

Research Article

Parenting Alliance Measure: Factor Structure in an Argentinian Sample

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Abstract

Parenting alliance refers to those aspects of a relationship between parents that are related to their shared parental responsibilities and are independent from their romantic bond. It reflects the way each member of the parental dyad appraises the other's strengths and weaknesses as a parent and their joint parenting work. The Parenting Alliance Measure (PAM) was developed to measure this construct reliably, but with limited representation of minorities in its original sample. The aim of this study was to explore the factor structure and psychometric properties of a Spanish version of the complete PAM in an Argentinian sample. Two hundred twenty-seven parents from Buenos Aires completed the PAM. An exploratory factor analysis (EFA) was completed based on the Unweighted Least Squares estimation method with oblique promax rotation on a polychoric correlation matrix and parallel analysis as the extraction method. Statistical analysis yielded a two-factor solution retaining 18 of the PAM's initial 20 items that explained 65% of the variance. Each factor was composed of 9 items. Factor 1 was related to respect towards the other parent and Factor 2 to the quality of their communication and teamwork. These results support the use of the PAM with Argentinian samples.

Keywords: parenting; alliance; Parenting Alliance Measure; factor; structure; exploratory; analysis.

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Weissman and Cohen (1985) first introduced the notion of parenting alliance in reference to those aspects of the relationship between parents that are specifically related to their shared parental responsibilities. These aspects are independent from those facets more strongly associated with the romantic relationship between both parents. Concordantly, parenting alliance does not allude exclusively to a mother-father married couple, as it incorporates divorced or never married couples or any parental dyad, including grandparents, friends or any set of adults that work together and share child rearing responsibilities (Talbot & McHale, 2004). Parenting alliance has four primary components: (i) parents' level of involvement with the children (ii) the appreciation of the other parent's involvement in their children's upbringing (iii) the respect and appreciation of the other parent's judgement and (iv) the desire to maintain an effective communication channel with the other parent (Weissman & Cohen, 1985). In this sense, the concept reflects the way each member of the parental dyad appraises the other's resources, strengths and weaknesses as a parent and their joint parenting work.

Abidin (1990a, 1992) included parental alliance as a critical component of his parenting stress model, as most models up to that point had found significant evidence of an association between parenting stress levels, characteristics and dynamic of the romantic and spousal relationship between parents and children's development and outcomes (Abidin 1990a, 1992; Belsky, 1984). However, findings were somewhat limited and contradictory, so the author proposed that the variable that entailed the marital relationship was too general and that those aspects exclusively related to the shared parental responsibility would be better predictors of child development and parenting stress (Konold & Abidin, 2001).

There is extensive evidence on the role of parenting alliance on parenting stress; the latter is understood as the aversive reactions that occur as parents' attempt to respond to their parenting demands (Deater-Deckard, 2014). Parenting alliance is proposed to work as a protective factor in relation to parenting stress (Cicchetti, 1984), as there seems to be a negative correlation between levels of parenting stress and alliance: parents with high levels of parenting alliance tend to experience lower levels of parenting stress (Abidin, 1992; Abidin

& Brunner, 1995; Abidin & Konold, 1999; Frank et al., 1991; Lionetti et al., 2015). However, these associations are part of a much more complex system where these and other variables show bidirectional and transactional relations (Lerner, 2001). For instance, there is also evidence of an association between levels of parenting alliance and behavioral problems in children, where again, reported levels of parenting alliance have a negative correlation with frequency and intensity of behavioral problems in children (Bearss & Eyberg, 1998; Floyd et al., 1998; Lamela et al., 2013). It could be argued that this relation is partially explained by a good parenting alliance facilitating effective coparenting and management of children's behavioral demands, and in turn, children's lower levels of defiant behaviors strengthening the parental alliance. Furthermore, Abidin (1992) proposed a mediating role of parenting alliance on the relation between children's problematic behaviors and levels of parenting stress.

Several studies have reported that parenting alliance may also mediate the relation between having a child with a developmental disability and its extensively documented associated high levels of parenting stress (Casey et al., 2012; Moh & Magiati, 2012; Roberts et al., 2014; Rodrigue et al., 2010; Sanders & Morgan, 1997). For instance, Hill-Chapman et al. (2013) reported that high levels of alliance among parents of children within the autism spectrum are associated with lower levels of stress, even when children display intense levels of atypical behaviors.

Given the significant relations of parenting alliance with different important aspects of the family system's welfare, being able to measure this construct reliably in different cultures and languages is of critical importance. The Parenting Alliance Measure (PAM, Abidin & Konold, 1999) is the most used instrument to assess parents' levels of alliance in regard to their shared parenting responsibilities. Numerous studies have adapted and validated the instrument in different cultures and countries including Italy (Camisasca et al., 2015; Delvecchio et al., 2015; Running et al., 1999), France (Rouyer et al., 2015), Portugal (Lamela et al., 2013) and China (Kwok et al., 2015). However, there are no studies or adaptations in Latin America. Moreover, there was a very limited representation of minorities in the sample included in the development of the PAM, hence the authors highlight the need to validate the measure before using it in different cultures (Abidin & Brunner, 1995).

Accordingly, the purpose of this study was to explore the factor structure and psychometric properties of the 20-item Parenting Alliance Measure-Spanish version, in an urban Argentinian sample of mothers and fathers. We analyzed the instrument's factor structure and internal consistency. In addition, following Abidin and Brunner's methods in the development of the PAM (Abidin & Brunner, 1995), we analyzed the instrument's construct

validity by also measuring parenting stress with the short form of the Parenting Stress Index in Spanish (PSI-SF, [Abidin, 1990b](#); [Solis & Abidin, 1991](#)).

Method

Design

A psychometric study was carried out to explore the internal structure of the Parenting Alliance Measure and its construct validity ([Ato et al., 2013](#)), following the criteria established by international psychometric standards ([American Psychological Association \[APA\], 2010](#)).

Participants

The sample consisted of 227 parents from the Autonomous City of Buenos Aires, Argentina. Participants were selected using a non-probability sample for accessibility and were recruited from different schools in Buenos Aires. Only parents with at least one child between 1 and 19 years old were included. Mothers completed 81.5% of the sample, while fathers completed the remaining 18.5%. Fathers had a mean age of 42.91 years old ($SD = 8.96$; $Min = 27$, $Max = 60$), while mothers averaged 40.37 years old ($SD = 7.26$; $Min = 21$, $Max = 60$).

Participants had an average of 2.35 children ($SD = 1.01$; $Min. = 1$, $Max. = 6$), 70.8% reported being married, 17.7% single, 4.9% separated, 6.2% divorced and 0.4% widowed, while 86.4% lived with their spouse. Despite being single, widowed or divorced, all parents still had someone who coparented with them. Specifically, the one participant who was a widower reported coparenting with the children's grandparents. The rest of the participants reported coparenting with the other parent, independently from being involved in a romantic relationship or not. Regarding educational level, 40% of participants had a college degree, 27.3% had completed graduate studies, 21.3% tertiary studies and 10.3% had completed high school. Only 2.23% of the sample had not completed elementary school. At the time of participation in the study, 84.5% of the participants reported being employed.

While all 227 participants completed the PAM, a random sub-sample of 173 parents (78.6% mothers, 21.4% fathers) also completed the Parenting Stress Index-Short Form, to explore the PAM's construct validity.

Procedure

Participants were informed that the aim of the study was to evaluate the parental partnership of mothers and fathers with children between 1 and 19 years of age and that the items did not have correct or incorrect answers. All participants provided written informed consent and then completed the pencil and paper versions of the measures without financial



remuneration. All procedures were evaluated and approved by the institutional review board (IRB) of an urban Argentinian university.

Instruments

Sociodemographic Questionnaire. A specific questionnaire was developed to gather sociodemographic information, including age, gender, marriage status, place of residence, highest level of education reached, occupation and employment status.

The Parenting Alliance Measure (PAM; Abidin & Konold, 1999) consists of 20 items that ask parents of children between one and 19 years old to report their perceptions on their alliance with their coparent. All items consist of statements regarding the level of agreement parents believe they have with the other parent, beliefs about the parenting skills of the other parent and about what he/she thinks of them as parents. While completing the instrument, mothers and fathers are asked to concentrate on the child that worries them the most. Each item is measured on a 5-point Likert scale in relation to the participant's agreement with each statement (strongly agree, agree, insecure, disagree and strongly disagree). High scores imply high levels of parenting alliance. The instrument is self-administered and existing research reports strong levels of internal consistency ($\alpha=.97$; Abidin & Brunner, 1995).

The Spanish translation of the PAM was administered in this study. This translation was evaluated by a committee, consisting of 3 clinicians and researchers that are highly trained and experienced in the field of parenting. Both linguistic and conceptual aspects of the Spanish version were considered. All members of the committee agreed that all 20 items had content validity, cultural relevance and were worded appropriately for Spanish speaking Argentinians.

In order to carry out a preliminary survey of the instrument, a pilot test was completed with a small sample of parents ($n = 15$) examining the language used, the understanding of each item and operational aspects of the administration. None of the items presented difficulties and parents reported the items were clear and culturally relevant, so the structure of the questionnaire was maintained.

The Parenting Stress Index-Short Form, Spanish version (PSI-SF; Solis & Abidin, 1991). Its short form is an adaptation of the Parenting Stress Index-Long Form and consists of a reduced selection of items from the longer version. It has the same psychometric strengths of the original version but takes significantly less time to complete (Abidin, 1990b, 1995). It is a self-report measure with a total of 36 items that consist of different statements regarding worries or discomforts related to the parenting role. Items are rated on a 5-point Likert scale in relation to the parent's agreement level with each statement, in a range of 1 to 5 (strongly

disagree to strongly agree). High scores imply high levels of parenting stress. A total score of 90 or more is considered to be indicative of clinical levels of stress (Abidin, 1995).

The instrument also provides three subscales comprised of 12 items each: Parental Distress (PD), Difficult Child (DC) and Parent-Child Dysfunctional Interaction (P-CDI). The present study evidenced satisfactory internal consistency properties with Cronbach's alpha coefficients of .85 for Parental Distress, .84 for Difficult Child, .85 for Parent-Child dysfunctional interaction, and .92 for Total Stress.

Data Analysis

Descriptive statistics of the items were analyzed with less than 5% of missing values (Graham, 2009). Nevertheless, missing values were imputed by calculating the mean scores of the respective items on the complete sample, following the procedure indicated in the instrument's manual (Abidin & Konold, 1999). Afterwards, a preliminary analysis was conducted to explore and verify the statistical assumptions of the observed variables.

An exploratory factor analysis (EFA) of the PAM was conducted using RStudio (Version 4.0.2; RStudio Team, 2020) with the Psych package (Revelle, 2020) to explore the factor structure of the PAM in an Argentinian sample.

Estimations were computed with the Unweighted Least Squares method (ULS; Jöreskog, 1977), with oblique Promax rotation on a polychoric correlation matrix. ULS was the method of choice because a few ordinal items presented absolute values greater than 2 for skewness and kurtosis. In these cases, application of a method based on Ordinary Least Squares like the ULS is recommended, given its capacity to factorize matrices in adverse situations without implied assumptions regarding distribution (Lloret-Segura et al., 2014). ULS is the most recommended method (Flora et al., 2012) given its high computational efficiency in the absence of normal distributions (Ferrando & Anguiano-Carrasco, 2010). In addition, ULS has demonstrated good results in the factorization of ordinal items when analyzing polychoric correlation matrices (Forero et al., 2009). The polychoric matrix was used to compute correlations since it is more adequate for ordinal scales than the Pearson's matrix (Gadermann et al., 2012) and is recommended for variables with a non-normal distribution (Abad et al., 2011). A parallel analysis was implemented as the extraction method since it provides objective criteria to support decisions regarding the number of factors to keep (Lloret-Segura et al., 2014) and has demonstrated higher precision than other traditional extraction criteria like the Kaiser method (Velicer et al., 2000). In addition, the starting theory and the interpretability of the solution found was included as support in the factor selection process (Timmerman & Lorenzo-Seva, 2011).

Ordinal and Cronbach's alphas were calculated for the overall PAM and its factors as a measure of reliability (Peters, 2014). Ordinal alphas were selected over the more traditional Cronbach alphas because they constitute a less biased indicator of reliability for instruments that use a categorical scale to collect responses (Oliden & Zumbo, 2008). Finally, the descriptive statistics of the PSI-SF and its Pearson correlations with the PAM were calculated to assess the PAM's construct validity.

Results

PAM Exploratory Factor Analysis

The data did not display a normal distribution, as evidenced by exploration of the q-q plot and histogram, in addition to the presence of a few ordinal items with absolute values greater than 2 for skewness and kurtosis (George & Mallery, 2016).

In a first exploratory factor analysis of the complete 20-item PAM, the Kaiser-Meyer-Olkin (KMO) coefficient was .95 and Bartlett's sphericity test was significant ($X^2 = 3843.7$; $df = 190$; $p < .001$), indicating the data was appropriate to conduct a factor analysis. Parallel analysis yielded a two-factor solution that explained 66% of the variance. However, items 3, which refers to the ability to problem solve together, and 4, which focuses on communication skills in relation to the child, presented crossloadings (significant loadings on both factors; see Table 1).



Table 1.
Component Promax Rotation of Polychoric Matrix, Item Loadings on The Factors and Communalities.

| Item | Factor 1 | Factor 2 | Communalities |
|----------|----------|----------|---------------|
| PAM_07 | 0.91 | | 0.78 |
| PAM_01 | 0.91 | | 0.59 |
| PAM_05 | 0.89 | | 0.82 |
| PAM_10 | 0.76 | | 0.72 |
| PAM_13 | 0.74 | | 0.86 |
| PAM_11 | 0.64 | 0.32 | 0.84 |
| PAM_14 | 0.63 | | 0.71 |
| PAM_06 | 0.60 | | 0.63 |
| PAM_09 | 0.55 | | 0.60 |
| PAM_03 | 0.50 | 0.37 | 0.68 |
| PAM_19 | | 0.94 | 0.70 |
| PAM_17 | | 0.71 | 0.45 |
| PAM_16 | | 0.70 | 0.54 |
| PAM_12 | | 0.70 | 0.53 |
| PAM_20 | | 0.69 | 0.61 |
| PAM_18 | | 0.69 | 0.63 |
| PAM_15 | | 0.68 | 0.62 |
| PAM_08 | | 0.65 | 0.59 |
| PAM_02 | | 0.56 | 0.48 |
| PAM_04 | 0.43 | 0.46 | 0.71 |
| Variance | 0.34 | 0.32 | 0.66 |

Note. Factor loads lower than 0.30 were eliminated.

It is considered good practice to retain items with a loading discrepancy between factors of at least .30 (Lloret-Segura et al., 2014). Items 3 and 4 did not meet this criterion, therefore they were both eliminated and a second exploratory factor analysis was conducted with a reduced 18-item PAM. The Kaiser-Meyer-Olkin (KMO) coefficient was .95 and Bartlett's sphericity test was significant ($X^2 = 3263.9$; $df = 153$; $p < .001$), indicating the data was appropriate to conduct a factor analysis.

Parallel analysis yielded a two-factor solution that explained 65% of the variance, with all the 18 items with factor loads above .30. Although item 11 presented a crossloading, it had a loading discrepancy of .30 between both factors, so it was not eliminated and the initial 18 items were retained (see Table 2).

Table 2.

Component Promax Rotation of Polychoric Matrix, Item Loadings on the Factors and Communalities

| Item | Factor 1 | Factor 2 | Communalities |
|----------|----------|----------|---------------|
| PAM_07 | 0.91 | | 0.79 |
| PAM_01 | 0.88 | | 0.58 |
| PAM_05 | 0.88 | | 0.81 |
| PAM_10 | 0.75 | | 0.72 |
| PAM_13 | 0.73 | | 0.86 |
| PAM_14 | 0.64 | | 0.73 |
| PAM_11 | 0.63 | 0.33 | 0.84 |
| PAM_06 | 0.60 | | 0.64 |
| PAM_09 | 0.54 | | 0.59 |
| PAM_19 | | 0.95 | 0.72 |
| PAM_12 | | 0.73 | 0.56 |
| PAM_20 | | 0.69 | 0.61 |
| PAM_18 | | 0.69 | 0.64 |
| PAM_16 | | 0.68 | 0.52 |
| PAM_17 | | 0.67 | 0.43 |
| PAM_15 | | 0.67 | 0.62 |
| PAM_08 | | 0.63 | 0.57 |
| PAM_02 | | 0.58 | 0.49 |
| Variance | 0.33 | 0.32 | 0.65 |

Note. Factor loads lower than 0.30 were eliminated.

In concordance with previous factor analyses of the PAM, Factor 1 was named Respect and Factor 2 was named Communication and Teamwork (Abidin & Brunner, 1995; Abidin & Konold, 1999; Camisasca et al., 2015; Delvecchio et al., 2015; Konold & Abidin, 2001; Rouyer et al., 2015; Running et al., 1999). Additionally, the choice of two dimensions was supported by two other methods including Optimal Coordinates and Kaiser Criterion.

Factor 1, Respect, was composed of nine items regarding the level of respect towards the other parent's competence and involvement in the children's upbringing, and feelings about the joint parental work. Factor 2, Communication and Teamwork, was composed of nine items that referred to the perceived level of agreement and quality of communication with the other parent. Both dimensions represent essential aspects of the parenting alliance construct as defined by Weissman and Cohen (1985). Factor 1 had a mean score of 38.44 ($SD = 7.59$; $min = 11$; $max = 45$) and factor 2 had a mean score of 37.76 ($SD = 6.12$; $min = 13$; $max = 45$). The factors were significantly and strongly correlated ($r(225) = .78$; $p < .01$).



Internal Consistency of PAM, Item Reliability and Psychometric Properties

Internal consistency was examined by computing the ordinal alphas, obtaining satisfactory values for the total scale ($\alpha = .96$) and both subscales corresponding to Factor 1-Respect ($\alpha = .96$) and Factor 2 - Communication and Teamwork ($\alpha = .92$). Indexes are slightly improved when computing ordinal alphas compared with Cronbach's alphas ($\alpha = .96$, $\alpha = .95$ and $\alpha = .91$, respectively) since the estimation of ordinal alphas takes into consideration the categorical quality of the responses in the instrument. Corrected item-total correlations were strong for all items (between .63 and .90; see Table 3). None of the values would improve if any of the factors' elements were suppressed.

Table 3.
Item Descriptive and Internal Consistency Analysis

| Subscale | Item | <i>M</i> | <i>SD</i> | Skew | Kurtosis | α -i | ritc |
|---------------------------------|------|----------|-----------|-------|----------|-------------|------|
| Factor 1 | 7 | 4.26 | 1.00 | -1.51 | 1.83 | 0.95 | 0.86 |
| "Respect" | 1 | 4.42 | 0.87 | -1.75 | 3.04 | 0.96 | 0.72 |
| | 5 | 4.22 | 1.07 | -1.51 | 1.66 | 0.95 | 0.88 |
| | 10 | 4.24 | 0.91 | -1.25 | 1.34 | 0.95 | 0.83 |
| | 13 | 4.47 | 0.93 | -2.10 | 4.17 | 0.95 | 0.90 |
| | 11 | 4.07 | 1.10 | -1.21 | 0.80 | 0.95 | 0.83 |
| | 14 | 4.27 | 1.03 | -1.59 | 2.00 | 0.95 | 0.89 |
| | 6 | 4.14 | 1.05 | -1.42 | 1.61 | 0.95 | 0.78 |
| | 9 | 4.35 | 1.01 | -1.69 | 2.11 | 0.96 | 0.75 |
| Factor 2 | 19 | 4.37 | 0.87 | -1.82 | 3.87 | 0.91 | 0.79 |
| "Communication And Teamwork" | 17 | 4.54 | 0.71 | -1.71 | 3.51 | 0.91 | 0.70 |
| | 16 | 4.32 | 0.92 | -1.55 | 2.40 | 0.91 | 0.74 |
| | 12 | 4.12 | 0.99 | -1.32 | 1.54 | 0.91 | 0.77 |
| | 20 | 3.97 | 0.93 | -0.90 | 0.81 | 0.91 | 0.70 |
| | 18 | 3.83 | 1.04 | -0.82 | 0.22 | 0.92 | 0.63 |
| | 15 | 3.89 | 1.02 | -0.92 | 0.51 | 0.91 | 0.76 |
| | 8 | 4.10 | 0.93 | -1.29 | 1.88 | 0.91 | 0.71 |
| | 2 | 4.62 | 0.73 | -2.50 | 7.68 | 0.92 | 0.66 |

Note. α -i, ordinal alpha if item is removed; ritc, corrected item-total correlation.

Construct validity

Pearson's correlations, means, and standard deviations of the PAM and PSI-SF factors are reported in Table 4. PAM scores were high, with a mean of 76.20 ($SD = 13.06$), falling in a similar range to the mean scores reported by Abidin and Brunner (1995) and Abidin and

Konold (1999), as well as other exploratory factor analyses (Delvecchio et al., 2015; Rouyer et al., 2015).

Table 4.

Descriptive Statistics, Correlation and Reliability of PAM and PSI factors (n = 171)

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|--------|--------|--------|--------|--------|-------|-------|
| PAM Total Score | (.96) | | | | | | |
| PSI Total Score | -.35** | (.92) | | | | | |
| Parental Distress (PD). | -.34** | .81** | (.85) | | | | |
| Parent-Child Dysfunctional Interaction (IDP) | -.28** | .87** | .54** | (.85) | | | |
| Difficult child (DC). | -.27** | .87** | .51** | .70** | (.84) | | |
| PAM Factor 1- Respect | .96** | -.30** | -.31** | -.22** | -.24** | (.95) | |
| PAM Factor 2 – Communication and Teamwork | .93** | -.37** | -.33** | -.33** | -.28** | .78** | (.91) |
| Range | 31-90 | 37-120 | 12-45 | 12-41 | 12-49 | 13-45 | 17-45 |
| M | 76.91 | 69.03 | 23.27 | 20.81 | 24.95 | 38.73 | 38.19 |
| SD | 12.10 | 17.46 | 7.16 | 6.32 | 7.07 | 7.23 | 5.59 |

Note. M, mean; SD standard deviation.

* $p < .05$. **; $p < .01$. Values in parentheses represent Cronbach's alpha coefficients for each scale.

The correlation analysis evidenced significant and moderate correlations among variables. As expected (Abidin & Brunner, 1995; Delvecchio et al., 2015; Konold & Abidin, 2001; Kwok et al., 2015; Lamela et al., 2013; Rouyer et al., 2015; Running et al., 1999), PAM Total Score and subscales' scores were all negatively associated with all dimensions of the PSI-SF. Particularly, PAM Total Score was moderately and negatively correlated with Parental Distress ($r(169) = -.34$, $p < .01$), Parent-Child Dysfunctional Interaction ($r(169) = -.28$, $p < .01$), Difficult child ($r(169) = -.27$, $p < .01$) and PSI Total Score ($r(169) = -.35$, $p < .01$).

Discussion

This study explored the psychometric properties and internal factor structure of the Parenting Alliance Measure in an Argentinian sample. The two-factor solution found here is concordant with the findings reported by Konold and Abidin (2001), where an internal structure of two factors for both mothers and fathers was confirmed.

As in previous studies, Factor 1 was related to the level of respect towards the other parent's competence and involvement in the children's upbringing, hence it was also named Respect; and Factor 2 referred to the perceived level of agreement and quality of the communication

with the other parent, hence it was also named Communication and teamwork (Abidin & Brunner, 1995; Abidin & Konold, 1999; Delvecchio et al., 2015; Konold & Abidin, 2001; Rouyer et al., 2015; Running et al., 1999). However, the present results yielded an 18-item version with a different distribution of items across factors. While in Konold and Abidin's original two-factor structure the Communication and teamwork factor was composed of only 3 items, with the remaining 17 items loading more significantly in the Respect factor (Konold & Abidin, 2001), here both factors were composed of 9 items each. The items eliminated in this version (3 and 4) were a part of Factor 2-Communication and teamwork in the original two-factor structure. Despite these discrepancies, the present 18-item version retained satisfactory internal consistency values for both subscales (Factor 1, $\alpha = .96$ and Factor 2, $\alpha = .92$) comparable to the values obtained in the original analysis (Factor 1, $\alpha = .82$ and Factor 2, $\alpha = .97$).

In addition to Parallel Analysis, four other extraction methods supported the decision to keep two factors (specifically Optimal Coordinates, Kaiser Criterion, Very Simple Structure Complexity and Velicer's Minimum Average Partial). But more importantly, the decision was concordant with theoretical aspects of the parenting alliance construct, as the dimensions represented by both latent factors include the four essential aspects of it according to Weissman and Cohen's definition and theory (1985). Specifically, Factor 1-Respect, includes items that refer to three of the four components of the parenting alliance: respect, appreciation and feelings towards the other parents' judgment and involvement in their children's upbringing (components 1, 2 and 3). Factor 2-Communication and teamwork, includes items that refer to the level of agreement and quality of the communication with the other parent (component 4).

Moreover, the idea of parenting alliance being composed of two dimensions that are somehow independent, one pertaining feelings of respect and judgment towards the other parent's competence and involvement and one regarding perceptions on the ability to work together and communicate effectively, seems to be supported by clinical experience working with parents in different cultures (Hughes, et al., 2004; Rivera et al., 2017). Therefore, obtaining scores for both subscales in addition to the total PAM score is of clinical value for the local population.

The instrument evidenced good psychometric properties, as all levels of internal consistency were high (total scale, $\alpha = .96$; Respect, $\alpha = .96$ and Communication and Teamwork, $\alpha = .92$) and corrected item-total correlations were strong for all items (between .63 and .90). It also

displayed good construct validity as both PAM's total and subscales scores had significant and negative correlations with the different dimensions of parenting stress as measured by the PSI-SF.

However, it could be argued that the PAM has certain structural limitations, given the high correlations among all its items, which suggest certain degree of redundancy in the dimensions they measure. This could also partially explain why different explorations of the PAM's factor structure have yielded results that could be interpreted as either a one-factor solution or a two-factor solution: a one-factor structure was proposed in the PAM's original manual (Abidin & Konold, 1999), and switched to a two-factor structure two years after that previous publication (Konold & Abidin, 2001).

Moreover, in concordance with the reduced 18-item version that resulted from the present factor analysis, an adaptation and validation of the instrument in a Portuguese sample, resulted in a revised 6-item version that retained all the psychometric qualities of the original 20-item PAM (Lamela et al., 2013), again indicating there is significant redundancy in the dimensions measured by most items. In addition, most studies report high mean total PAM scores (Abidin & Brunner, 1995; Abidin & Konold, 1999; Delvecchio et al., 2015), suggesting the instrument has a decreased sensitivity to lower levels of parenting alliance. Future studies could explore this issue and complete an item revision accordingly.

Limitations and future researches

Although the number of participants in this study met the established general guidelines for exploratory factor analyses (Lloret-Segura et al., 2014), sample size was somewhat limited with a significant majority of mothers over fathers. Additional studies with bigger sample sizes with a more evenly distributed proportion of mothers and fathers are warranted. Further studies should also include completing a confirmatory factor analysis on the reported factor structure and its competing models. This comparison should include the one-factor model and the original two-factor model which presents a different distribution of items across factors, with only items 2, 12 and 19 loading on Factor 1, and all the other items loading on Factor 2 (Camisasca et al., 2015; Delvecchio et al., 2015; Konold & Abidin, 2001).

Conclusion

The construct of parenting alliance has proven to be central in the analysis and exploration of parenting, family dynamics and child behavior (Abidin & Konold, 1999; Bearss & Eyberg,

1998; Floyd et al., 1998; Konold & Abidin, 2001; Lamela et al., 2013). Therefore, measuring it reliably in different cultures and languages is of critical importance.

This study explored the psychometric properties and internal factor structure of the Parenting Alliance Measure in an Argentinian sample. Results confirmed a two-factor solution for both mothers and fathers (Konold & Abidin, 2001).

Despite its limitations, the present study supports the use of the PAM in future studies with Argentinian samples, given the reported evidence of good psychometric properties and a culturally sensitive factor structure.

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Competing Interests

The authors have declared that no competing interests exist.



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