

Psychometric Analysis of the Catalan Version of the Alabama Parenting Questionnaire (APQ) in a Community Sample

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The aim of this study was to adapt to Catalan the parents' and children's global report forms of the Alabama Parenting Questionnaire (APQ), using a community sample of 364 children between 10 and 15 years old and their families. Sociodemographic information (from parents) and the presence of externalizing problems (from parents and teachers) were collected. The results suggest a 3-factor structure corresponding to the scales of Positive Parenting Practices (PPP), Inconsistent and Negative Discipline (IND) and Poor Monitoring/Supervision (PMS). The internal consistency is acceptable in all the scales, except for the IND in the children's format. The scales also present good convergent and discriminant validity, and the relations with the external variable studied pointed in the expected direction: inefficient parenting practices are related to the presence of more behavior problems in children. To sum up, the Catalan version of the parents' and children's global report forms of the APQ are considered suitable for use in the area of children's and adolescents' behavior problems.

Keywords: parenting practices, Alabama Parenting Questionnaire, Catalan, Spain.

El objetivo de este estudio ha sido la adaptación catalana de las versiones para padres/madres e hijos/as del formato autoinforme del *Alabama Parenting Questionnaire* (APQ) en una muestra comunitaria de 364 niños entre 10 y 15 años y sus familias. Se recogió información sociodemográfica (progenitores) y sobre la presencia de conducta externalizante (progenitores y maestros/as). Los resultados sugieren una estructura de 3 factores a partir de los cuales se han construido las escalas Prácticas Educativas Positivas (PEP), Disciplina Inconsistente y Negativa (DIN) y Escasa Monitorización/Supervisión (EMS). La consistencia interna es aceptable en todas ellas, excepto en la escala DIN de la versión para hijos/as, presentan buena validez convergente y discriminante, así como relaciones con la variable externa estudiada en el sentido esperado: las prácticas educativas parentales ineficientes se asocian con la presencia de mayor problemática conductual en los hijos/as. En suma, las versiones catalanas para padres/madres e hijos/as del formato autoinforme del APQ se presentan como un instrumento adecuado para su uso en el área de los problemas de conducta infanto-juveniles.

Palabras clave: prácticas educativas parentales, Alabama Parenting Questionnaire, Catalán, España.

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Several longitudinal studies have highlighted the existence of continuity between antisocial behaviors that manifest in childhood and those that occur in later developmental stages (Broidy et al., 2003; Farrington, 1993; Moffitt, 1993).

It has also been observed that in children in whom the problem behavior occurs earlier, present a more persistent developmental trajectory compared to those who begin to display problems in adolescence (Campbell, 1995; Farrington et al., 1990; Patterson, Reid, & Dishion, 1992). Hence, the study of the early onset of behavior problems is crucial for understanding the etiology and course of development. It has been suggested that programs that focus on primary prevention of childhood behavior problems will achieve better results (Rivara & Farrington, 1995).

Family factors are essential in the main theories about the origins of behavior problems, among which parenting practices stand out (Patterson et al., 1992; Stormshak, Bierman, McMahon, & Lengua, 2000). Parental involvement, rejection, and supervision have been confirmed as the more relevant parental practices in meta-analyses (Hoeve et al., 2009; Loeber & Stouthamer-Loeber, 1986). Other practices, such as the deficient application of positive change strategies, psychological control, inconsistent use of discipline, and corporal punishment are also considered significant.

These results have suggested that the most effective treatment for behavior problems at an early age is family intervention, which has led to a rapid proliferation of training programs for parents in recent years (Brestan & Eyberg, 1998). These programs are presented as a structured and short-term alternative that can be implemented in various contexts, such as in groups or individually, and that can be carried out by various types of professionals (Dretzke et al., 2009; Sanders, 1999).

Currently, there are instruments to measure parenting practices, which vary depending on the constructs measured, the measuring method used, the available versions, item content, and their psychometric properties. In previous work, the constructs parenting styles and parenting practices have been used interchangeably (Darling & Steinberg, 1993), responses have been obtained from a single informant (usually the mother), they have used a small number of items to assess a particular parenting practice (e.g., a single question), or the instruments were not specifically designed to assess the most relevant dimensions in the study of behavior problems.

Among the most frequently used instruments are the Child's Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965), the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979), and the Egna Minnen Beträffande Uppfostran (EMBU; Perris, Jacobsson, Lindström, von Knorring, & Perris, 1980). As not all of them have different versions, a common practice to obtain information from more than one source has been to reformulate the items (e.g., changing the tense or the person) without analyzing whether

the factor structure remains intact for each informant (Butler, Skinner, Gelfand, Berg, & Wiebe, 2007; Yeganeh, Beidel, & Turner, 2006).

The CRPBI (Samper, Cortés, Mestre, Nacher, & Tur, 2006) and the EMBU (Castro, de Pablo, Gómez, Arrindell, & Toro, 1997; Castro, Toro, Van, & Arrindell, 1993) have been adapted to Spanish. However, the EMBU does not assess parental monitoring; it was designed to assess the memory of parenting practices in people suffering from depressive symptoms, and the CRPBI only has a version for children. There are also instruments designed in Spain, such as the ESPA29 (Musitu & García, 2001), which has shown adequate psychometric properties and has recently been adapted to Euskara (López-Jáuregui & Oliden, 2009). Nevertheless, this questionnaire assesses parenting styles and has only a version for adolescents. To our knowledge, there are no instruments that measure the most relevant parenting practices in the genesis, development, and maintenance of child and adolescent problem behavior adapted to Catalan and that, at the same time, provide information from different informants to make comparisons.

Paul Frick developed the Alabama Parenting Questionnaire (APQ; Shelton, Frick, & Wootton, 1996) based on items from previous works (Capaldi & Patterson, 1989; Loeber & Stouthamer-Loeber, 1986; Schaefer, 1965) in order to assess constructs of parenting practices that showed the most consistent effects in explaining behavior problems in children. It has five scales: Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment; and four assessments formats: parent and child global report forms, and parent and child telephone interviews. The APQ parent and children's (as of age 9) forms have shown adequate psychometric properties (Dadds, Maujean, & Fraser, 2003; Shelton et al., 1996), they have been used in numerous studies of behavior problems (e.g., Blader, 2004), and their scales have been considered psychometrically valid to assess parental discipline and nurturance in a review of parenting measures (Locke & Prinz, 2002). However, the APQ has not been adapted to the diverse languages of Spain.

Within this framework, the overall aim of this work was to study the psychometric properties of the Catalan versions of parents' and children's global report forms of the APQ in a community sample. For this purpose, we analyzed reliability (internal consistency) and validity, using internal sources of evidence through the study of the factor structure and external evidence by examining the convergent and discriminant validity of the scales with the multitrait/multimethod correlation matrix, comparing informants' scores and exploring the relationship of the scales with the external variable behavior problems.

This study aims to make two main contributions. First, to provide psychometric data on the APQ to justify its use; the validation study of the original version was done with a small community sample, and its structure was not

analyzed (Dadds et al., 2003; Shelton et al., 1996). This has been carried out in subsequent work, but only with the children's version (Essau, Sasagawa, & Frick, 2006), or with other purposes, such as to study its properties in pre-school population (Clerkin, Marks, Policaro, & Halperin, 2007) or to develop a short form for parents (Elgar, Waschbusch, Dadds, & Sigvaldason, 2007). And, secondly, to adapt an instrument that can provide support to diverse professionals in various fields, from both a preventive and intervention viewpoint, given the lack of self-reports of parenting adapted to the Catalan population.

Method

Participants

This study was carried out in diverse public schools and state-subsidized schools from Osona (Barcelona). Nine-hundred protocols were distributed and 453 were sent back, a response rate of 50.3%. Inclusion criteria were: 1) parental consent, 2) Spanish origin of at least one parent, 3) participation of at least one parent in the study, and 4) at least one parent living at the child's main residence. Eighty-nine cases were eliminated: 11 failed to meet the second criterion, 25 failed to meet the third, 20 did not meet the fourth, 5 presented inconsistent responses, and 28 did not provide children's information. The final sample comprised 364 children and their families and teachers. Of the participants, 50% came from towns with more than 15 000 inhabitants, 20% from towns with between 4000 and 6000 inhabitants, and 30% from towns with fewer than 4000 inhabitants. In 49.4% of the cases, the mothers provided the information, in 38.2% both parents, and in 12.4% only the fathers.

Sex ratio was similar (48.6% boys and 51.4% girls). Regarding educational level, 44.3% of participants were in their 5th and 6th year of primary education, and 55.7% were in their 1st and 2nd year of secondary school. Age ranged between 10 and 15 years ($M = 12.65$, $SD = 1.19$). In almost all cases, both parents were mainly of Spanish origin (99.4%), and 89.9% of the families were nuclear. The parents' modal educational level was "incomplete high school, formative cycles of medium degree and related" (45.8% fathers, 41.1% mothers). Regarding labor situation, 98% of the fathers and 75.6% of the mothers were actively employed at the moment of the study.

Measures

Socio-demographic characteristics. Parents provided this information in a questionnaire specifically designed for the study.

Parenting Practices. The Alabama Parenting Questionnaire (APQ; Shelton et al., 1996) consists of 35 items distributed

in five rationally formulated constructs: Parental Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, and Corporal Punishment. The first two are positive subscales, whereas the last three are negative subscales. The construct Parental Involvement has 10 items (e.g., "you have a friendly talk with your child"), the construct Positive Parenting has 6 items (e.g., "you let your child know when he/she is doing a good job with something"), the construct Poor Monitoring/Supervision has 10 items (e.g., "your child stays out in the evening past the time he/she is supposed to be home"), the construct Inconsistent Discipline has 6 items (e.g., "you threatened to punish your child and then do not actually punish him/her"), and the construct Corporal Punishment has 3 items (e.g., "you spank your child with your hand when he/she has done something wrong"). The APQ includes 7 additional items measuring specific discipline practices other than corporal punishment to avoid negative biases, and they are not considered in any construct.

The APQ employs a multimethod (global report form and telephone interview) and multi-source perspective (parents and children). In this study, we only used the global report form and both informants. Items are rated on a 5-point Likert scale according to the typical frequency in the home, ranging from 1 (*never*) to 5 (*always*). Parents' and children's versions are the same except for the construct Parental Involvement. Nine of the 10 items are repeated in the children's format, asking separately about the mother and the father and forming two subscales, Mother's Involvement and Father's Involvement. In the Catalan adaptation, Item 28 from the parents' format is reverse-scored to avoid double negations. Higher scores in the positive scales show efficient parenting practices and higher scores in the negative scales indicate inefficient practices.

Behavior problems. The Children's Symptom Inventory-4 (CSI-4, Gadow & Sprafkin, 1997) was taken as a reference to design a behavior rating scale made of items from the diagnostic criteria for the attention deficit hyperactivity disorder (18 items), the oppositional defiant disorder (8 items), and the conduct disorder (15 items) according to the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV, American Psychiatric Association, 1994). A parents' and teachers' version was created. Items are rated on a 4-point Likert scale according to the frequency of the symptom, ranging from 1 (*never*) to 4 (*very often*). The symptom count scoring procedure of the CSI-4 was also used as a reference. The score was dichotomized: the symptom is absent (*never/sometimes*) or present (*often/very often*). Next, we added the number of items of the three disorders conjointly responded with *often* or *very often* to form the variable "behavior problems." Higher scores correspond to increased likelihood of behavioral problems. Cronbach alpha for the parents' version was .85 and for the teachers' version, .88.

Procedure

A bilingual translator performed a back translation and the Language Service of the UAB carried out a revision of the Catalan translation of the APQ. We requested the assistance of the Counseling and Psychopedagogical Orientation Team from the area of Osona, and the schools were contacted. Tutors were given 900 protocols to send to the families through the students in closed envelopes with a letter explaining the project requesting both their permission for their children's participation and their own collaboration in the study. The families returned the questionnaires to the school, in a closed envelope that was attached to the protocol, within 15 days. Next, we requested the collaboration of the teachers and students. Participation was anonymous and the participants did not receive economic compensation. All analyses were performed using the SPSS 15.0 program.

Results

Below are presented the results of the psychometric properties of the global report form for parents and children of the APQ. Specifically, we present the factor structure (exploratory factor analysis), internal consistency (Cronbach's alpha), and convergent and discriminant validity (multitrait-multimethod matrix), and the results of comparing informants' scores (paired samples *t*-test), and the relationship between the APQ and behavior problems (Pearson product-moment correlations).

Exploratory Factor Analysis

Several factor analyses with principal component analysis (PCA) and oblimin rotation were conducted. The criteria considered to select the final items were: a) eigenvalues greater than one, b) factor loadings of at least .30, c) interpretability

Table 1
Factor structure of items of the parents' global report form of the APQ

Item (APQ)	Factor 1	Factor 2	Factor 3
13. Felicitat el seu fill/la seva filla quan fa una cosa ben feta.	.774	-.117	-.209
2. Quan el seu fill/la seva filla fa bé les coses li ho fa saber.	.723	-.187	-.177
16. Elogia el seu fill/la seva filla si es porta bé.	.712	.050	-.164
27. Quan el seu fill/la seva filla l'ajuda en les feines de casa, vostè li manifesta la seva satisfacció.	.662	-.108	-.114
18. Fa una abraçada o un petó al seu fill/la seva filla quan fa una cosa ben feta.	.657	.093	-.141
1. Té converses agradables amb el seu fill/la seva filla.	.566	-.337	-.071
9. Demana al seu fill/a la seva filla com li ha anat a l'escola.	.557	-.052	-.239
14. Pregunta al seu fill/la seva filla quins plans té l'endemà.	.533	-.053	-.156
20. Parla amb el seu fill/la seva filla dels seus amics.	.501	-.079	-.146
23. El seu fill/la seva filla col·labora en la planificació de les activitats familiars.	.467	-.129	-.054
7. Vostè juga o fa altres activitats amb el seu fill/la seva filla.	.444	-.034	-.292
35. Quan el seu fill/la seva filla ha fet una malifeta, li dóna una bufetada.	-.063	.718	.096
33. Quan el seu fill/la seva filla ha fet una malifeta, li pega al cul amb la mà.	.040	.700	.039
3. Amenaça el seu fill/la seva filla amb càstigs i, a l'hora de la veritat, incompleix el seu advertiment.	-.082	.625	.169
31. Els càstigs que posa al seu fill/a la seva filla depenen del seu humor.	-.191	.614	.148
22. Allibera els càstigs al seu fill /la seva filla abans del temps establert.	.016	.590	.094
12. Creu que intentar que el seu fill/la seva filla l'obeeixi li causa més problemes del compte.	-.233	.438	.229
10. A la nit, el seu fill/la seva filla arriba a casa més tard de l'hora prevista.	-.215	.157	.727
6. El seu fill/la seva filla surt de casa sense deixar una nota o sense dir on va.	-.160	.055	.684
21. Després de fer-se fosc, el seu fill/la seva filla és fora de casa sense la companyia d'adults.	-.123	.042	.666
19. El seu fill/la seva filla surt sense haver fixat una hora de tornada a casa.	-.123	.191	.664
30. El seu fill/la seva filla s'endarrereix més d'una hora en tornar de l'escola.	-.093	.228	.447
29. Surt de casa sense dir al seu fill/a la seva filla on va.	-.256	.043	.371
Eigenvalue	4.65	2.47	1.86
Variance (%)	20.20	10.76	8.09
Total variance (%)	39.05		

Note. The Items included in the Catalan version are in bold face. APQ = Alabama Parenting Questionnaire.

Table 2
Factor structure of items of the children global report form of the APQ for mother data.

Item (APQ)	Factor 1	Factor 2	Factor 3
18. Els teus pares et fan una abraçada o un petó quan fas una cosa ben feta.	.662	-.275	.125
2. Els teus pares et diuen que fas bé les coses.	.640	-.146	-.054
13. Els teus pares et feliciten quan fas una cosa ben feta.	.625	-.152	.067
27. Quan ajudes en les feines de casa, els teus pares et manifesten la seva satisfacció.	.611	-.101	-.172
1 ^a . Tens converses agradables amb la teva mare.	.596	-.266	-.234
7 ^a . Jugues o fas altres activitats divertides amb la teva mare.	.581	-.382	-.058
16. Els teus pares t'elogien perquè et portes bé.	.570	-.101	.174
14 ^a . La teva mare et pregunta quins plans tens l'endemà.	.551	-.015	-.048
20 ^a . La teva mare et parla dels teus amics.	.549	-.014	-.047
23. Col·labores en la planificació de les activitats familiars.	.546	-.255	-.284
9 ^a . La teva mare et demana com t'ha anat a l'escola.	.434	-.168	-.151
21. Després de fer-se fosc, ets fora de casa sense la companyia d'adults.	-.194	.695	.125
10. A la nit, arribes a casa més tard de l'hora prevista.	-.210	.681	.170
6. Surts de casa sense deixar una nota o sense dir als teus pares on vas.	-.150	.577	.099
19. Surts sense haver fixat una hora de tornada a casa.	-.248	.573	.191
30. T'endarrereixes més d'una hora en tornar de l'escola.	-.109	.558	.010
29. Els teus pares surten de casa sense dir-te on van.	-.351	.413	.095
3. Els teus pares t'amenacen amb càstigs i, a l'hora de la veritat, incompleixen el seu advertiment.	.121	.142	.610
22. Els teus pares t'alliberen els càstigs abans del temps establert.	.137	.163	.609
12. Els teus pares renuncien a fer-te obeir perquè els causa massa problemes.	-.087	.149	.545
33. Quan fas una malifeta, els teus pares et peguen al cul amb la mà.	-.103	-.288	.473
31. Els càstigs dels teus pares depenen del seu humor.	-.230	.120	.471
35. Quan fas una malifeta, els teus pares et donen una bufetada.	-.309	-.269	.368
Eigenvalue	4.62	2.13	1.70
Variance (%)	20.10	9.28	7.37
Total variance (%)	36.75		

Note. The Items included in the Catalan version are in bold face. APQ = Alabama Parenting Questionnaire.

^a Items repeated for mother and father separately.

of factors, and d) parallelism between parents' and children's form of the APQ to maintain the original conception of the instrument and to allow informant comparisons.

For the parents' form, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .79 and Bartlett's test of sphericity ($p < .001$) confirmed adequacy of factor analysis. The initial solution consisted of 11 factors with eigenvalues greater than 1, explaining the 59.06% of the total variance.

A second analysis was conducted, extracting three factors based on the scree plot. Three items (25, 28, and 32) of the 35 original items were eliminated because of low loadings and one item (5) because of similar loadings on two factors. After comparing parents' and children's results, eight more items were eliminated (4, 8, 11, 15, 17, 24, 26, and 38). Table 1 shows the final structure, comprising 23 items. The first factor has items from the original Parental Involvement and Positive Parenting scales, the second factor includes items from the original Inconsistent Discipline and Corporal Punishment scales,

and the third factor has items from the original Poor Monitoring/Supervision scale. These factors made up three scales: Positive Parenting (PP), Inconsistent and Negative Discipline (IND), and Poor Monitoring/Supervision (PMS).

For the children's form, all analyses were completed separately for the mothers' and the fathers' data, as nine items of the Parental Involvement scale are repeated.

Firstly, the results related to mothers' data are presented. The measure of sampling adequacy (KMO = .81) and Bartlett's sphericity test ($p < .001$) confirmed adequacy of factor analysis. The initial solution consisted of 11 factors with eigenvalues greater than 1, explaining the 59.27% of the total variance. A second analysis was conducted, extracting three factors based on the scree plot. Lastly, two items (26 and 38) were eliminated because of low loadings, and three items (4, 8, and 15) because of similar loadings on two factors. After comparing the results with the parents' form, seven more items were eliminated (5, 11, 17, 24, 25, 28, and 32). The final solution is shown on Table 2.

Table 3
Factor structure of items of the children global report form of the APQ for father data.

Item (APQ)	Factor 1	Factor 2	Factor 3
14 ^a . La teva mare et pregunta quins plans tens l'endemà. I el teu pare, que t'ho pregunta?	.630	-.067	-.105
13. Els teus pares et feliciten quan fas una cosa ben feta.	.622	-.151	.108
18. Els teus pares et fan una abraçada o un petó quan fas una cosa ben feta.	.619	-.296	.172
9 ^a . La teva mare et demana com t'ha anat a l'escola. I el teu pare, que t'ho demana?	.617	-.060	-.190
2. Els teus pares et diuen que fas bé les coses.	.601	-.170	-.018
27. Quan ajudes en les feines de casa, els teus pares et manifesten la seva satisfacció.	.590	-.101	-.143
20 ^a . La teva mare et parla dels teus amics. I el teu pare, que te'n parla?	.578	.023	-.089
1 ^a . Tens converses agradables amb la teva mare. I amb el teu pare, que en tens?	.574	-.189	-.124
16. Els teus pares t'elogien perquè et portes bé.	.539	-.116	.220
7 ^a . Jugues o fas altres activitats divertides amb la teva mare. I amb el teu pare?	.511	-.278	.096
23. Col·labores en la planificació de les activitats familiars.	.509	-.244	-.262
21. Després de fer-se fosc, ets fora de casa sense la companyia d'adults.	-.170	.692	.106
10. A la nit, arribes a casa més tard de l'hora prevista.	-.172	.671	.189
6. Surts de casa sense deixar una nota o sense dir als teus pares on vas.	-.134	.587	.095
19. Surts sense haver fixat una hora de tornada a casa.	-.263	.579	.162
30. T'endarrereixes més d'una hora en tornar de l'escola.	-.130	.555	-.013
29. Els teus pares surten de casa sense dir-te on van.	-.330	.350	.115
22. Els teus pares t'alliberen els càstigs abans del temps establert.	.124	.194	.595
3. Els teus pares t'amenacen amb càstigs i, a l'hora de la veritat, incompleixen el seu advertiment.	.107	.175	.587
12. Els teus pares renuncien a fer-te obeir perquè els causa massa problemes.	-.077	.158	.541
33. Quan fas una malifeta, els teus pares et peguen al cul amb la mà.	-.087	-.282	.479
31. Els càstigs dels teus pares depenen del seu humor.	-.281	.148	.477
35. Quan fas una malifeta, els teus pares et donen una bufetada.	-.301	-.246	.374
Eigenvalue	4.50	2.19	1.71
Variance (%)	19.56	9.51	7.41
Total variance (%)	36.48		

Note. The Items included in the Catalan version are in bold face. APQ = Alabama Parenting Questionnaire.

^a Items repeated for mother and father separately.

For the fathers' data of the children's form, the measure of sampling adequacy (KMO = .80) and the Bartlett's sphericity test ($p < .001$) confirmed the adequacy of factor analysis. The initial solution consisted of 11 factors with eigenvalues greater than 1, explaining the 59.49% of the total variance. A second analysis was conducted, extracting three factors. Lastly, two items (25 and 38) were eliminated because of low loadings, and one item (8) because of similar loadings on two factors. After comparing the results with the previous versions, 9 more items were eliminated (4, 5, 11, 15, 17, 24, 26, 28, and 32). The final solution is shown on Table 3.

As shown in Tables 2 and 3, the two versions of the children's form are similar and support a single version for children, repeating the Positive Parenting scale, as proposed by the author. The first factor of the children's form corresponds to the first factor of parents' form. The children's third factor is equivalent to the parent's second factor and the children's second factor corresponds to the

parent's third factor. Thus, the resulting factors for the children's form are: Mother Positive Parenting (MPP), Father Positive Parenting (FPP), Inconsistent and Negative Discipline (IND), and Poor Monitoring/Supervision (PMS).

Reliability

The reliability (internal consistency) of the APQ scales was computed with the Cronbach's alpha (Table 4) for both informants. The PP scale showed higher reliability in both versions. The IND scale of the children's form obtained lower internal consistency.

Convergent and discriminant validity

The Table 5 shows the results of the multitrait-multimethod matrix (Pearson product-moment correlation). In general, the results support the convergent and discriminant validity of the scales. The main diagonal of the table (bold

Table 4
Internal consistency of APQ Scales (Cronbach alpha).

APQ	Parents	Children	
		Mother	Father
<i>Positive Parenting^a</i>			
Alpha	.82	.81	.81
Mean inter-item <i>r</i>	.30	.28	.28
<i>Inconsistent and Negative Discipline</i>			
Alpha	.68		.50
Mean inter-item <i>r</i>	.27		.14
<i>Poor Monitoring/Supervision</i>			
Alpha	.66		.69
Mean inter-item <i>r</i>	.25		.27

Note. APQ = Alabama Parenting Questionnaire; *r* = correlation.

^a This construct is repeated in the children's version as the items refer to the father and the mother separately.

Table 5
Multitrait-multimethod correlation matrix for the APQ Scales.

APQ	Parents			Children			
	PP	IND	PMS	MPP	FPP	IND	PMS
<i>Parents</i>							
PP	—						
IND	-.16**	—					
PMS	-.26***	.22***	—				
<i>Children</i>							
MPP	.31***	-.08	-.18**	—			
FPP	.28***	-.07	-.14*	.94***	—		
IND	-.04	.36***	.10	-.09	-.11	—	
PMS	-.12*	.09	.41***	-.37***	-.37***	.17**	—

Note. The diagonal of the convergent validity is in bold face. APQ = Alabama Parenting Questionnaire; PP = Positive Parenting; MPP = Mother Positive Parenting; FPP = Father Positive Parenting; IND = Inconsistent and Negative Discipline; PMS = Poor Monitoring/Supervision.

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

face) presents the convergent validity coefficients. The values are greater than zero and sufficiently high, considering that instead of two different methods, we are measuring two informants.

Regarding discriminant validity, all the values of the coefficients on the diagonal are higher than the values from the row and column (heteromethod block). However, the values of the coefficients on the diagonal tend to be higher than the monomethod-heterotrait triangles. The correlations between both versions of the scales of Positive Parenting (PP, MPP, FPP) are exceptions, as they are lower than the correlations between two different scales in the children's form (correlations of MPP and FPP with PMS). A similar pattern of correlations can be seen in all the triangles. The highest correlation was found between the PP and PMS scales and the lowest was between the PP and IND scales.

Differences between informants

Table 6 presents the means and standard deviations of the scales for each group of informants and the results of the paired *t*-test and Cohen's *d*. Differences were statistically significant in all the scales, especially for the positive ones. The parents scored higher than the children in the PP and IND scales and lower in the PMS scales. Following Cohen's (1992) norms, the effect size was high for differences in the positive PP scale, and medium in the two negative scales IND and PMS.

Relationship with external variables

The relationship between the APQ and behavior problems was determined with Pearson product-moment correlations

for each group of informants (see Table 7). In general, the results show low to moderate relationships between the two versions of the APQ and behavior problems. In all cases, the relationships were as expected. Correlation values were higher when it was the same informant in both types of variables.

For the APQ parents' form, the relationships were statistically significant regardless of whether it was the parents or the teachers who reported the presence or absence of behavior problems. The parent's PP scale showed the lowest correlation with behavior problems. For the APQ children's form, statistically significant relations were observed only with the parents' version of the behavior problems questionnaire, but not with the teachers' version, and in the scales measuring negative parenting practices (IND and PMS).

Discussion

The main purpose of this study was to analyze the psychometric properties of the Catalan versions of parents' and children's global report forms of the APQ in a

community sample. The psychometric analysis performed showed that the Catalan version of the APQ's global report form has three reliable, valid, and parallel scales for parents/children. In the children's format, the scale of positive parenting practices is repeated as in the original version. The scales have acceptable reliability (internal consistency)—with the exception of the scale Inconsistent and Negative Discipline in the children's version—, and adequate convergent and discriminant validity, and the relationships with the external variable behavior problems point in the expected direction. Moreover, as in previous work, parents show a tendency to self-rate more positively than children.

The results do not support the five-factor theoretical structure suggested by the author of the original scale but not validated at a factorial level. The five-factor solution has only been confirmed in the German version of the global report form for children and it has a different structure for the father and the mother (Essau et al., 2006). However, several data provide robustness to the three-factor solution in this work. Firstly, the structure is consistent in both versions of the instrument, parents and children. Secondly,

Table 6
Means and standard deviations of the APQ Scales and paired samples t-test.

APQ	Parents (n = 337-355)		Children (n = 337-355)		t	d
	M	DT	M	DT		
PP/MPP	44.16	5.51	39.53	6.94	11.55***	.74
PP/FPP	44.09	5.57	37.84	7.13	14.77***	.98
IND	12.51	3.42	11.28	3.11	6.11***	.38
PMS	8.05	2.60	9.36	3.29	-7.55***	-.44

Note. APQ = Alabama Parenting Questionnaire; PP = Positive Parenting; MPP = Mother Positive Parenting; FPP = Father Positive Parenting; IND = Inconsistent and Negative Discipline; PMS = Poor Monitoring/Supervision.

*** $p < .001$.

Table 7
Pearson product-moment correlations between the APQ Scales and behavior problems according to different informants.

APQ Scale	Behavior problems	
	Parents	Teachers
Parents		
PP	-.11*	-.10
IND	.37***	.12*
PMS	.25***	.15**
Children		
MPP	-.08	-.06
FPP	-.10	-.06
IND	.13*	.08
PMS	.14**	.08

Note. APQ = Alabama Parenting Questionnaire; PP = Positive Parenting; MPP = Mother Positive Parenting; FPP = Father Positive Parenting; IND = Inconsistent and Negative Discipline; PMS = Poor Monitoring/Supervision.

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

the two positive scales load on a single factor, as predicted (Shelton et al., 1996). As to why three factors and not four, it is expected that, as the original scale Corporal Punishment consists of only 3 items, the elimination of one of them has grouped the rest into the factor associated with disciplinary practices. Also, previous studies in community and clinical samples have found similar results regarding the number of factors and their content (Elgar et al., 2007; Wells et al., 2000). Even the order of factors obtained in each of the versions matches the one presented by Wells et al. (2000) with the APQ.

As for reliability, the scale Positive Parenting has high internal consistency in the two versions (parents and children) and the values are above .80. The scale has a large number of items, as it groups two scales from the original instrument that had high correlations in previous works. Therefore, its reliability has not worsened; in both versions, it has the highest values and is comparable to the two positive scales dealt with separately in prior studies (Dadds et al., 2003; Shelton et al., 1996).

In contrast, in the rest of the scales, the correlations are below .70, considered the cutoff point to argue that the reliability is adequate. However, some authors suggest that values between .60 and .69 are acceptable in group evaluations (Nunnally & Bernstein, 1994). Therefore, the reliability of the Poor Monitoring/Supervision scale would be acceptable in both versions of the APQ because its correlations are greater than .65. This scale contains four items less than the original, so its internal consistency is expected to be affected. It is noteworthy that, in the parents' version, the value is lower than that obtained by the author in the original scale and, in the children's version, it is higher.

In the Inconsistent and Negative Discipline scale, the reliability of the parents' version is acceptable but the children's version is questionable because it is lower than .60. As this scale joins two original scales that did not show high or moderate correlations in previous studies (Inconsistent Discipline and Corporal Punishment) and the number of items was reduced, it is expected to present lower values. In addition, the internal consistency of the original scales has been questioned in previous studies. On the one hand, the original Corporal Punishment scale has obtained low values in both parents' and children's versions (Dadds et al., 2003; Shelton et al., 1996). On the other hand, the children's version of the Inconsistent Discipline scale had a reliability of .66 in the original study, in a voluntary sample of 33 subjects (Shelton et al., 1996). Essau et al. (2006), who analyzed the internal structure of the German version in a sample of 1219 children and obtained a five-factor solution, found that the reliability of the Inconsistent Discipline scale was lower and had questionable values. Overall, the results suggest that the items related to the Inconsistent Discipline and Corporal Punishment scales should be reviewed in the original version to provide more consistent measures that increase the validity of the APQ.

In general, the results of the multitrait/multisource matrix support the convergent and discriminant validity of the scales. The correlations between different scales within the same informant tend to be lower than the correlations between different informants on the same scale. The direction of the relationships is as expected in all the associations. The negative scale Poor Monitoring/Supervision is moderately related both to the Positive Parenting and the Inconsistent Discipline scales, mainly with the former and in the children's version. This result suggests that further studies of the relations of the EMS scale should be carried out to determine whether it is necessary to reverse it and consider it a positive parenting practice.

The data from this study about the degree of correspondence and discrepancy between informants when assessing positive educational practices through self-report are suggestive. The correlations between parents and children on the same APQ scale support previous findings about the degree of relationship between more than one informant in studies of parenting practices (Bögels & van Melick, 2004; Schwarz, Barton-Henry, & Pruzinsky, 1985) and on emotional and behavioral problems in children (Achenbach, McConaughy, & Howell, 1987). The relations were modest, statistically significant, and higher than those presented by the author.

However, parents and children scored significantly different in parenting practices, mainly the positive ones. In view of the absence of such an analysis with the original instrument, the data cannot be compared, but are consistent with previous studies carried out with other self-reports of parenting practices that suggest that parents' self-ratings tend to be more favorable than their children's ratings (Schwarz et al., 1985). In our study, parents perceived themselves worse in inconsistent and negative disciplinary practices. This result can be considered as a sign of the low influence of the social desirability effect, together with other data that reveal coincidences of the two informants (e.g., relationship of the APQ with external variables).

The APQ assesses informants' perceptions of parenting practices and, therefore, does not necessarily correspond with real practices. Several studies have shown that the level of agreement between informants who play the same role is greater than that of those who play a different role (Achenbach et al., 1987), which may explain some of the moderate values of the correlations between informants for the same scale, the mean differences between informants on the same scale, and the magnitude of the relationship with behavior problems as a function to the source.

Several aspects can influence the assessments made by informants. The child's age and sex, ethnicity, the problem or construct to be assessed, the method used to collect information, the skills needed to reflect the perceptions, the quality of the memory of relevant information, the degree of sincerity and social desirability, the informant's emotional state, and the family's socioeconomic status are some of them (Achenbach, 2006; De los Reyes & Kazdin, 2005;

Renk, 2005). As suggested by several authors, low to moderate relationships between informants are to be expected. Moreover, finding differences between informants does not invalidate one of the two sources; each one provides unique, irreplaceable information (De los Reyes & Kazdin, 2005; Rubio-Stipec, Fitzmaurice, Murphy, & Walker, 2003). To consider a single informant can only lead to an incomplete, partial or biased knowledge (van der Ende & Verhulst, 2005).

To use more than one source has advantages and disadvantages. There is currently no consensus on how to use information from different informants. However, having instruments with parallel forms for more than one source allows launching studies to fulfill this current need.

The APQ scales of both versions are related to the presence of behavior problems. Coinciding with the original scale, negative parenting practices are more closely associated with behavior problems and also have statistically significant associations with them, regardless of the source. Shelton et al. (1996) found that the three negative scales of the parents' form of the APQ discriminate between children with and without a diagnosis of disruptive behavior disorder; the positive scales were not statistically significant. In the children's form, a similar trend was found but there were no statistical significant differences on any scale. In our study, both versions correlated significantly with behavior problems. A greater effect was expected for the parents' version compared to the children's, as it was the same informant for all the variables.

The absence of significant relationships in some of the analyzed correlations may be due to the nature of the sample (normative and voluntary), the type of variable used to measure behavior problems, and the influence of the source. In any case, finding similar patterns of relationships in both versions of the instrument provides more robust results.

These results must be interpreted taking into account certain methodological decisions. The nature of the sample, voluntary and normative, limits generalization to other samples (e.g., clinical sample or young offenders' sample). The variable behavior problem is a psychometric approach and not a diagnosis. The criterion of creating parallel forms of the instrument for parents and children can involve a loss of explanatory power when removing items that could have been maintained if we had not intended to create comparable versions. However, diverse tests, not presented herein, were conducted to study the relationship of the APQ scales with both the criteria and the external variable, and the results were very similar.

In conclusion, data from this study support previous findings and the use of the Catalan versions of the APQ for parents and children between 10 and 15 years as a measure of relevant parenting practices for the development of behavior problems in research studies. However, its use in clinical settings should be addressed with caution. Future work should study its psychometric properties in clinical samples and of juvenile offenders, and the Spanish version

should be elaborated, given the broad practical applications (clinical, educational, forensic, research) of the scale. It would also be advisable to perform confirmatory factor analysis in larger community samples, and to analyze whether the scores vary before and after applying parent training programs.

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