

## Perceptions of Parents Questionnaire: Evidence for a Measure of Parenting Styles<sup>1</sup>

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**Abstract:** Parenting styles have been investigated for several decades and are considered predictors of behavior among young individuals. This study's objective was to identify evidence for the factorial validity and internal consistency of the short version of the Parental Perception Questionnaire (PPQ-20), an instrument that is useful for assessing parenting styles. The participants were 386 elementary-school students (208 men) with a mean age of 12.7 years ( $sd = 1.60$ ). The participants answered two versions of the PPQ, each one composed of 20 items, to assess the young individuals' perceptions concerning their fathers (PPQ-20-F) and mothers (PPQ-20-M). The analysis of principal components (varimax rotation) revealed a two-component structure (responsiveness and demandingness) for both versions, which accounted for about 40% of the total variance. These components presented Cronbach's alpha scores above 0.70. Finally, there is evidence this measure has factorial validity and internal consistency.

**Keywords:** parental styles, socialization, questionnaires, statistical validity, teste reliability

## Questionário de Percepção dos Pais: Evidências de uma Medida de Estilos Parentais

**Abstract:** Parenting styles have been investigated for several decades and are considered predictors of behavior among young individuals. This study's objective was to produce a reduced version of a Brazilian measure that can be used to evaluate such styles, the Parental Perception Questionnaire (PPQ-20), an instrument that is useful in assessing parenting styles. The participants were 386 elementary-school students (208 men) with a mean age of 12.7 years ( $sd = 1.60$ ). The participants answered two versions of the PPQ, each one composed of 20 items to assess the young individuals' perceptions concerning their fathers (PPQ-20-F) and mothers (PPQ-20-M). The analysis of principal components (varimax rotation) revealed a two-component structure (responsiveness and demandingness) for both versions, which accounted for about 40% of the total variance. These components presented Cronbach's alpha scores above 0.70. Finally, there is evidence this measure has factorial validity and internal consistency.

**Palavras-chave:** estilos parentais, socialização, questionários, validade estatística, precisão do teste

## Cuestionario de Percepción de los Padres: Evidencias de una Medida de Estilos Parentales

**Resumen:** Los estilos parentales han sido investigados por décadas, siendo considerados predictores de comportamientos de los jóvenes. El objetivo principal de este estudio fue producir una versión reducida de una medida brasileña que se puede utilizar para evaluar estos estilos, el Cuestionario de Percepción de los Padres (CPP-20), un instrumento útil para evaluar tales estilos parentales. Participaron 386 estudiantes de primaria (208 varones) con edad promedio de 12.7 años ( $dt = 1.60$ ). Dos versiones del CPP, cada una con 20 ítems, fueron contestadas, evaluando la percepción de los jóvenes con respecto a sus padres (CPP-20-P) y madres (CPP-20-M). Un análisis de componentes principales (rotación varimax) reveló una estructura de dos factores (receptividad y exigencia) para las dos versiones, explicando alrededor de un 40% de la varianza total. Estos componentes presentaron alfas de Cronbach superiores a 0.70. Se concluyó que existen evidencias de validez factorial y fiabilidad de esta medida, que incluye dos dimensiones principales de los estilos parentales.

**Palabras clave:** estilos parentales, socialización, cuestionario, validación estadística, precisión de test

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The family is one of the most important agents in an individual's process of socialization. It is within the family environment that individuals first acquire values, beliefs, attitudes, standards and behaviors considered to be culturally appropriate (Berns, 2009). Regardless of culture,

social group or family structure, parents usually reinforce the behaviors of their children, indicating whether they are appropriate or not (Darling & Steinberg, 1993). Such responsibility on the part of parents is a constant that transcends the diversity of social standards, making it possible to identify behavioral characteristics or styles adopted by parents in the daily socialization of their children (Musitu & García, 2001).

Parenting styles have been investigated for many decades and are considered important predictors of child development (Weber, Selig, Bernardi, & Salvador, 2006). Such styles can be seen as a set of behaviors of fathers and mothers in the children's socialization process (Kobarg, Vieira, & Vieira, 2010). The variability of parents' behaviors in relation to the socialization of their children has been satisfactorily explained by two basic dimensions, which, despite other terms used by researchers, can be called parental *control (demandingness)* and *affection (responsiveness)* (Musitu, Estévez, Martínez, & Jiménez, 2008). Control implies making demands, supervision, and requirements imposed by maternal and paternal figures, while affection involves sensitivity, acknowledgment and commitment of parents to their children (Baumrind, 2005; Weaver & Prelow, 2005).

These dimensions can be put into operation by a continuum whose intersection originates four styles of progressive-regressive influence, defining four styles of parental socialization that are a consensus in the literature (Costa, Teixeira, & Gomes, 2000; Maccoby & Martin, 1983; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Specifically, scores in the dimensions *control* and *affection* allow us to define *authoritative* (high control and affection), *authoritarian* (high control and low affection), *uninvolved* (low control and low affection) and *permissive* (low control and high affection) styles (Rothrauff, Cooney, & An, 2009).

The *authoritative* style describes parents who maintain a balance between high levels of demandingness and affection, consistently supervising their children's behavior in order to discipline them through inductive rather than punitive methods. They reinforce socially responsible and mature behavior through praise and manifestations of affection, offering support, encouraging communication and valuing their children's points of view (Karavasilis, Doyle, & Markiewicz, 2003). *Authoritarian* parents on the other hand, are highly demanding but unresponsive (low affection), emphasizing obedience, respect for authority and the maintenance of order through discipline based on power and severe (usually physical) punishment, expecting that rules will be complied with without offering their children a chance to negotiate (Baumrind, 1997).

Parents considered to be *permissive* are characterized by little or non-existent control, infrequent exercise of any type of authority in order to ensure compliance from their children. On the contrary, they tend to talk and ask their children about family decisions, encouraging them to be independent (Baumrind, 1997; Rothrauff et al., 2009). *Uninvolved*

parents in turn, are characterized by a lack of involvement and little time dedicated to interact with their children. These parents are generally concerned with their own problems and neglect their parental responsibilities. They do not supervise their children and do not provide any type of affective support (Maccoby & Martin, 1983).

Contrary to the more vertical and unidirectional view that only emphasizes the perception of parents concerning their children, researchers have increasingly highlighted the importance of considering the perceptions of children concerning their parents, evaluating how such perceptions explain certain constructs (Mora-Ríos, González-Forteza, Jiménez-Tapia, & Andrade-Palos, 1999). Incidentally, these four styles have been associated with various issues that permeate childhood and adolescence (Brand, Hatzinger, Beck, & Holsboer-Trachsler, 2009) such as psychological development, academic performance, social skills, depressive disorders, anxiety and socially deviant behaviors (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Milevsky, Schlechter, Netter, & Keehn, 2007; Steinberg, 2001).

Despite the previous discussion, there are few studies addressing the topic in Brazil, while instruments available to evaluate the perception of children concerning their parents, with some exceptions, are even more scarce (Costa et al., 2000; Teixeira, Oliveira, & Wottrich, 2006). This study's objective was to develop a short version of a Brazilian instrument that can be employed to evaluate parenting styles, the *Questionário de Percepção dos Pais* [Perceptions of Parents Questionnaire] (PPQ) (Pasquali & Araújo, 1986). Specifically, we intend to evaluate its factor structure, focusing on the dimensions *affection* and *control*, and check their respective internal consistency coefficients. The use of this instrument is justified based on its evidence of construct validity and the appropriate reliability indexes of its factors. The expectation is that this new short version will be more easily and quickly applied, and therefore, more convenient for use in future studies. Nonetheless, before describing the corresponding study, it seems pertinent to briefly present some instruments developed or adapted to evaluate parenting styles in Brazil.

### **Instruments to Evaluate Parenting Styles**

The relationships between parents and children result in behaviors or practices that are referred to in different ways in the literature, such as: care practices, parental care, parenting practices, educational practices, and parenting styles. In addition to these, there are terms such as cognition, beliefs, ideas and parental values (Martins et al., 2010). Even though these terms correspond to different constructs, all share an emphasis on the relationship between parents and children, which justifies considering them together. Some instruments used to evaluate such relationships are listed here. These were developed and/or evaluated in terms of the evidence of their validity in the Brazilian context.

Costa et al. (2000) translated and adapted two scales that evaluate the dimensions of parental *responsiveness* and *demandingness* with the participation of 378 adolescents. The results of the analysis of the main components confirmed a dimension related to *responsiveness*, and suggested two specific factors to represent *demandingness*: *explicit control* and *implicit control*. The internal consistency coefficients (Cronbach's alpha) of these scales ranged from 0.70 to 0.83. Analysis of variance revealed that perceived maternal *demandingness* was greater than perceived paternal *demandingness* among adolescents of both genders, while girls perceived greater levels of (paternal and maternal) *demandingness* than boys. Maternal *responsiveness* was also perceived to be greater than paternal *responsiveness* by both genders, and again, girls obtained higher scores compared to boys in relation to the perception of maternal *responsiveness*.

The study performed by Teixeira, Bardagi and Gomes (2004) refined the instrument previously mentioned to evaluate the parental dimensions of *demandingness* and *responsiveness* as perceived by adolescents. New items were developed taking into account the *demandingness* and *responsiveness* scales previously tested in Brazil (Costa et al., 2000). At this stage, the authors intended to enrich the content of the items and improve the reliability of the scales. Therefore, 33 items were initially applied to 550 adolescents aged 16.6 years old on average. An analysis of the main components indicated that 24 items could be represented by two theorized components. These components presented Cronbach's alphas of 0.78 (*demandingness*) and 0.92 (*responsiveness*). These results provide evidence of the instrument's factor validity and internal consistency.

Benetti and Balbinotti (2003) developed an inventory of socialization practices employed by fathers and mothers of school aged children. They used a sample of 106 parents, of both genders, of children with ages that ranged from six to ten years old. Based on a literature review, two instruments were developed: *Inventário de Práticas Parentais* [Parental Practices Inventory] and *Escala de Pertinência e Clareza* [Relevance and Clarity Scale]. The latter was developed to measure inter-rater agreement. The 16 items from the first instrument evaluated four dimensions: *affective involvement*, *didactic elements*, *discipline* and *social aspects of parental involvement*. Based on the analysis of items and the coefficients of internal consistency (Cronbach's alpha), which ranged from 0.55 (discipline) to 0.82 (education), it was suggested that the Parental Practices Inventory was able to identify socialization practices in school-aged children in relation to the quality of parental involvement.

Valentini (2009) sought to validate the Young Parenting Inventory (Young, 1999) for the Brazilian context. This instrument is composed of 72 items addressing 18 parenting (maternal and paternal) styles, proposed by the author. The study included 920 students (543 females)

attending secondary school or higher education in the Brazilian cities of Natal, Petrolina, Brasília, and the metropolitan region of Porto Alegre. Exploratory and confirmatory factor analysis corroborated, in part, the second-order factors proposed by Young. Five factors were extracted from both the maternal and paternal scales. The factors in the maternal scale explained 45.1% of the variance, as follows: *disconnection* ( $\alpha = 0.89$ ) *affectivity* ( $\alpha = 0.85$ ), *hyper-vigilance* ( $\alpha = 0.83$ ), *overprotection* ( $\alpha = 0.78$ ), and *poor sense of boundaries* ( $\alpha = 0.66$ ). The factors in the paternal scale explained 47.6% of the variance, which are: *rejection* ( $\alpha = 0.90$ ), *emotional stability* ( $\alpha = 0.88$ ), *other-oriented* ( $\alpha = 0.85$ ), *low level of autonomy* ( $\alpha = 0.79$ ), and *poor sense of boundaries* ( $\alpha = 0.71$ ).

In order to develop an instrument to evaluate educational practices toward adolescents in parenting, Teixeira et al. (2006) worked with a sample of 409 adolescents, 298 of which answered all the items. A total of 62 items were initially developed to evaluate various dimensions of parental practices, six of them were identified through analysis of the main components, resulting in a version with 27 items. The components and their respective Cronbach's alphas were as follows: *punitive control* (0.73), *behavioral supervision* (0.77), *demandingness of responsibility* (0.70), *intrusiveness* (0.67), *emotional support* (0.89), and *encouragement of autonomy* (0.76). In this context, the authors concluded that it was possible to distinguish more specific parental educational practices besides *demandingness* and *responsiveness*. Correlations between parental educational practices and variables of psychosocial development were observed indicating that the first are important for the psychosocial development of adolescents, providing evidence of the concurrent validity of its measurement.

Studies performed by Gomide (2006) resulted in the development of the Parenting Styles Inventory (PSI). It is composed of 42 questions and evaluates parenting styles through seven educational practices: five related to the development of antisocial behaviors (neglect, inconsistent punishment, lax discipline, negative monitoring, and physical abuse) and two related to the development of pro-social behavior (moral behavior and positive monitoring). This instrument was initially applied to a sample of 769 male adolescents from two groups: a risk group and a non-risk group. The internal consistency coefficients of these factors of parenting styles ranged from 0.46 to 0.87.

Martins et al. (2010) gathered evidence of factor validity of a scale of parenting beliefs and care practices in early childhood, taking into account the Brazilian context (E-CPPC). They considered the model to understand parenting as proposed by Keller (2007), which comprises care practices used by parents of children up to three years old, as well as beliefs they hold and that guide their behavior. The scale was applied to two samples, one with 250 and another with 600 mothers. They identified two

factors: *primary care* and *stimuli* with Cronbach's alphas of 0.68 and 0.83, respectively. Therefore, these authors suggest that such an instrument gathered evidence of factor validity and reliability.

The study conducted by Kobarg, Vieira and Vieira (2010) intended to validate the scale that assesses memories of rearing practices during childhood, the EMBU. The study included a sample of 454 male and female college students. The instrument was initially composed of 23 items for each of the parents and the items were answered on a four-point scale. The dimensions evaluated were: *emotional support*, *rejection* and *overprotection*. According to the factor analysis with *varimax* extraction, three factors explained 44.14% of the variance in the participants' responses. The EMBU's final version comprised 21 items, two less than the initial version. The authors stressed the importance of validating the instrument, which needs to be put into the context of the culture in which it will be applied.

In summary, there are various instruments in the Brazilian context that identify parenting styles and practices. However, not all instruments focus on the dimensions *demandingness* and *responsibility* (Teixeira et al., 2004). Some were developed to map complex factor structures with multiple factors (Costa et al., 2000; Teixeira et al., 2006) and others present low internal consistency coefficients (Bentti & Balbinotti, 2003; Gomide, 2006). In this context, we consider the possibility of identifying the aforementioned dimensions of parenting styles based on an instrument developed within the Brazilian context to evaluate multiple factors of perception concerning parents. Thus, we aim to obtain a more parsimonious factor structure, gathering evidence of its appropriateness in terms of internal consistency. Following we present the instrument before presenting this study's results.

### Parental Perception Questionnaire (PPQ)

According to Pasquali and Araújo (1986), the PPQ was designed to provide an inventory of children's perception concerning their parents' behaviors and attitudes. The instrument was developed based on the work of Schaefer (1965), which presented 189 items distributed into three main factors: *acknowledgment/rejection*, *psychological autonomy/psychological control*, and *firm control/lax control*. Based on it, more than 200 items were adapted or developed; evidence of the semantic validity of these was verified. A total of 25 adolescents, aged between 15 and 18 years old attending secondary school participated in the study. Based on this preliminary analysis, some items were reformulated and others discarded, resulting in the first version of the instrument, which was composed of 185 items.

Wanting to reduce these items and reach a more functional and practical version of the PPQ, an exploratory factor analysis of the main components was performed. The questionnaire was completed by 171 adolescents, of

both genders, who were attending primary and secondary schools. A total of 85 adolescents responded to a version addressing the perceptions they hold of their fathers and 86 responded to a version addressing their perceptions concerning their mothers. Given criteria established *a priori* by the authors (factor minimum loads of 0.30, saturation in a single factor, and a minimum of three items per factor), 65 items were retained and divided into 12 factors, which were then related to the perceptions of fathers. This explained 52.5% of the total variance, in addition to 19 factors that represented the participants' perception concerning their mothers, thus explaining 68.2% of the total variance.

This new version of the PPQ was applied to 574 students attending primary school (9%), secondary school (50%), and college (41%), with an average age of 17.5 years old; most were from families in which the parents lived together (75%). All answered both versions (concerning father and mother) and analysis of the main components for each set of items was performed according to the version they referred to (mother or father). The same criteria previously presented were used to retain an item in each factor, adding eigenvalues equal to or above 1.5 and factor loads from 0.40. The data matrix for the father's version allowed the extraction of up to seven components, though given the established criteria, the items were grouped into four factors that together explained 33.6% of the variance. Five components were extracted from the mother's version; one of them was discarded for not meeting the established criteria, thus four factors explained 35.1% of the total variance.

Based on the correlations between the factors of both versions, two second-order factors emerged (Pasquali & Araújo, 1986). Therefore, in the following stage, in order to verify the PPQ's internal consistency, the coefficients of each specific component and of the two admitted as second-order were computed. In the father's version, this second-order component was called *friendship*, which was composed of the first-order components *companion*, *friend* and *child-oriented*, and *discipline*, which comprised *punitive discipline* and *lax discipline*. In the mother's version, the second-order component *discipline* gathered the first-order components *over protection*, *lax control* and *punishment*. The second-order component called *friendship* was composed of the items of the first-order component called *intimate friend*. The Kuder-Richardson ( $KR_{21}$ ) coefficients were 0.70 for all the components in the QPP's father and mother versions, with the exception of the third component of first-order components (*discipline/lax control*), whose values were 0.62 and 0.61, respectively.

In summary, this instrument gathered factor validity evidence, enabling us to consider the affection (*responsiveness*) and control (*demandingness*) dimensions identified in the literature, which presented indicators of internal consistency ( $KR_{21}$ ) that can be considered satisfactory,

at least for the purposes of the study (Pasquali, 2003). Nonetheless, we wondered about the possibility of having a more reduced, focused measure, specifically for the second-order dimensions, whose high and low scores can be combined to identify the four parenting styles mentioned in the literature: *authoritative*, *authoritarian*, *uninvolved* and *permissive* (Pereira, Canavarro, Cardoso, & Mendonça, 2009; Weber, Prado, Viezzer, & Brandenburg, 2004). This is precisely the goal of this study, described as follows.

## Method

### Participants

This study included 386 students: 208 males and 178 females, aged from 10 to 16 years old ( $m = 12.7$ ,  $sd = 1.60$ ), attending the 6<sup>th</sup> to 9<sup>th</sup> grades, equally distributed between public and private schools in the city of João Pessoa, PB, Brazil. This was a convenience (non-probabilistic) sample in which individuals authorized by each school agreed to voluntarily answer the questionnaire. The respondents and their respective legal guardians were informed of the study's confidential nature and that they were free to withdraw from it at any time.

### Instruments

The participants received a booklet containing four main parts: *Antisocial and Criminal Behavior Scale*, *Basic Values Questionnaire*, *Parental Perceptions Questionnaire*, and a *Demographic Questionnaire*. Only the last two will be described, given this study's objective.

*Parental Perceptions Questionnaire*: The original version presented by the authors contained more than 50 items (Pasquali & Araújo, 1986) but our purpose was to achieve a shorter version. Therefore, based on the items' semantic content and their factor loads as described in the instrument's original study, we selected for 20 items each version for the father and mother versions, equally distributed to represent the dimensions responsiveness (e.g. *Becomes happy when s/he sees me when I get back from school or from a trip*; *Reassures me when I am afraid*) and demand (e.g. *Believes that s/he has to punish me so I correct myself and improve*; *Always reminds me of things I am not supposed to do*). The participants should indicate for each item, on a five-point scale, the extent the described behavior or attitude was applicable or described one of the parents. The scaled ranged from 0 (= *not applicable*) to 4 (= *totally applicable*).

*Demographic Questionnaire*: This instrument was developed to characterize the study's participants and was the last part of the booklet. Questions addressing the individuals' gender, ages and religious identification were included, as well as questions addressing their self-perceived religiosity (*To what extent do you consider yourself religious?*)

and different social groups (*To what extent do you identify yourself with the following groups: parents, siblings, peers, neighbors, family members, and friends*). The same five-point scale was used in both cases, that is, ranging from 0 = *Not applicable* and 4 = *Totally applicable*.

## Procedure

**Data collection.** In order to comply with ethical recommendations provided by Resolution 196/96, Brazilian National Council of Health, we obtained authorization from the principals of the participating schools and consent from the participants' parents or legal guardians. After that, we scheduled dates for the instruments to be applied. Although all questionnaires were to be answered in the classroom at the same time, each student answered them individually. Two research assistants, properly trained, were responsible for collecting data. The teachers were asked to leave the classrooms and only the researcher assistants remained in the classroom, only for the purpose of clarifying doubts concerning how to answer the questions, but never concerning their content. The average time to conclude the application of the instruments was approximately 30 minutes.

**Data analysis.** Data were tabulated and analyzed through PASW version 18. We initially sought to evaluate the appropriateness of the QPP's inter-item correlation matrix in order to perform factor analysis, observing the KMO (*Kaiser-Meyer-Olkin*) indicators and Bartlett's test of sphericity. Then, in order to identify the number of components to be extracted, we checked different criteria (Kaiser, Cattell and Horn), performing analysis of the main components. To gather evidence regarding precision, the internal consistency (Cronbach's alpha) of the resulting components was computed.

### Ethical Considerations

This study was approved by the Committee for Research Ethics Concerning Human Subjects at the Lauro Wanderley University Hospital, Universidade Federal da Paraíba, Brazil (protocol CEP/HULW n° 140/11).

## Results

We initially verified the appropriateness of the QPP's matrix of correlation to perform factor analysis. Satisfactory indicators were observed both for the version addressing the perception concerning mothers [ $KMO = 0.85$ ; Bartlett's test of sphericity (190) = 1,992.64,  $p < 0.001$ ] and for the version addressing the perception concerning fathers [ $KMO = 0.86$ ; Bartlett's test of sphericity (190) = 2,340.29,  $p < 0.001$ ]. The next step was to identify the number of components to extract, adopting Horn's criterion (parallel analysis), an alternative procedure to criteria commonly used (*Kaiser and Cattell*),

which have presented dubious results (Hayton, Allen, & Scarpello, 2004). In the parallel analysis, eigenvalues are compared to the observed values. In this case, we admitted a structure of database composed of 386 participants and 20 items and performed 1,000 simulations. The corresponding results were compared to those of the main components analysis. The component is identified when the observed eigenvalue is higher than the simulated one. The results of this analysis are shown in Table 1.

Table 1  
Parallel analysis for the items of the PPQ-20

Simulated values	Observed values		Percentile
	Mother's version	Father's version	
1,43	4,69	5,38	1,50
1,35	2,88	2,90	1,40
1,29	1,26	1,22	1,34
1,24	1,08	1,11	1,29
1,20	0,97	1,05	1,22
1,15	0,94	0,93	1,18
1,11	0,87	0,83	1,14
1,07	0,79	0,72	1,10
1,04	0,77	0,70	1,07
1,00	0,73	0,64	1,03
0,97	0,69	0,63	1,00
0,93	0,64	0,56	0,96
0,90	0,60	0,53	0,93
0,87	0,57	0,49	0,90
0,83	0,47	0,45	0,86
0,80	0,46	0,44	0,83
0,76	0,45	0,41	0,80
0,73	0,42	0,36	0,76
0,69	0,37	0,35	0,72
0,64	0,32	0,31	0,69

According to Table 1, only the first two eigenvalues observed for the questionnaires addressing the perception of mothers (4.69 and 2.88 respectively) and the perception of fathers (5.38 and 2.90, respectively) were higher than the simulated ones. It suggests that extracting only two components for both the PPQ's versions is a pertinent exercise. Hence, we decided to perform the main component analysis for each PPQ version according to its focus (father or mother), adopting varimax rotation and saturation criterion above 0.30. The results of each version are described as follow.

*Questionnaire Addressing the Perceptions of Mothers.* The results of this version are summarized in Table 2. The two extracted components presented eigenvalues above 2, jointly explaining 37.9% of total variance. These can be described as:

*Component I* was composed of 11 items ranging from 0.33 (*Item 5. She would like for me to stay home more where she can take care of me*) to 0.76 (*Item 7. Reassures me when I am afraid*). Its eigenvalue was 4.69, explaining 23.5% of total variance, with an internal consistency of (Cronbach's alpha) of 0.84. The semantic analysis of the items leaves no doubt about the construct represented: *responsiveness*, evidence for behavior related to communication, support promotion, expressing affection and harmony in the mother-child relationship.

*Component II.* Gathered eight items whose saturations ranged from 0.31 (*Item 6. She wants to know exactly where I am and what I am doing when I am not home*) to 0.76 (*Item 19. Believes all my bad behavior should be punished somehow*). With an eigenvalue of 2.88, this component contributed to 14.4% of total variance; its Cronbach's alpha was 0.73. Its items with higher saturations are clear in relation to the content addressed: *demandingness*. They portray the individual's perception in relation to the mother's authority, which is expressed into actions such as monitoring, demandingness, and control of the child's behavior.

*Questionnaire Addressing the Perceptions of Fathers.* Table 3 shows a summary of the main components' analysis concerning the participants' perceptions of their fathers. Two components were extracted, jointly explaining 41.4% of the total variance. Such components are described as follow:

*Component I.* The items that composed this component presented saturations between 0.54 (*Item 16. Allows me to have my friends in our home*) and 0.77 (*Item 10. Seeks to cheer me up when I am sad*). This component presented an eigenvalue of 5.38, explaining 26.9% of the total variance. Its internal consistency (Cronbach's alpha) was 0.86; the content of these items revealed paternal *responsiveness*, which is characterized by strategies such as talking to the child, sharing ideas and problems, listening and showing affection.

*Component II.* This component gathered items with saturations ranging from 0.33 (*Item 18. Does not seem to notice whether I behave at home or do well at school*) and 0.75 (*Item 5. Believes that my bad behavior should be punished somehow*). Its eigenvalue was 2.89, explaining 14.5% of total variance; its Cronbach's alpha was 0.85. Its items suggest imposed obedience and punishment as a way to ensure that social rules and standards are complied with, expecting behavior considered socially correct, making evident why it is called *demand*.

In summary, a two-dimension structure becomes apparent in both versions (father and mother) of the Parental Perceptions Scale, showing two main dimensions of parenting styles: *responsiveness* and *demandingness*. Its internal consistency coefficients show the appropriateness of each of its components.

Table 2  
*Factor Structure of the of the Scale Concerning the Perceptions of Mothers*

Items	Content	Components	
		I	II
07	Reassures me when I am afraid	0,76*	-0,03
13	Seeks to cheer me up when I am sad	0,74*	-0,01
04	Tries to be my “friend” rather than a “boss”	0,70*	-0,11
18	Likes to discuss things and talk to me	0,70*	0,04
08	Wants to know what I really think about certain events	0,67*	0,12
14	It is easy to talk to her	0,62*	-0,06
01	Becomes happy when she sees me coming back from school or a trip	0,60*	0,05
12	Likes to talk to me about what she reads	0,57*	0,13
02	Spends a lot of time with me	0,56*	-0,05
20	She is very interested in what I learn at school	0,55*	0,19
05	She would like for me to stay home more where she can take care of me	0,33*	0,18
19	Believes all my bad behavior should be punished somehow	0,01	0,76*
15	Punishes me when I do not obey	0,09	0,73*
10	Believes she has to punish me to correct me and make me improve	-0,06	0,73*
09	Punishes me severely	-0,11	0,72*
16	She is always saying how I am supposed to behave	0,20	0,51*
17	If I break a promise she will not trust me for a while	0,04	0,44*
03	She keeps reminding me of things I am not supposed to do	0,23	0,36*
06	She wants to know exactly where I am and what I am doing when I am not home	0,30	0,31*
11	Does not seem to notice much whether I behave well at home or do well at school.	-0,04	0,19
Number of items		11	8
Eigenvalue		4,69	2,88
Cronbach's alpha		0,84	0,73
% Total variance		23,5	14,4

\* Item considered for the interpretation of the component

## Discussion

This study's objective was to verify evidence of the factor validity and internal consistency of a short version of the Parental Perceptions Questionnaire (Pasquali & Araújo, 1986) and we believe to have achieved such an objective. In fact, statistical analysis allowed us to identify two main dimensions of parenting styles that have been referred to in the literature, that is, *responsiveness* and *demandingness* (Baumrind, 2005; Teixeira et al., 2004; Weaver & Prelow, 2005), whose internal consistency coefficients (Cronbach's alpha) were above the cut off point usually recommended (0.70) (Pasquali, 2003). Nonetheless, it is wise to note the limitations of the sample, which, even though it was sufficient to perform the desired analyses, cannot be considered to be representative (Osborne & Costello, 2004). The main findings are discussed below.

Even though it is a short version of the original instrument (Pasquali & Araújo), the present instrument's second-order factor structure was clearly preserved. In this case, the components *responsiveness* and *demandingness* were theoretically and empirically evident. Although the four or five components were plausible when extraction criteria

such as those of Kaiser (eigenvalue above 1) and Cattell (graphical representation of eigenvalues) were used, we opted for a more robust criterion and performed simulations (parallel analysis) to compare randomly generated eigenvalues with those effectively observed (Laros, 2004).

Following the indication of extracting two components, we clearly identified dimensions predicted for the father and mother versions. Specifically, one dimension covered elements that translate behavior related to open communication, support and the demonstration of affection and harmony in the relationship between parents and children (*responsiveness*), while the other focused aspects that highlighted the monitoring of behavior, demandingness and behavioral control, reflecting the perception of parents as authorities (*demandingness*). These results reinforce those described by Pasquali and Araújo (1986), who even though they extracted four components for each version, described two second-order components called *friendship* and *discipline*, which are very similar to the ones identified in this study. In fact, regardless of the terms used by the researchers, these dimensions have been commonly identified, expressing parental *control* and *affection* (Musitu et al., 2008).

Table 3  
Factor Analysis of the Scale Concerning the Perception of Fathers

Items	Content	Components	
		I	II
10	Seeks to cheer me up when I am sad.	0.77*	0,02
08	I feel better after I talk to him about my problems	0.74*	0,13
11	It is easy to talk to him	0.74*	0,04
20	Gets happy when he sees me when I get back from school or a trip	0.70*	0,06
17	Acknowledges my opinions even when they differ from his own	0.67*	-0,05
15	Tells me when he likes me	0.65*	0,10
13	He is very interested in what I learn at school	0.63*	0,23
06	Spends a lot of time with me	0.57*	0,19
12	Likes to talk me about what he reads	0.55*	0,15
16	Allows me to have my friends in our home	0.54*	0,01
05	Believes that my bad behavior should be punished somehow	-0.01	0,75*
19	Punishes me when I do not obey	0.02	0,72*
07	Does not easily forget what I do wrong	0.07	0,70*
04	He is tough on me	-0.28	0,68*
02	He always says how I am supposed to behave	0.35	0,54*
01	He keeps reminding me of things I am not supposed to do	0.30	0,54*
03	He wants to know exactly where I am and what I am doing when I am not home	0.30	0,49*
09	Believes I am supposed to obey all his orders	-0.04	0,46*
14	Does not want to be bothered and make sure that his rules are obeyed	0.25	0,34*
18	Does not seem to notice much whether I behave at home or if I do well at school	0.13	0,33*
Number of items		10	10
Eigenvalue		5,38	2,89
Cronbach's alpha		0,86	0,77
% Total variance		26,9	14,5

\* Item considered for the interpretation of the component

In this study, we chose to call the identified components *responsiveness* and *demandingness*, foregoing the previous designation used by Pasquali and Araújo, because the first are more appropriate to the current literature addressing parenting styles and socialization practices. Although the idea expressed by the components is the same, *demandingness* indicates a notion of control, implying the children's perception concerning demandingness, supervision and requirements imposed by their maternal and paternal figures. *Responsiveness* in turn comprises affection and is translated into the perception the young individual has concerning sensitivity, acknowledgement and commitment from parents (Baumrind, 2005; Gomide, 2006; Weaver & Prelow, 2005). At this point, it is relevant to question the greater contribution of the dimension *responsiveness* when compared to *demandingness*, to explain the total variance of the perceptions the participants hold of their parents. Even though this difference can be attributed to the greater complexity of the latter, we offer a simpler explanation: perhaps the participants' perceptions concerning their parents varies more in terms of affection (*responsiveness*) than in terms of authority (*demandingness*) (Weber et al., 2004). This explanation seems plausible given the phase of life the participants were

experiencing. They were 12.7 years old on average and their parents' concerns and demands are more clearly expressed on the part of parents. Further studies are needed to consider such conjectures.

Since it is possible to describe the perceptions of the adolescents in relation to their parents through two main dimensions of parenting styles: *responsiveness* and *demandingness*, it seems evident that this simplified instrument is appropriate. How is it then possible to identify the four types of parenting styles (*authoritative*, *authoritarian*, *uninvolved* and *permissive*) based on these dimensions? Based on an empirical median observed for each of them, we recommend defining higher and lower score groups, a strategy that has been already used (Costa et al., 2000; Musitu & García, 2001). The *authoritarian* style is represented with a high score in *demandingness* and a low score in *responsiveness*, while an *authoritative* style would imply a high score in both dimensions; the *uninvolved* style would obtain low scores in both *responsiveness* and *demandingness*, while the *permissive* style would obtain high scores in *responsiveness* but low scores in *demandingness*.

The literature review conducted in Brazil by Macarini, Martins, Minetto and Vieira (2010) concerning



parenting practices identified 64 papers presenting at least one of the following key words: “educational practices”, “parenting styles”, “parenting practices”, “care practices” and “parenting care”. Of these, more than a third (24 papers) employed some questionnaire or scale. This study does not offer an instrument to replace the existing ones but shows an effort to contribute to a topic that has increasingly attracted the interest of Brazilian researchers. Recovering a tool from the 1980s seemed nonsensical, if it was not for the appropriateness of its psychometric parameters, brevity and the facility with which it can be answered. Additionally, this is a free instrument, not commercialized, which encourages studies in the field and contributes to the professional practice of psychologists interested in understanding the relationship between parents and children.

Finally, the versions of parenting styles measure we are proposing (PPQ-20-P and PPQ-20-M) gather parameters that are equal to or even higher than those described in the literature. The most divergent items, with lower saturations, could be discarded, considering seven or eight items per dimension, although the impact of reducing this instrument’s parameters needs to be evaluated. Further research concerning other parameters such as temporal stability, convergent-discriminatory validity, and predictive validity is needed. We also acknowledge that the performed analyses were exploratory and the appropriateness of the two-factor model should be confirmed in the future, comparing it with an alternative, one-dimension model, and checked for its factor invariance.

### Conclusions

This study’s objective was to identify the evidence for the factor validity and internal consistency of a short version of the Parental Perceptions Questionnaire - PPQ (Pasquali & Araújo, 1986). The results show the existence of two factors of parenting style with robust psychometric parameters. We should, however, note that the sample cannot be considered representative of the Brazilian population, which indicates the need for future studies including broader and more diverse samples.

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