



Anuario de

Psicología

The UB Journal of Psychology | 52/2



UNIVERSITAT DE
BARCELONA

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Anuario de Psicología

N.º 52/2 | 2022 | págs. 190-200

Enviado: 2 de febrero de 2021

Aceptado: 12 de abril de 2021

DOI: 10.1344/ANPSIC2022.52/2.8

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Psychometric properties of the Perceived Parental Autonomy Support Scale (P-PASS) in Spanish late-adolescents

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Abstract

This study analyzed psychometric characteristics of the Spanish version of the Perceived Parental Autonomy Support Scale (P-PASS), a self-report questionnaire designed to assess adolescents' perception of parental autonomy support. Confirmatory factor analyses demonstrated the hypothesized two-factor structure of the P-PASS, indicating the distinction between parental autonomy support and controlling parenting. Moreover, convergent validity was confirmed by theoretically consistent associations between the P-PASS and other measures of parental psychological control. Results confirmed that parental autonomy support was a different dimension from overprotection and care. The findings from the hierarchical regression demonstrated the contributions of parental autonomy support and parental control to the development of self-concept. Effect sizes findings highlight the upper weight of students' perception of parents' behaviors on their family, social and physical self-concept.

Keywords

Parental autonomy support, parental control, self-concept, adolescence, effect sizes.

Propietats psicomètriques de l'escala de percepció del suport a l'autonomia en una mostra d'adolescents tardans espanyols

Resum

Aquest treball va analitzar les característiques psicomètriques de l'escala de percepció del suport parental a l'autonomia (*perceived parental autonomy support scale*, P-PASS) (versió espanyola), autoinforme que avalua la percepció dels adolescents sobre el suport parental a l'autonomia. L'anàlisi factorial confirmatòria va revelar dos factors diferenciats de la P-PASS: el suport a l'autonomia i el control parental. A més, la validesa convergent es va confirmar per l'associació consistent entre la P-PASS i altres mesures de control psicològic parental. També es va confirmar que el suport a l'autonomia parental és una dimensió diferent de la sobreprotecció i la cura. La regressió jeràrquica va revelar la contribució de la percepció del suport a l'autonomia i el control parental en l'autoconcepte adolescent. Es va mostrar un major pes de la conducta dels pares, percebuda pels adolescents, sobre els autoconceptes familiar, social i físic.

Paraules clau

Suport a l'autonomia parental, control parental, autoconcepte, adolescència, intensitat dels efectes.

Propiedades psicométricas de la Escala de Percepción de Apoyo a la Autonomía en una muestra de adolescentes tardíos españoles

Resumen

Este trabajo analizó las características psicométricas del Perceived Parental Autonomy Support Scale (P-PASS), versión española, autoinforme que evalúa la percepción de los adolescentes sobre el apoyo parental a la autonomía. El análisis factorial confirmatorio reveló dos factores del P-PASS, diferenciando entre el apoyo a la autonomía y el control parental. Además, la validez convergente se confirmó por la asociación consistente entre el P-PASS y otras medidas de control psicológico parental. También se confirma que el apoyo a la autonomía parental es una dimensión diferente de la sobreprotección y el cuidado. La regresión jerárquica reveló la contribución de la percepción del apoyo a la autonomía y el control parental en el autoconcepto adolescente. Se mostró un mayor peso de la conducta de los padres, percibida por los adolescentes, sobre los autoconceptos familiar, social y físico.

Palabras clave

Apoyo a la autonomía parental, control parental, autoconcepto, adolescencia, tamaño de los efectos.

PARENTAL AUTONOMY SUPPORT VERSUS PARENTAL CONTROL

Previous research on parenting educational styles has made a distinction between psychological control and behavioral control (Barber, 1996; Tur *et al.*, 2015). Psychological control refers to parental behaviors that interfere in children's thoughts and feelings predicting increased internalizing problems. Behavioral control is defined as the parents' attempts to regulate children's behavior, and this parental dimension has positive effects on children's and adolescents' well-being (Bean *et al.*, 2006). This differentiation between a control that is coercive (psychological control) and a control that guides and monitors (behavioral control) has caused many problems in interpreting the results of research because the term "control" has been used to refer to both ideas interchangeably and, consequently, the measures have been confusing and mixed (Griffith & Grolnick, 2014; Grolnick & Pomerantz, 2009).

To overcome these contradictions, Grolnick & Pomerantz (2009) proposed a new definition of "parental control", suggesting that the term only be used to describe dominant and coercive parental behaviors. Controlling parents undermine the development of autonomy because they use controlling tactics to get their children to behave the way they want. Autonomy support is the opposite pole to control. Autonomy supportive parents

promote the development of a sense of volition in one's actions because they allow their children to choose whenever possible, and support them so that they act in accordance with their personal values and interests (Griffith & Grolnick, 2014). In recent research, autonomy support has been operationalized in four key strategies. First, empathy, or recognition and understanding the child's perspective. Second, providing a rationale for rules and demands. Third, offering choices whenever possible; and fourth, opening exchanges avoiding controlling language (Grolnick *et al.*, 2014). It is also important to note that parents who promote autonomy may convey disapproval of some children's behaviors but should also convey to children the idea that they are disappointed with their actions, not with the child as a person. So, they must convey the idea that they love them but are disappointed in some behaviors.

In Grolnick *et al.* (2014), autonomy support was examined in academic, unsupervised time, and responsibilities domains. The authors concluded that there was good reliability and coherence for the four components of autonomy support that were measured with a semi-structured interview. Further autonomy support was associated with several competence outcomes, especially in the academic and responsibilities domains. Other studies found sim-

ilar results. Grolnick *et al.* (2015; see also Joussemet *et al.*, 2005) found that autonomy support predicted some academic competences such as perceived academic competence and autonomous motivation.

With regard to the social domain, parental autonomy support was negatively related to externalizing problem behavior (Skinner *et al.*, 2005) and delinquent friends (Sher-Censor *et al.*, 2011), and positively related to social competence (Skinner *et al.*, 2005). In the domain of psychological well-being, autonomy supportive parenting was negatively associated with depression (Ahmad & Soenens, 2010; Griffith & Grolnick, 2014; Sher-Censor *et al.*, 2011) and self-criticism (Ahmad & Soenens, 2010), but was positively correlated with self-worth (Sher-Censor *et al.*, 2011; Skinner *et al.*, 2005) and general well-being (Costa *et al.*, 2016; Van der Kaap-Deeder *et al.*, 2017).

Similarly, studies that have used the Perceived Parental Autonomy Support Scale (P-PASS) (Bureau & Mageau, 2014) to measure autonomy supportive parenting have found positive correlations between perceived parental autonomy support and positive outcomes, such as life satisfaction, self-esteem, and positive affect (Mageau *et al.*, 2015), identification with the honesty value (Bureau & Mageau, 2014), or feelings of need satisfaction and vitality (Costa *et al.*, 2016).

The current study

Our intention in this study was to validate the Spanish version of the Perceived Parental Autonomy Support Scale (P-PASS) with Spanish-speaking late adolescents. This scale is a multidimensional measure that accurately defines the construct “parental autonomy support versus control” and helps overcome some of the problems brought about by the terminological confusion associated with the construct parental control. So, in this instrument controlling parenting was operationalized as (a) threatening to punish the child, (b) inducing guilt, and (c) encouraging performance goals. Autonomy supportive parenting was operationalized as (a) offering choice within certain limits, (b) explaining the reasons behind requirements, rules and limits, and (c) being aware of, accepting, and recognizing the child’s feelings.

Previous studies have supported the psychometric properties of P-PASS. Mageau *et al.* (2015), showed this instrument to be a useful and reliable scale for assessing autonomy supportive versus controlling parenting, providing effective differentiation between the two components. Cronbach’s alphas confirm the internal consistency of the P-PASS, and convergent validity was confirmed by correlation patterns between the P-PASS and measures of psychological control and other family components. Bureau & Mageau (2014) confirmed both the second-order factor structure and the internal consistency of P-PASS. The correlation patterns between the P-PASS subscales

and the Psychological Control Scale (PCS-YSR) supported their convergent validity. Finally, Costa *et al.* (2016) showed that the Italian version of P-PASS also supported its psychometric properties. The internal consistency was good and the CFA indicated a good model fit for maternal and paternal perception.

So far, the P-PASS has only been translated into Italian (Costa *et al.*, 2016). As long as there are no studies with a Spanish sample and only two adaptations to Canadian and Italian culture are available, it seems necessary to validate the P-PASS in different linguistic and cultural backgrounds countries. Thus, the current study assessed the factorial and convergent validity and reliability of a Spanish version of the Perceived Parental Autonomy Support Scale (P-PASS) with a sample of late adolescents. We expected to replicate the two-factor structure of the P-PASS (autonomy supportive and controlling parenting) and to find similar patterns of associations between P-PASS and other measures of family dimensions. In addition, we expected that both mothers’ and fathers’ autonomy support would positively influence self-concept in late-adolescents.

METHOD

Participants

Population of 21,000 students, and error of 5%, the appropriate size sample was between 392 and 277 (Faul *et al.*, 1992-2020). Finally, the students participating were $N = 368$ from four degrees (Pedagogy, Primary Teaching, Engineering, and Computing) at public universities. Regarding academic year, 54.6% were freshman, 25.5% sophomore and 19.9% junior students. Over half (230) were women (62.7%) and 137 were men (37.3%) (one student failed to indicate the sex). The mean age was 19.80, $SD = 2.11$, but age data was lacking for 20 students. The age distribution was not normal, with absolute skewness and kurtosis values above 1, but equal variance was assumed ($F_{(1,346)} = 0.508, p = .476$). Parents, ($N = 668$), school level: 36% primary school, 40% secondary education, and 24% degree studies. Additionally, the parents’ marital status was: 84.7% married, 6.6% divorced, 3.1% widow, 2.5% living as a couple, 2.1% single and 1% separated. Also, the parents’ labor situation had the following distribution: 58.7% full time, 13.8% housekeeper, 9.8% part time, 9.1% retired, 8.4% unemployment, and 0.2% missing.

It is a non-experimental type cross-sectional predictive study (Johnson, 2001; Ato *et al.*, 2013), the sampling technique used was convenience and snowball sampling, the target were youth and legal age, some students participated because they were informed by their peers. Families had estimated medium socioeconomic status from urban and rural surroundings.

Procedure

Data were collected during lectures. After a brief presentation in which the researcher described the purpose of the study, the students gave their informed consent filling out the questionnaire. Everyone participated voluntarily in the data collection, and there was no remuneration or course credits for participation. The questionnaire took about 20 minutes to complete. Anonymity of answers was guaranteed.

The team developed an initial Spanish translation of the original version of each of the scales. Once completed, this initial version of different scales was assessed by two independent experts in parenting educational styles. Then, this Spanish translation was sent to a bilingual translator, who did not have prior knowledge of the original versions, in order to back-translate the Spanish versions. As **Table 1** depicts, only item 13 was adapted to Spanish culture.

Measures

Perceived Parental Autonomy Support Scale (P-PASS) (Mageau *et al.*, 2015). Consists of 24 items assessing perceived autonomy support (PAS) versus parenting control (PPC) in the past. Adolescent participants rated each item on a 7-point Likert-scale (from “Do not agree” to “Very Strongly Agree”). Participants completed one scale about their mothers, and another about their fathers. Original version reliability ranged from .89 to .94 from mothers and fathers.

Other measures. In order to validate the P-PASS, we assessed two complementary measures of psychological control and one measure of parenting care and overprotection. In addition, we measured one indicator of late adolescents’ psychological adjustment: self-concept.

Psychological Control Scale-Youth Self-Report (PCS-YSR) (Barber, 1996) and *Psychological Control-Disrespect Scale (PCDS)* (Barber *et al.*, 2012). The first scale consists of 8 items that assess psychological control and participants completed one scale about their mothers, and another about their fathers. The Cronbach’s alpha value in the Spanish sample was .80 for mothers, and .83 for fathers. The second scale consists of 8 items that assess a type of psychological control that communicates to the adolescents that they were not respected as individuals. In the Spanish mothers’ scale, the internal consistency was .84; and in the Spanish fathers’ scale, the alpha value was .85. In both scales items were rated on a 3-point scale, the participants rated the items separately for each parent (Rodríguez-Menéndez *et al.*, 2021).

Parental Bonding Instrument (Parker *et al.*, 1979). This scale assesses two dimensions of parenting: care and overprotection. The overprotection scale consists of 13 items, and the care scale consists of 12 items. The internal consistency through Cronbach values in the Spanish version was .86 in the father’s scale and .82 in the mother’s scale.

AF5. Autoconcepto Forma 5 (García & Musitu, 1999).

This instrument assesses a person’s self-concept in five aspects: social, academic, emotional, family, and physical. Participants answered 30 items. The reliability (Cronbach values) of the overall Spanish version scale is .82; and by each self-concept academic/professional life, $\alpha = .88$; social, $\alpha = .70$; emotional, $\alpha = .73$; family, $\alpha = .77$ and physical, $\alpha = .74$.

DATA ANALYSIS

Following the original version (Mageau *et al.*, 2015), exploratory factor analyses (EFA) and confirmatory factor analyses (CFA) were carried out to test the psychometric characteristics of P-PASS for fathers and for mothers. Firstly, the sample was divided into two subsamples to minimize measurement errors, through the SPSS tools: random number generator and random sample of cases from “data-select cases” menu. EFA samples were $n_p = 187$ and $n_m = 174$; CFA samples were $n_p = 158$ and $n_m = 194$; 23 missing in the fathers version. The EFA was performed using the Factor program. We ran a CFA using MPLUS 7.3 software (Muthén & Muthén, 1998-2012), with the second subsample to test the structure given by the EFA.

Convergent and divergent validity was analyzed. The former by Pearson’s correlations run between P-PASS, PCS-YSR, PCDS, and the latter with correlations between P-PASS and PBI which can ensure content validity from the perceived autonomy support dimension. Hierarchical regression analyses allowed the effect of P-PASS on students’ self-concept to be assessed. The effect sizes were calculated with the Cohen f^2 (Cohen, 1988).

Finally, repeated measures T-test was done to compare the students’ perception about the rates of father and mothers.

RESULTS

Factor structure. The EFA was performed using unweighted least squares as the factor extraction method. Promin was the oblique rotation method employed (Lorenzo-Seva, 1999). The fit model measures included: the chi-square test of significance (χ^2), the Tucker Lewis index (TLI), the comparative fit index (CFI), the goodness of fit index (GFI), Root Mean Square of Residuals (RMSR), Standardized Root Mean Square Residual (SRMR), and Steiger’s Root Mean Square error of approximation (RMSEA). To accept the model the cut off indexes must be higher than 0.90 for TLI, CFI, GFI, and lower than .08 in RMSEA and SRMR.

Table 1 depicts loadings in each factor. For fathers’ perceptions, the necessary criteria for the EFA were met, Bartlett’s statistic = 2,069.0, $df = 276$, $p = .000010$, and

Table 1. Factor loadings for Perceived Parental Autonomy Support Scale (P-PASS), reliability, Fathers' items / Mothers' items

Items	Loadings	Mean	Variance	% of Variance	Reliability
PAS				37/33	.97/.98
<i>Offering choice within certain limits</i>					.93/.86
1. Mis progenitores me daban oportunidades de tomar mis propias decisiones sobre lo que estaba haciendo [My parents gave me many opportunities to make my own decisions about what I was doing]	.61/.60	5.63/5.54	1.88/2.24		
4. Mi punto de vista era muy importante para mis progenitores cuando tenían que tomar decisiones importantes que me concernían [My point of view was very important to my parents when they made important decisions concerning me]	.74/.78	4.85/5.02	3.17/2.72		
8. Con ciertos límites, mis progenitores me permitían tener libertad para que eligiera mis propias actividades [Within certain limits, my parents allowed me the freedom to choose my own activities]	.61/.63	5.59/5.81	2.19/1.59		
14. Mis progenitores esperaban que pudiera tomar decisiones que correspondieran con mis intereses y preferencias en vez de con los suyos [My parents hoped that I would make choices that corresponded to my interests and preferences regardless of what theirs were]	.68/.66	5.41/5.22	2.24/2.45		
Explaining the reasons behind the demands, rules, and limits					.94/.82
2. Cuando mis progenitores me pedían hacer algo, me explicaban el por qué querían que lo hiciera [When my parents asked me to do something, they explained why they wanted me to do it]	.64/.71	4.72/4.88	2.36/2.37		
9. Cuando no me permitían hacer algo, normalmente sabía por qué [When I was not allowed to do something, I usually knew why]	.62/.61	5.10/5.13	2.16/2.32		
19. Mis progenitores se aseguraban de que entendía por qué me prohibían ciertas cosas [My parents made sure that I understood why they forbid certain things]	.66/.60	4.53/4.87	3.18/2.66		
23. Cuando preguntaba por qué podía, o no, hacer algo, mis progenitores me daban buenos motivos [When I asked why I had to do, or not do, something, my parents gave me good reasons]	.84/.72	4.65/4.87	2.48/2.89		
Being aware of, accepting, and recognizing the child's feelings					.90/.89
7. Mis progenitores me alentaban (animaban) a ser yo mismo [My parents encouraged me to be myself]	.68/.72	5.97/5.94	1.82/2.16		
13. Mis progenitores eran capaces de ponerse en mi lugar y entender mis sentimientos [My parents were able to put themselves in my shoes and understand my feelings]	.77/.73	4.72/4.96	2.48/2.88		
16. Mis progenitores estaban abiertos a mis sentimientos y pensamientos, incluso cuando eran diferentes a los suyos [My parents were open to my thoughts and feelings even when they were different from theirs]	.79/.59	5.03/5.24	2.92/2.97		
24. Mis progenitores escuchaban mi opinión y punto de vista cuando no estaba de acuerdo con ellos [My parents listened to my opinion and point of view when I disagreed with them]	.68/.66	4.97/4.97	2.77/3.06		

Table 1. Factor loadings for Perceived Parental Autonomy Support Scale (P-PASS), reliability, Fathers' items / Mothers' items

PPC				9/10	.93/.94
<i>Threatening to punish the child</i>					
3. Cuando me negaba a hacer algo, mis progenitores me amenazaban con quitarme ciertos privilegios con el fin de que lo hiciera [When I refused to do something, my parents threatened to take away certain privileges in order to make me do it]	.08/.35	4.02/4.40	3.06/3.46		.93/.86
10. Siempre tenía que hacer lo que mis progenitores querían que hiciese, si no, trataban de quitarme privilegios [I always had to do what my parents wanted me to do, if not, they would threaten to take away privileges]	.29/.51	2.72/2.79	2.55/3.03		
15. Cuando mis progenitores querían que hiciera algo, tenía que obedecer o si no, sería castigado [When my parents wanted me to do something, I had to obey or else I was punished]	.32/.44	3.44/3.61	3.06/2.90		
20. Tan pronto como no hacía lo que mis progenitores querían, amenazaban con castigarme [As soon as I didn't do exactly what my parents wanted, they threatened to punish me]	.36/.47	2.70/2.93	2.52/2.74		
<i>Inducing guilt</i>					
6. Cuando mis progenitores querían que hiciera algo de manera diferente, me hacían sentirme culpable [When my parents wanted me to do something differently, they made me feel guilty]	.73/.74	2.00/1.88	2.12/1.91		.92/.83
12. Mis progenitores me hacían sentirme culpable por cualquier cosa [My parents made me feel guilty for anything and everything]	.76/.56	1.49/1.45	1.25/0.90		
18. Cuando mis progenitores querían que actuara de manera diferente, me hacían sentir avergonzado para hacerme cambiar [When my parents wanted me to act differently, they made me feel ashamed in order to make me change]	.68/.57	1.57/1.58	1.40/1.45		
21. Mis progenitores usaban la culpa para controlarme [My parents used guilt to control me]	.58/.74	1.74/1.77	1.68/1.86		
<i>Encouraging performance goals</i>					
5. Mis progenitores se negaban a aceptar que podía querer simplemente divertirme, sin intentar ser el mejor [My parents refused to accept that I could want simply to have fun without trying to be the best]	.27/.33	2.43/2.71	3.47/3.72		.93/.89
11. Mis progenitores creían que para tener éxito, siempre tenía que ser el mejor en lo que hiciera [My parents believed that, in order to succeed, I always had to be the best at what I did]	.11/.43	2.78/2.97	3.83/3.85		
17. Para que mis progenitores estuvieran orgullosos de mi, tenía que ser el mejor [In order for my parents to be proud of me, I had to be the best]	.63/.50	1.92/2.10	2.18/2.42		
22. Mis progenitores insistían que siempre tenía que ser mejor que los demás [My parents insisted that I always be better than others]	.64/.31	1.85/1.95	2.51/2.57		

KMO test = .92. The fit indices support a two-factor solution, $\chi^2(229, 187) = 242.22, p = .2619; TLI = 0.99; CFI = 0.99; GFI = 0.97; RMSR = .07$, the expected mean RMSR for an acceptable model being .0811 (Kelley's criterion). The alpha coefficient for the whole scale was .92 and the two-factor structure explained 45% of vari-

ance. We also examined a six-factor model, $\chi^2(147, 187) = 32.53, p = .99; TLI = 1.04; CFI = 1.00; GFI = 0.99; RMSR = .02$.

With respect to perceptions about mothers, it is assumed the parametric criteria, Bartlett's statistic = 1,728.0 ($df = 276; p = 0.000010$), and KMO test = .86. The

two-factor model (autonomous support vs controlling parenting) had excellent fit, $\chi^2(229, 174) = 279.96, p = .012; TLI = 0.98; CFI = 0.98; GFI = 0.95; RMSR = .08$, the expected mean for *RMSR* for an acceptable model being .0836 (Kelley's criterion). The alpha value was .90 in the maternal scale, and the two predominant factors explaining of 43% of the variance. The six-factor model achieved a good fit, $\chi^2(147, 174) = 37.27, p = .099; TLI = 1.05; CFI = 1.00; GFI = 0.99; RMSR = .03$.

In the paternal version, the CFA for the two-factor model, with the second subsample, had the following indexes of fit, $\chi^2(230, 158) = 377.67, p = .00, TLI = .90,$

$CFI = .91, RMSEA = .06, SRMR = .07$. The six-factor model fit was: $\chi^2(227, 158) = 364.17, p = .00, TLI = .90, CFI = .92, RMSEA = .06, SRMR = .07$.

The CFA for the maternal subsample produced the following indices for the two-factor model, $\chi^2(233, 194) = 387.74, p = .00, TLI = .89, CFI = .91, RMSEA = .06, SRMR = .07$. For the six-factor model the indices were $\chi^2(230, 194) = 385.88, p = .00; TLI = .90, CFI = .91, RMSEA = .06, SRMR = .07$.

Convergent and divergent validity. Given that the factorial structure was similar for perceptions about fathers and mothers, Pearson's correlation was run between the

Table 2. Summary of intercorrelations from P-PASS, PCS, PCDS and AF5

Variable	1	2	3	4	5	6	7	8
1. PAS mother								
2. PAS father	.82***							
3. PPC mother	-.52***	-.52***						
4. PPC father	-.40***	-.63***	.79***					
5. PCS mother	-.55***	-.44***	.52***	.33***				
6. PCS father	-.31***	-.52***	.42***	.59***	.57***			
7. PCDS mother	-.49***	-.42***	.53***	.38***	.75***	.45***		
8. PCDS father	-.31***	-.54***	.42***	.64***	.42***	.78***	.58***	

Note. $p < .05; **p < .01; ***p < .001$

Table 3. Concurrent validity of the Perceived Parental Autonomy Support Scale (P-PASS)

Predictor variable	Family self-concept				Social self-concept				Academic self-concept				Emotional self-concept				Physical self-concept			
	r^2	Δr^2	β	VIF	r^2	Δr^2	β	VIF	r^2	Δr^2	β	VIF	r^2	Δr^2	β	VIF	r^2	Δr^2	β	VIF
Mother's Regression model																				
(Enter in Step 1)																				
PAS		.37	.49***	1.36		.05	.14*	1.36		.08	.27***	1.35		.00	-.02	1.35		.02	.14*	1.35
(Enter in Step 2)																				
PPC	.41	.04	-.23***	1.36	.06	.01	-.16**	1.36	.08	.00	-.01	1.35	.02	.02	-.14*	1.35	.02	.00	.00	1.35
Father's Regression model																				
(Enter in Step 1)																				
PAS		.39	.47***	1.63		.11	.31***	1.62		.06	.27***	1.61		.01	.06	1.62		.20	.15*	1.63
(Enter in Step 2)																				
PPC	.42	.03	-.24***	1.63	.12	.001	-.04	1.62	.06	.001	.05	1.61	.02	.01	-.09	1.62	.20	.00	.01	1.63

Note. r^2 = percentage explained variance; Δr^2 = change of explained variance; β = relationship that the predictor has with each self-concept; VIF = variance inflation factor.

* $p < .05$. ** $p < .01$. *** $p < .001$

P-PASS, PCS, PCDS, and PBI scales (Table 2). Correlations between the perception of parental autonomy support dimensions and the PCS and PCDS scales were negative, while the correlations of these scales with the perception of parental control were positive.

There were positive correlations between both maternal and paternal autonomy support and five dimensions of self-concept, whereas correlations between controlling parenting and those same dimensions were negative.

As the correlations between PBI and P-PASS were close to zero (from $-.08$ to $.05$) these were not included in Table 2. This result reinforced the definition of autonomy support and parental control as dimensions which are separated from care and overprotection behaviors.

Concurrent validity. Considering the following cut-off values to define the effect of predictors on criterion variables: small $f^2 = .02$; medium $f^2 = .15$ and large $f^2 = .35$ (Cohen, 1988), the effect sizes of parental autonomy support and control were large: Cohen $f^2 = .69$, for mothers' behavior; and $f^2 = .72$; for fathers' behavior (Table 3). Parents' high perception of autonomy support and low perception of parental control lead to good family self-concept.

P-PASS could predict moderately social self-concept for fathers ($f^2 = .14$), and small in mothers ($f^2 = .06$). Regarding academic self-concept, data showed the positive effect of perceived parental autonomy support to a low degree, $f^2 = .09$; and $f^2 = .06$.

The influence in emotional self-concept was minor, $f^2 = .02$ in both parents. Finally, in the improvement of physical self-concept, perceived parental autonomy support had a medium influence $f^2 = .25$ in fathers, and small in mothers $f^2 = .02$.

Differences between mothers and fathers in PASS dimensions

The students perceived more autonomy support from mothers than fathers, in general dimensions and subfactors; regarding control dimensions, there were significant differences in encouraging performance goals, with the students' perception of fathers higher (Table 4).

Table 4. Means comparison between mothers and fathers

		Mean	SD	T	p
PAS	Mother	5.28	1.11	4.85	.000
	Father	5.09	1.20		
Offering choice	Mother	5.44	1.17	3.01	.003
	Father	5.32	1.26		
Explaining reasons	Mother	4.99	1.28	3.69	.000
	Father	4.82	1.38		
Being aware	Mother	5.41	1.28	5.28	.000
	Father	5.11	1.40		

		Mean	SD	T	p
PPC	Mother	2.48	.92	-0.49	.621
	Father	2.50	1.03		
Threatening	Mother	3.46	1.42	1.30	.194
	Father	3.39	1.43		
Inducting Guilt	Mother	1.78	1.01	-0.51	.611
	Father	1.80	1.11		
Encouraging	Mother	2.30	1.32	-2.48	.014
	Father	2.40	1.43		

GENERAL DISCUSSION

Exploratory and confirmatory analysis showed a good fit with the original instrument. With respect to the EFA, the internal consistency was high and this structure explained 85% of the variance in the students' perceptions about paternal autonomy support. Our results were like those obtained in other studies which analyzed the psychometric properties of the P-PASS (Costa *et al.*, 2016; Mageau *et al.*, 2015). The EFA and CFA findings showed that the two-factor model explained more appropriately the theoretical model of perceived parental autonomy support and controlling parenting. These results confirm that the P-PASS is a useful instrument for studying perceived parental autonomy support and controlling parenting. So, our study allows the advancement of scientific knowledge in the field of parenting as it extends previous research in a country, Spain, which has different linguistic and cultural backgrounds than the Costa's and Mageau's samples. Parents who are perceived as supporting autonomy are beneficial in all cultural contexts and it is necessary analyze the generality of this parental behavior across cultures. So, our research provides an empirical basis on the usefulness of a scale that helps to measure parental autonomy support.

In terms of the loading of each factor and item, Table 1 clearly showed that most items about fathers and mothers had almost similar loadings. In research by Mageau *et al.* (2015), two controlling items needed additional work because in one of their studies, the correlations between these items with controlling parenting factors were lower. Both items measured parents' use of threats. For this reason, Mageau *et al.* (2015) recommended that future research should be carried out in order to improve the assessment of the controlling component of threatening. In line with Mageau's research results, our study confirmed that one of these two items did not either yield satisfactory loadings (item 3) in the fathers' group. On the other hand, the other item, number 15, obtained good loadings in the Spanish sample.

Results also showed that the negative correlations between autonomy support dimensions and parental control behaviors supported the assertion that they were two

different dimensions. Likewise, the inverse correlations between the dimensions of the P-PASS and the results of the PCS and PCDS reinforce the hypothesis that they are two divergent dimensions from a conceptual point of view. Soenens *et al.* (2009) recognized that there is a debate about whether parental autonomy support and parental control are orthogonal dimensions or opposite ends of one dimension. They stated that the constructs “parental autonomy support” and “parental control” have been studied in relative isolation from one another, so little is known about the relationship between the two constructs. In short, our result confirmed that the two factors are different dimensions in a similar way to the results found by Mageau *et al.* (2015), using the same instrument (P-PASS). In addition, our findings corroborate the theoretical corpus of self-determination theory. In this theory parental control is viewed as antithetical to autonomy support because parents who use controlling tactics pressure the child to comply with their standards and expectations. Van der Kaap-Deeder *et al.* (2017) recognized that the lack of parental autonomy support does not mean the presence of parental psychological control. So the absence of autonomy support is different from forcing a child to behave in a certain way using parental control tactics.

Our results also confirmed that parental autonomy support was a different dimension from other parenting behaviors, particularly overprotection and care. Parents are responsible for taking care of children, and providing them with love and security. Nevertheless, care is different to parental autonomy support, which is a behavior that helps the development of a sense of volition in children because parents allow them to choose, whenever possible, and encourage them to behave according to their personal values.

The positive correlation between maternal and paternal autonomy support reinforces the idea that this construct exists independently from gender and, in addition, both dimensions work in the same direction inside the family environment. Similar consideration is possible regarding positive correlations between mothers’ and fathers’ parental control. Our research demonstrates the importance of studying the relative contribution of both fathers and mothers to autonomy support and parental control. Too often research only takes into account a young person’s perception of maternal behaviors (Mageau *et al.*, 2015). Our research contributes to the advancement of scientific knowledge in parenting because it takes into account the perceptions of late adolescents about the autonomy supportive and controlling behaviors of both mothers and fathers.

Following on from this, the findings from the regression demonstrate the important role of perceived autonomy support and parental control in predicting family and social self-concept. Results confirm previous research about the role of autonomy support and parental con-

trol in the development of different outcomes, specifically self-concept (Sher-Censor *et al.*, 2011; Skinner *et al.*, 2005). Our research confirmed that parents who provided choice within certain limits, gave rationales for requirements and limits, and recognized the adolescent’s perspective created a sense of competence and promoted a good self-concept. On the other hand, parents who threatened to punish, who cultivated performance goals, and induced guilt helped to produce a poor self-concept.

Besides, perceived maternal and paternal autonomy support had significant influence (weight) on four self-concepts: family, social, academic, and physical. Similarly, controlling mothers negatively influenced family, social, and emotional self-concept, and controlling fathering negatively influenced family self-concept. It seems that maternal and paternal autonomy support had similar influence on the development of family, academic, and physical self-concepts. However, if we focus on social self-concept, the greatest influence comes from autonomy support fathering.

Therefore, as Mageau *et al.* (2015) concluded, it would be necessary to do more research about the concurrent validity of the P-PASS by using other outcome measures. By doing so it would be possible to compare the results of our research concerning the associations between P-PASS autonomy support, controlling parenting and self-concept, with other studies which have already analyzed the correlations between P-PASS and other outcomes (Costa *et al.*, 2016; Bureau & Mageau, 2014; Mageau *et al.*, 2015).

LIMITATIONS

This study has several limitations. Firstly, the data only reflected the adolescents’ perceptions of parenting behavior. This is a valid approach because adolescents’ perceptions are a critical part of interpreting relationships between parents and their children. However, we must note that it is also important to obtain information from different agents because there may be differences between parents’ perceptions of their behavior and late adolescents’ perceptions about their parents’ behavior. The next step in this research would be to assess these dimensions using a multi-informant design that considers the parents’ points of view (Van Petegem *et al.*, 2012).

A second limitation is that the sample was quite homogenous, particularly in relation to ethnicity. Therefore, there is a need to replicate the study with more ethnically diverse samples. Furthermore, in our study the adolescents were not asked about their socioeconomic status, parents’ educational qualifications or family structure.

The final limitation is that there was no distinction made between those participants who had a non-existent or limited relationship with their parents, and those who maintained a frequent relationship with their parents.

This variable should be considered in forward studies to reveal more about the effects of parental autonomy support and control.

Despite these limitations, this research provides support for the reliability and validity of the P-PASS in the Spanish context, and to the cross-cultural validation of the instrument. The validation of the instrument is very useful because there are no studies with a Spanish sample and there are only two adaptations to Canadian and Italian culture. In this context, it is necessary to validate the P-PASS in different sociocultural contexts to know the potentiality of the instrument to measure the perception of parental autonomy support. In addition, our study contributes to the debate about whether parental autonomy support and parental control are orthogonal dimensions or opposite ends of one dimension, indicating that both can be seen as largely incompatible dimensions of parenting.

in memoriam

Full Professor D. JOSÉ-VICENTE PEÑA-CALVO

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