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**PSYCHOMETRIC PROPERTIES OF AN ADAPTED VERSION OF
THE PARENTAL SENSE OF COMPETENCE (PSOC) SCALE FOR
PORTUGUESE AT-RISK PARENTS**

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3 **PSYCHOMETRIC PROPERTIES OF AN ADAPTED VERSION OF THE**
4 **PARENTAL SENSE OF COMPETENCE (PSOC) SCALE FOR PORTUGUESE**
5 **AT-RISK PARENTS**
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8
9 **Abstract**

10 Parental sense of competence is one of the central dimensions targeted on psychosocial
11 interventions aimed at supporting at-risk families. Researchers and practitioners need
12 reliable instruments to assess the parental role adapted for these families. Although the
13 Parental Sense of Competence (PSOC) scale has been frequently used to assess this
14 construct, there is still no adapted version for Portuguese parents. In this study, the
15 reliability, validity, and factor structure of the PSOC scale is examined with a clinical
16 sample of 146 mothers from at-risk families receiving psychosocial interventions for
17 family preservation from Child Protective Services. Results show that the Portuguese
18 version of the PSOC measures three distinct constructs with acceptable psychometric
19 properties: Efficacy, dissatisfaction, and controllability. As expected, the obtained
20 factors were significantly and positively related to parenting alliance and family
21 cohesion, and negatively associated with parenting stress. In sum, the proposed
22 Portuguese version shows reliability and validity evidences to measure three relevant
23 dimensions of parental self-evaluation, and it constitutes a cost- and time-effective
24 instrument suited for at-risk mothers.
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38 **Keywords:** assessment, parental competence, risk in social work, child protection.
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INTRODUCTION

Nowadays, family preservation interventions are directed not only to avoid children out-of-home placement but also to strengthen parental competences. As a consequence, Child Protective Services interventions have a preventive and positive orientation that is aimed at families with diverse profiles and risk levels (Sanders & Cann, 2002). Although there is no standard definition of at-risk families, this term refers to families that have difficulties to adequately meet children's needs, but not severely enough to require children's placement in foster care (Rodrigo *et al.* 2012; Sanders & Cann, 2002). For these families, preservation interventions go beyond the classical clinical therapeutic approach and focus on child and family well-being. Specifically, parenting group interventions provide an approach that may be more cost-effective than individual interventions, offering the opportunity for mutual support and the building of informal support relationships (Lindsay *et al.* 2011; Rodrigo *et al.* 2012).

One of the central dimensions addressed by these interventions is parental sense of competence. The importance of this construct is demonstrated by the large amount of research that has focused on its measurement (Coleman & Karraker, 2000; Lovejoy *et al.* 1997) and on its impact on parent, child, and family outcomes (for a review, see Jones & Prinz, 2005).

Parental sense of competence has received multiple designations, such as parental self-esteem, self-efficacy, or perceived control, which highlight the underlying theoretical approach (for a more detailed description, see Bugental *et al.*, 1998; Carpenter & Donohue, 2006; Coleman & Karraker, 1997, 2000; Jones & Prinz, 2005; Sabatelli & Waldron, 1995). Despite this variability, all these approaches include two global components: cognitive and emotional self-perceptions of parenting. The former consists of the beliefs or judgments that parents hold about their abilities to perform

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3 parenting-related tasks (Farkas & Valdés, 2010; Jones & Prinz, 2005; Montigny &
4 Lacharité, 2005) and to influence children and their environment in ways that will
5 promote children's positive development (Ardelt & Eccles, 2001). The latter, emotional
6 component, consists of the satisfaction derived from the parenting role (Johnston &
7 Mash, 1989), which is the positive result of the comparison between obtained results in
8 parenting and prior expectations (Sabatelly & Waldron, 1995).

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16 Parental sense of competence has been associated with a wide array of parental
17 outcomes, such as parental behavior and competence (Coleman & Karraker 1997;
18 Gelkopf & Jabotaro, 2013; Shumow & Lomax, 2002), parental depression (Gondoli &
19 Silverberg, 1997; Teti & Gelfand, 1991), or parenting stress (Begle & Dumas, 2011;
20 Bloomfield & Kendall, 2012; Erdwins *et al.* 2001). The psychological adjustment of
21 parents, in turn, is linked to **parental sense of competence** and children's adjustment.
22 Specifically, many studies have found a positive relation between **parental sense of**
23 **competence** and children's adjusted behavior (Coleman & Karraker, 2000), positive
24 socio-emotional functioning, and academic achievement (Ardelt & Eccles, 2001; Hill &
25 Bush, 2001). Furthermore, indirect relations between **parental sense of competence** and
26 both potential child abuse (Begle & Dumas, 2011) and child maltreatment (Mammen *et*
27 *al.* 2003) have been drawn. In this line, there is empirical evidence about **parental sense**
28 **of competence** as a protective factor that moderates the effects of risk factors, such as
29 maternal depression and children's difficult temperament (Farkas & Valdés, 2010;
30 Gondoli & Silverberg, 1997), and as a buffer of the effects of adversity in families
31 living in disadvantaged environments (Ardelt & Eccles, 2001). **Parental sense of**
32 **competence** has also been associated with other family dimensions, such as indicators of
33 both marital relation and family functioning (Jones & Prinz, 2005; Ohan *et al.* 2000;
34 Sevigny & Loutzenhiser, 2010).

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3 All these findings point out to the importance of assessing the determinants of
4 **parental sense of competence** (Seigny & Loutzenhiser, 2010), particularly with parents
5 that face adverse circumstances that undermine their parenting, which threaten child
6 well-being. Research has shown that parental sense of competence in families at
7 psychosocial risk has features somewhat different from those in **the** community
8 population (Menéndez *et al.* 2011; Rodrigo & Byrne, 2011). Specifically, parents from
9 families at psychosocial risk tend to perceive themselves as being less competent in
10 their parenting role (Coleman & Karraker, 1997; Raikes & Thompson, 2005).
11 Moreover, the perception that at-risk parents have about their own skills may be
12 distorted because parents under social stress tend to evaluate everyday situations in
13 simple and automatic ways, and are inclined to lack perspectivism and to have fewer
14 self-correcting mechanisms (Rodrigo *et al.* 2006). This simplistic, self-centered, and
15 unconscious cognitive processing favors a minimization of the difficulty of parenting-
16 related tasks and more impulsive, rigid, and reactive educational practices and feelings
17 of helplessness. Hence, a portion of at-risk parents likely hold an excessively
18 benevolent perception of their own parenting abilities.

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21 In considering these findings, enhancing parental sense of competence must be
22 included clearly as one of the main objectives of the psychosocial interventions with at-
23 risk families. Researchers and practitioners must also employ reliable **as well as** cost-
24 and time-efficient instruments to assess the effectiveness of these interventions.
25 Concerning parental sense of competence, there are several widely used instruments,
26 such as the Maternal Self-Efficacy Scale (Teti & Gelfand, 1991), Parent Attribution
27 Test (Bugental *et al.* 1989), Parental Locus of Control (Campis *et al.* 1986), Parenting
28 Self-Agency Measure (Dumka *et al.* 1996), and Parental Sense of Competence
29 (Johnston & Mash, 1989).
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3 According to the extensive review of Jones & Prinz (2005), the PSOC is the
4 most frequently used tool in assessing parenting self-evaluations. The PSOC is an
5 adaptation of Gibaud-Wallston & Wandersman's (1978) parental sense of competence.
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7 This scale originally had 17 items, and as a result of a principal-components factor
8 analysis, Johnston & Mash (1989) eliminated Item 17 because of its poor loading on
9 any of the factors, and identified two subscales: efficacy and satisfaction. The first
10 dimension reflects the degree to which the parent feels competent, capable of problem
11 solving, and at ease with parenting, whereas the second one reflects the extent to which
12 the parent feels frustrated, anxious, and poorly motivated in the parenting role. The
13 version proposed by Johnston & Mash (1989) has been used in many countries, such as
14 Canada (Ohan *et al.* 2000), the United States (Coleman & Karraker, 2000; Lovejoy *et*
15 *al.* 1997), China (Ngai *et al.* 2007), Australia (Gilmore & Cuskelly, 2009; Rogers &
16 Matthews, 2004), Norway (Reedtz *et al.* 2011), and Spain (Menéndez *et al.* 2011), both
17 with community (Coleman & Karraker, 2000; Seigny & Loutzenhiser, 2010) and
18 clinical samples (Gelkopf & Jabotaro, 2013; Knoche, *et al.* 2007; Menéndez *et al.* 2011;
19 Sanders & Woolley, 2005). It has also been widely used as a tool for evaluating
20 parenting interventions (Cerezo *et al.* 2013; Lindsay *et al.* 2011; Reedtz *et al.* 2011).

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22 The PSOC has substantial strengths, including good content validity, internal
23 consistency (e.g., alpha value of .80 reported by Ohan *et al.* 2000), some normative data
24 (see the review of Črnčec *et al.* 2010), test-retest reliability (e.g., test-retest reliability
25 between .73 and .74 according to Gibaud-Wallston, 1977), and indicators of both
26 convergent and discriminant validity. Thus, significant and negative correlations with
27 Child Behavior Checklist scores have been reported (Johnston & Mash, 1989; Ohan *et*
28 *al.* 2000) and the Satisfaction subscale has showed strong correlations with measures of
29 child behavior, parent well-being, and parenting style (Rogers & Matthews, 2004).
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3 However, some issues worth mentioning are as follows: some items are quite long, and
4 readability may be an issue with some populations that have a low educational level,
5 such as families at psychosocial risk. Concerning psychometric aspects, some items
6 have proven to be problematic, and the factorial structure has not always been
7 consensual: for example, some studies (Gilmore & Cuskelly, 2009; Rogers &
8 Matthews, 2004) have found other factors in addition to the original subscales. There is
9 also some evidence that challenges PSOC's validity in non-community samples, such as
10 low-income and ethnic minority populations (O'Neil *et al.* 2009).
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20 Also, the translation and cultural adaptation of the PSOC is a particularly
21 relevant issue. If an instrument is to be used in a different cultural and linguistic context
22 from the one in which it was originally developed, an adaptation following the
23 development stages is needed in order to guarantee its validity (Van Widenfelt *et al.*
24 2005). The adaptations of the PSOC for at-risk parents have been scarce, and available
25 evidence shows that the final tool can be substantially different from the original one.
26 For example, the proposed adaptation of the PSOC for Spanish at-risk families
27 (Menéndez *et al.* 2011) includes 10 items and two subscales: efficacy and
28 controllability. To the best of our knowledge, the PSOC has not been translated or
29 adapted to the Portuguese population, although it has been used in an empiric study
30 (Coutinho, 2004). In this study, with the aim of overcoming the limitations previously
31 mentioned, the translation, psychometric analysis, and validation of a Portuguese
32 version of the PSOC are described, and an adapted version of the scale for at-risk
33 families is offered.
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51 52 53 **METHODS**

54 *Participants*

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3 The sample was composed of 146 mothers from at-risk families receiving interventions
4 for family preservation from government Child Protective Services of six areas at the
5 South of Portugal.
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9 Participants had an average age of 37.35 years ($SD = 9.41$), and their educational
10 level was quite low: 55.48% were illiterate, 22.60% completed primary school, and only
11 17.79% and 3.42% had initiated or finished high school or university studies,
12 respectively. Only 39.73% were employed but with unfavorable labor conditions:
13 84.48% of the working mothers had stable jobs, mainly without qualification (69.49%
14 worked as seller, baker, cleaner, assistant, etc.), and 25.56% were without employment
15 contract.
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19 The majority (88.36%) of the families had a stable composition, with a medium
20 size of four people ($M = 4.40$, $SD = 1.49$) and two children and/or adolescents ($M =$
21 1.98 , $SD = 1.07$). The sample was composed of 26.71% of single-parent families. One-
22 fourth of the sample (26%) lived with a member of the extended family. Family income
23 was described as unstable for 30.14% of the sample, and in fact, 45.21% of the families
24 were receiving welfare financial assistance.
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27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 *Instruments*

42 Data were obtained through semi-structured interviews using different instruments. The
43 participants were asked to provide information related to sociodemographic,
44 educational, and professional profile about both parents (age, educational level, work
45 status, and job's conditions) and the family (size; composition and stability; structure—
46 single- or two-parent family; and amount, source, and stability of family incomes).
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52 The 16-item version of the PSOC scale (Johnston & Mash, 1989) was used,
53 measuring efficacy (7 items, e.g., "I honestly belief I have all the skills necessary to be a
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3 good mother to my child”) and satisfaction (9 items, e.g., “My talents and interests are
4 in other areas, not in being a parent”) in parenting. **As negative indicators are included**
5 **to evaluate satisfaction, the items need to be reversed.** For both subscales, ranging from
6 1 (*strongly disagree*) to 6 (*strongly agree*), higher scores indicate a greater parental
7 sense of competence. To obtain a preliminary Portuguese version of the scale, a
8 forward-backward translation strategy was adopted, with the collaboration of two
9 translators **having a** background in psychology research. The cultural adaptation was
10 particularly considered, taking into account clarity, common language use, and
11 conceptual equivalence of the scale. Items and response choices that did not meet the
12 quality criteria were re-entered into the adaptation process. Reliability indexes obtained
13 with this sample were $\alpha = 0.69$ for efficacy and $\alpha = 0.65$ for satisfaction.

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27 The participants also completed the following scales:

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29 • Parenting Stress Index - Short Form (PSI-SF, Abidin, 1995). The PSI-SF,
30 composed of 36 items with a response format ranging from 1 (*strongly agree*) to 5
31 (*strongly disagree*), assesses parents' feelings of stress regarding their parenting role and
32 relationship with the child. A total score is computed by summing all the items; the
33 higher the score, the greater the feelings of parenting stress. Internal consistency in this
34 research was $\alpha = 0.88$.

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42 • Parenting Alliance Inventory (PAI, Abidin & Bruner, 1995). The PAI is a 20-
43 item scale that assesses the degree of commitment and cooperation between husband
44 and wife in childrearing. Each item asks a parent to answer on a 5-point scale ranging
45 from 1 (*strongly agree*) to 5 (*strongly disagree*). The total PAI score ($\alpha = 0.96$) is
46 obtained by summing the 20 items; higher scores indicate stronger support between
47 partners as parents.
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3 • Family Cohesion Scale (Olson *et al.* 1985). The Family Cohesion Scale (FCS)
4 of FACES-III was used. The FCS measures the emotional links characterizing the
5 relationship between family members, using 10 items with a 5-point scale ranging from
6 1 (*never*) to 5 (*always*). Unlike other versions, cohesion scores assessed with FACES-III
7 are interpreted in a linear manner, thus the higher the FCS score, the greater the level of
8 family cohesion. Internal consistency was $\alpha = 0.83$.
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18 *Procedure*

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20 The target population was at-risk families who are recipients of Child Protective
21 Services of the South of Portugal. The study received ethical approval from the
22 involved institutions. Inclusion criteria were: (1) to be formally supported by one of the
23 aforementioned agencies for family preservation, (2) to have at least one child younger
24 than 18 years, and (3) to be the caregiver of a minor declared at psychosocial risk.
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32 Participants were selected and recruited by practitioners of Child Protective
33 Services according to the inclusion criteria described earlier. Mothers were contacted by
34 phone calls and agreed to participate voluntarily and without remuneration. They signed
35 an informed consent form, and confidentiality was guaranteed.
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41 Individual interviews were conducted by trained researchers in the facilities of
42 the state agencies to complete the aforementioned compilation of tools. Data were
43 computed and analyzed using the statistical package IBM SPSS 20.
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49 **RESULTS**

50 *PSOC original version: Descriptive and reliability analyses*

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52 Preliminary analyses performed with the original version of the PSOC showed a mean
53 score of 32.25 for the efficacy subscale (SD = 5.39, range = 18-42) and 32.66 for
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3 satisfaction ($SD = 8.14$, $range = 16-54$). Weighted averages were computed to test
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5 differences in both subscales, and repeated-measures ANOVA showed that participants
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7 scored higher on efficacy ($M = 4.61$, $SD = 0.77$) compared with satisfaction ($M = 3.63$,
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9 $SD = 0.90$), $F(1, 145) = 138.39$, $p < 0.001$, $\eta^2_{\text{partial}} = 0.49$. Both subscales were
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11 significantly associated, $r(146) = 0.29$, $p < 0.001$. Internal consistency showed
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13 acceptable but moderated values for both efficacy ($\alpha = 0.69$) and satisfaction ($\alpha = 0.65$)
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15 subscales.
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18 19 20 21 *Factor structure analysis*

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23 To explore the factorial structure of the total scale, the metric properties of the PSOC
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25 items were examined, the dimensionality of the scale was analyzed, and the internal
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27 consistency of the obtained factors was tested. First, inter-item correlations and internal
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29 consistency of the PSOC items were examined to purify the scale prior to determining
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31 the factors that represented the construct. For this purpose, mean, standard deviation,
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33 item-total correlation, and alpha (if the item is deleted) are shown for each item in Table
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35 1. Acceptable values were generally found: means with no skewness, standard
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37 deviations around or higher than 1, positive correlation indexes, and no increases in
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39 reliability if the item was removed (global $\alpha = 0.72$). An exception was found for Item 8
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41 and, as a consequence, this item was excluded from subsequent analyses.
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TABLE 1 HERE

Second, a factor analysis was used to explore latent factors from PSOC. Due to the idiosyncrasy of the sample, as well as heterogeneity in previous results (e.g., Gilmore & Cuskelly, 2009; Rogers & Matthews, 2004), no *a priori* assumptions about the factors were justified; therefore, a principal-component analysis (PCA) was performed (Fabrigar *et al.* 1999). Normality and linearity were assumed, and three

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3 multivariate extreme cases according to Mahalanobis distance were deleted from
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5 subsequent analyses (Tabachnick & Fidell, 2007). According to Field's (2009)
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7 recommendations, matrix factorability was proved, that is, the correlation matrix
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9 showed a low determinant (0.02), several correlations around or over 0.30, acceptable
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11 results at Kaiser test (KMO = 0.69), and statistically significant results at Bartlett's test
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13 of sphericity ($\chi^2(105) = 529.70; p < 0.001$). Both orthogonal (varimax) and oblique
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15 (direct oblimin) rotations were followed; as no difference was shown, varimax rotation
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17 was finally included to simplify the interpretation of the factor solution. Five factors
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19 were extracted with eigenvalues above 1: Factor 1, 23.98% of the variance ($\lambda = 3.60$);
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21 Factor 2, 13.58% ($\lambda = 2.04$); Factor 3, 11.25% ($\lambda = 1.69$); Factor 4, 7.09% ($\lambda = 1.06$);
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23 and Factor 5, 6.77% ($\lambda = 1.02$). Both the scree plot and theoretical assumptions
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25 recommended retaining three factors (Field, 2009). As a consequence, PCA was
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27 replicated, confirming three factors, and variables loading above 0.45 were retained
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29 (Comrey & Lee, 1992). The final solution accounted for 48.81% of the variance, and the
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31 resulting factors were computed by summing items' scores. Factor 1 was composed of
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33 Items 1, 6, 10, 11, 13, and 15, and almost replicated the original subscale efficacy.
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35 Factor 2 included Items 2, 5, 12, and 14, and was named dissatisfaction. The third factor
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37 was composed of Items 3, 4, 7, and 9, and was related to controllability as a mother.
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39 Item 16 was removed from the scale because of its low factor loading.
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TABLE 2 HERE

Third, the internal consistency of proposed factors was tested, and according to Kline (2000), good values were found for efficacy ($\alpha = 0.74$) and dissatisfaction ($\alpha = 0.72$), and an acceptable value was found for controllability ($\alpha = 0.65$).

PSOC adapted version: Descriptive and validity analyses

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3 Descriptive analyses of the factor scores from the adapted version were computed, and
4 the results are displayed in Table 3, including central scores (mean, median, and mode),
5 dispersion values (standard deviation), and percentiles (from 5 to 95). Significant but
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7 moderated correlations were obtained for efficacy-dissatisfaction ($r(143) = 0.24, p =$
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9 0.004), efficacy-controllability ($r(143) = 0.24, p = 0.008$), and dissatisfaction-
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11 controllability ($r(143) = 0.25, p = 0.003$). Repeated-measures ANOVAs performed with
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13 weighted averages showed that participants scored higher on efficacy ($M = 4.90, SD =$
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15 0.79) in comparison to dissatisfaction ($M = 4.09, SD = 1.37$), $F(1, 142) = 46.28, p <$
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17 $0.001, \eta^2_{\text{partial}} = 0.25$, and to controllability ($M = 3.31, SD = 1.12$), $F(1, 142) = 242.40, p$
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19 $< 0.001, \eta^2_{\text{partial}} = 0.63$. Moreover, dissatisfaction average was statistically different
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21 from controllability, $F(1, 142) = 37.10, p < 0.001, \eta^2_{\text{partial}} = 0.21$.
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27 TABLE 3 HERE
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29 To test evidence for criterion validity, the three factors from the PSOC adapted
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31 version were related to the aforementioned family measures: parenting stress, parenting
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33 alliance, and family cohesion. As can be seen in Table 4, significant but moderated
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35 correlation coefficients were obtained.
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38 TABLE 4 HERE
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40 DISCUSSION

41 The results suggest the relevance of the PSOC as a reliable and valuable tool for
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43 assessing parental sense of competence in disadvantaged families. The proposed
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45 Portuguese version of this scale adapted for at-risk mothers allows the measurement of
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47 three relevant dimensions of parental self-evaluation using a cost- and time-effective
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49 instrument with acceptable psychometric properties and validity evidence.
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53 The performed analyses also showed that the PSOC must be partially adapted to
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55 meet the specific characteristics of at-risk mothers, taking into account two salient
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3 issues. First, **Items** 8 and 16 need to be removed; similar problems with these items have
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5 been found in previous studies (Ohan *et al.* 2000; Rogers & Matthews, 2004). Second,
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7 the factor analysis has shown the existence of a third subscale related to the sense of
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9 control as a parent. This dimension also has been reported by other studies as a partial
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11 substitute of the original satisfaction scale (Menéndez *et al.* 2011) and a specific third
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13 factor (Gilmore & Cuskelly, 2009). The third factor found in this study, named
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15 controllability, covers a central aspect of parental sense of competence, particularly in
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17 at-risk families. **Controllability refers to the extent to which parents feel responsible and**
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19 **able to control child-rearing situations and consequences.** As mentioned earlier, at-risk
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21 parents tend to experience a distorted perception of self-competence, under- or over-
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23 evaluating their parenting skills (Coleman & Karraker, 1997; Rodrigo *et al.* 2006). This
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25 result suggests that controllability and satisfaction are distinct aspects of perceived
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27 parental competence that should be assessed separately.
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32 With respect to the original satisfaction scale, it is important to consider that the
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34 items are expressed in a negative form, that is, according to the authors' instructions,
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36 higher scores in this subscale **mean** higher satisfaction as a parent. However, a literal
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38 interpretation of high scores indeed means that there is no dissatisfaction. According to
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40 Sabatelli & Waldron (1995), a low sense of discontent or anxiety cannot conceptually
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42 be considered the same as feeling pleased or comfortable as a parent. For this reason, in
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44 this paper, this subscale is referred as dissatisfaction.
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48 The Portuguese version of the PSOC offered in this study includes important
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50 aspects of parental sense of competence in at-risk situations with acceptable validity
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52 evidence. Efficacy, dissatisfaction, and controllability subscales were related to
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54 parenting stress, parenting alliance, and family cohesion. Previous studies have also
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56 shown relations between parental sense of competence and these family dimensions
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3 (Begle & Dumas, 2011; Bloomfield & Kendall, 2012; Erdwins *et al.* 2001; Jones &
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5 Prinz, 2005; Ohan *et al.* 2000; Sevigny & Loutzenhiser, 2010).
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8 Despite the relevance of these results, some limitations must be highlighted. The
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10 small size and narrow location of the sample should be noticed. However, the particular
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12 difficulties to conduct empirical studies with clinical populations, such as at-risk
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14 families, should be underlined. This is due to inner complexities derived from
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16 accessibility issues and psychosocial characteristics that make data collection difficult.
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18 To overcome this gap, further confirmatory analyses should be performed with a larger
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20 sample to replicate these results. Moreover, the present study only included mothers but,
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22 to our knowledge, there are no previous studies that compare mothers' and fathers'
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24 scores in at-risk situations. Nevertheless, future studies should include fathers in order
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26 to verify whether the results are similar. Also, test-retest reliability and comparisons
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28 with the community population could be considered in future research.
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32 33 34 **CONCLUSION**

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36 In this paper, a Portuguese version of the PSOC scale specifically adapted for at-risk
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38 families is offered as a useful tool for both researchers and practitioners who need to
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40 assess parental sense of competence, a relevant construct when adopting a
41
42 psychoeducational approach to family context.
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Table 1. Metric properties of the PSOC items

Items	<i>M (SD)</i>	Item-total correlation	α if item deleted
1. The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired	4.64 (1.20)	0.33	0.70
2. Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age	3.75 (2.04)	0.48	0.68
3. I go to bed the same way I wake up in the morning, feeling I have not accomplished a whole lot	3.49 (1.65)	0.54	0.67
4. I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated	3.16 (1.51)	0.30	0.70
5. My mother/father was better prepared to be a good mother/father than I am	3.90 (1.78)	0.27	0.71
6. I would make a fine model for a new mother/father to follow in order to learn what she/he would need to know in order to be a good parent	4.56 (1.66)	0.19	0.72
7. Being a parent is manageable, and any problems are easily solved	3.05 (1.63)	0.26	0.71
8. A difficult problem in being a parent is not knowing whether you're doing a good job or a bad job	2.38 (1.68)	-0.15	0.75
9. Sometimes I feel like I'm not getting anything done	3.49 (1.64)	0.49	0.68
10. I meet my own personal expectations for expertise in caring for my child	4.51 (1.43)	0.42	0.69
11. If anyone can find the answer to what is troubling my child, I am the one	5.28 (0.97)	0.37	0.70
12. My talents and interests are in other areas, not in being a parent	4.43 (1.75)	0.31	0.70
13. Considering how long I've been a mother/father, I feel thoroughly familiar with this role	5.01 (1.07)	0.37	0.70
14. If being a mother/father of a child were only more interesting, I would be motivated to do a better job as a parent	4.27 (1.85)	0.37	0.69
15. I honestly believe I have all the skills necessary to be a goof mother/father to my child	5.20 (0.97)	0.36	0.70
16. Being a parent makes me tense and anxious	3.78 (1.87)	0.25	0.71

Table 2. PCA three factors solution

Items	Factors		
	1	2	3
10	0.74		
6	0.70		
15	0.68		
13	0.63		
1	0.63		
11	0.59		
14		0.84	
2		0.72	
12		0.68	
5		0.52	
16			
4			0.76
9			0.65
7			0.63
3			0.63
% of variance	23.97%	13.58%	11.25%
Cumulative % of variance		37.56%	48.81%

Peer Review

Table 3. Descriptive statistics of Efficacy, Dissatisfaction and Controllability

	Efficacy	Dissatisfaction	Controllability
Mean	29.37	16.37	13.24
Standard deviation	4.75	5.49	4.46
Median	30.00	17.00	13.00
Mode	31.00	24.00	10.00
Minimum	17.00	4.00	4.00
Maximum	36.00	24.00	23.00
5	21.00	6.20	7.00
10	22.40	8.00	8.00
15	23.00	10.00	9.00
20	25.00	11.00	9.00
25	26.00	12.00	10.00
30	28.00	13.20	10.00
35	29.00	15.00	11.00
40	29.00	15.00	11.00
45	30.00	16.80	12.00
Percentiles 50	30.00	17.00	13.00
55	31.00	18.00	14.00
60	31.00	19.00	14.00
65	31.00	19.00	15.00
70	32.00	20.00	16.00
75	33.00	21.00	16.00
80	34.00	22.00	17.00
85	35.00	23.00	18.00
90	35.60	24.00	20.00
95	36.00	24.00	22.00

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Table 4. Correlations between the PSOC adapted version and the PSI, PAI and FCS

PSOC adapted version	PSI	PAI	FCS
Efficacy	-0.19*	0.25***	0.41****
Dissatisfaction	-0.35****	0.22*	0.20*
Controllability	-0.36****	0.28****	0.22**

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.005$ **** $p < 0.001$

For Peer Review