adequate instrument to assess family allocentrism in Spanish adolescents. The empirical

support that reveals the family as a protective factor against the development of depressive problems reaffirms the importance of its study. The high comorbidity between different disorders—for example, anxiety and depression (Al-Asadi, Klein, & Meyer, 2015; Cummings, Caporino, & Kendall, 2014)—and their great impact on the lives of adolescents (Flink, Beirens, Butte, & Raat, 2014) suggest the need to study possible common underlying factors or causes that contribute to the etiology and maintenance of these problems (Lovibond & Lovibond, 1995), one of which is family allocentrism.

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