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## **Exploring Teacher-Family Partnerships in Infant Center-based Care: A Comparative Study of Teachers' and Mothers' Perspectives and Influential Factors**

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# **The Exploring Teacher-Family Partnerships in Infant Center-based Care: A Comparative Study of Teachers' and Mothers' Perspectives and Influential Factors**

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## **Abstract**

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Teacher-family partnerships are crucial elements of high-quality early childhood education. The factors influencing these partnerships, particularly for children under age 3, are not well known. This study compares teachers' and mothers' perspectives on their partnership and the ideal practices they would like to see implemented. Additionally, it investigates child, family, and program-level factors predictive of partnership practices. Participants were mothers and teachers of 90 infants who completed the Real-Ideal Teacher-parents Partnership Scale; mothers rated child's temperament, and classroom quality was observed 6-months after infants entered childcare. Home environment was assessed before infants entered childcare. Both mothers and teachers reported a medium-high number of practices being implemented, but ideally, would like more practices to be implemented. The frequency of mother and teacher reports of real and ideal practices were significantly associated, although teacher reports were higher. Findings from the regression analyses showed that teacher level of education (having a Master) was uniquely and positively associated with both teachers' and mothers' reports of real partnership practices, and was significantly associated with teachers' reports of ideal partnership practices. Mothers' education level predicted their ideal partnership practices. Findings highlight the importance of teacher education for partnerships, especially considering the variability in legal requirements regarding qualifications for teaching infants across Europe.

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**Keywords:** teacher-family partnerships, infant care, teacher qualification, partnership, childcare

# **Exploración de la colaboración entre maestros y familias en los centros de atención infantil: Un estudio comparativo de las perspectivas de maestros y madres y los factores influyentes**

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## **Resumen**

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La colaboración entre maestros y familias es un elemento crucial de la educación infantil de alta calidad. No se conocen bien los factores que las influyen, especialmente en el caso de los niños pequeños. Este estudio compara las perspectivas de maestros y madres sobre sus prácticas ideales y reales de colaboración. Investiga los factores a nivel de niño, familia y programa que predicen la colaboración. Participan madres y maestros de 90 niños que rellenaron la Escala de colaboración real-ideal familias-maestros; las madres valoraron el temperamento del niño; la calidad del aula se observó 6 meses después de que los niños entraran la educación infantil. Tanto madres como maestros informaron de un número medio-alto de prácticas aplicadas, pero, idealmente, desearían que se aplicaran más. La frecuencia de los informes de madres y maestros sobre prácticas reales e ideales se asoció significativamente, aunque los maestros fueron más elevados. El nivel educativo de los maestros (tener un máster) se asociaba única y positivamente con los informes de los maestros y de las madres sobre las prácticas reales de asociación, y se asociaba significativamente con los informes de los maestros sobre las prácticas ideales de colaboración. El nivel educativo de las madres predijo sus prácticas ideales de colaboración. Los resultados apuntan a la importancia de la cualificación para mejorar la colaboración, especialmente si se tiene en cuenta la variabilidad de los requisitos legales relativos a la cualificación de los maestros en las aulas de educación infantil en Europa.

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**Palabras clave:** relaciones maestro-familia, cuidado de niños, cualificación del profesorado, relaciones, cuidado de niños



Partnerships between families and teachers of young children play an important role in fostering children’s development and well-being (e.g., [Castro et al., 2004](#); [Swartz & Easterbrooks, 2014](#)). The teacher-family partnership has been identified as a key component of high-quality programs for early childhood education and care (ECEC), and its associations with children’s positive outcomes are highlighted (e.g., [Castro et al., 2004](#); [Cottle & Alexander, 2014](#); [Lang et al., 2020](#)). However, most literature about teacher-family partnerships focuses on preschool or school-aged children, leaving a need to better understand what the teacher-family partnership involves when the child is an infant or toddler ([Coelho et al., 2019](#); [Elicker et al., 1997](#)). Understanding teacher-family partnership in infant centre-based programs can be particularly important as parents with infants are mostly dependent on teachers to know what the child experienced and how the child behaved during the out-of-home care. Consequently, parents’ feelings of anxiety and their levels of security and satisfaction with their infant care arrangements are largely dependent on the relationship with the teacher. This study documents perceptions of mothers and teachers about the real (i.e., implemented) and ideal (i.e., desired) partnership practices in centre-based infant childcare, and explores associations between these practices and characteristics of the child, family and childcare program.

The teacher-family partnership is defined as a collaboration between families and teachers, aiming to achieve common goals in the process of child education and care (e.g., [Owen et al., 2000](#)). Partnership enhances families’ and teachers’ knowledge about the child in both home and centre, thus allowing valuable connections between children’s experiences in each context ([Dunst & Dempsey, 2007](#); [Leavitt, 1995](#); [Owen et al., 2000](#)). Thus, successful partnerships between parents and teachers require that both can collaborate from an equal position, sharing responsibility for the child’s care ([Rouse & O’Brien, 2017](#)).

Strong and supportive connections between family and educational contexts have been described as essential for children’s development and wellbeing ([Drugli & Undheim, 2012](#); [Jeon et al., 2021](#); [Lang et al., 2020](#); [Owen et al., 2008](#); [Shpancer, 1998](#); [White et al., 2020](#)).

Even though it is broadly recognized – by researchers, educators and policymakers – that partnership between families and childcare centres is important (e.g., [National Association for the Education of Young Children \[NAEYC\], n.d.](#); [Swartz & Easterbrooks, 2014](#)), several authors (e.g., [Drugli &](#)

Undheim, 2012; Owen et al., 2000; Perlman & Fletcher, 2012; Shpancer, 2002) underline the scarceness of studies on family-childcare partnerships, especially in the infant and toddler years. Stronger partnerships are particularly relevant in infant ECEC programs for several reasons. Infants depend mostly on teachers or other adults to have their basic needs ensured, with responsive and sensitive interactions being pivotal for infants to feel secure and accomplish positive developmental outcomes (Cadima et al., 2020; Pinto et al., 2019; White et al., 2020). Importantly, families are dependent on those same adults to get information about their child's care in ECEC. Reciprocally, practices in ECEC can further attend to each child when parents are engaged, and thus the development of positive partnerships for families' satisfaction with childcare services and continuity of care between settings.

### **Predictors of Teacher-Family Partnerships**

Several family, child, teacher and program characteristics have been studied in relation to teacher-family partnerships in early education. Regarding family characteristics, Pirchio and colleagues (2011) found that the frequency of teacher-family communication for children under age 3 was negatively associated with maternal age, education level and family income, indicating that teachers tended to communicate more often with younger mothers, less educated mothers, and mothers from lower income families. Contradictory findings have been also found, with more partnership activities being positively associated with parents' education level and family income (Shpancer, 1998; Swartz & Easterbrooks, 2014). Murray and colleagues (2015) reported less teacher-family involvement in preschool among families from low-socioeconomic status.

Larger family size and more traditional childrearing beliefs have been related to fewer family-childcare interactions (Shpancer, 1998). Additionally, Bradley (2010, p. 136) noted that families characterized by "chaos at home" (e.g., more disorganized family environments, absence of family routines, overpopulated family environments, nuclear family members' instability) are more likely to have less productive and efficient relations and to communicate less with their children's teachers. On the other hand, more stimulating home environments were positively associated with better teacher-family communication during preschool (Murray et al., 2015).

Considering child-level variables, gender, age and temperament seem to be related to teacher-family partnerships, particularly for school-age children. For ECEC, studies shown that teachers and parents communicate more when children are younger (e.g., Rimm-Kaufman & Pianta 1999), when comparing communication in infant/toddler classrooms with preschool classrooms (e.g., Endsley & Minish, 1989). However, results are inconsistent. Swartz and Easterbrooks (2014) found that children's age was related to the perceived quality of teacher-family-partnerships, as reported by families and teachers. Child temperament has been studied as, particularly for children with more difficult temperaments, good communication between families and teachers has the potential of buffering the challenges faced in their education and care. In a study involving children under the age of 3, more positive temperament characteristics were positively associated with stronger teacher-family partnerships, whereas more difficult temperament was associated with less teacher-family communication (Pirchio et al., 2011). This may indicate that both teachers and families may not feel confident or may not have the adequate competencies for approaching and discussing with each other the most difficult aspects of children's behaviour in childcare.

Among center-level variables, literature shows that high-quality classrooms and positive partnerships are usually valued by parents, particularly during the ECEC (Coelho et al., 2015; Leavi, 1995). Overall, high-quality centers are characterized by more positive teacher-family partnerships (e.g., Elicker et al., 1997; Endsley & Minish, 1989; Owen et al., 2000; Perlman & Fletcher, 2012); with stronger teacher-family partnerships observed when more sensitive and supportive teacher-child interactions in ECEC exist (Owen et al., 2000). Teacher level of education has been highlighted as an important feature of the quality of childcare settings, being key for ensuring teachers have the necessary knowledge and competence to provide infants with the care and high-quality interactions they need (Barros et al., 2018; Cadima et al., 2020; Ward, 2018). Some studies point to the positive effects of a university-level degree compared to lower education levels regarding the quality of infant care (Cadima et al., 2020). Not only, but particularly in countries such as Portugal where teachers in infant classrooms are not required to have a specialized training or qualification, studies have indicated that lower teacher educational levels are associated with lower childcare quality and less communication between teachers and families (e.g., Barros et al., 2018; Coelho et al., 2019; NICHD Early Child Care Research Network, 1996; Phillips et al., 2000). Possible

associations between teacher level of education and teacher-family partnerships requires further exploration.

### **Infant Childcare Services in Portugal**

Portugal has a split system regarding the education of young children, one for children younger than age 3 and one for children aged 3-6. Childcare centers for under-3s are regulated by the Ministry of Solidarity, Employment and Social Security, with a low level of involvement by the Ministry of Education (Portaria n. ° 262/2011, de 31 de Agosto), regardless of the recognition that childcare goals include both social support and a pedagogical dimension. According to the Portuguese law, it is not mandatory to have a teacher with a higher education degree in center-based infant classrooms. As such, in Portugal the minimum requirement to work in infants' classrooms is to have completed compulsory education in force, what may vary according to the person's age<sup>1</sup>. The lack of training in ECEC may reduce a teacher's ability to intentionally support infant development and learning and has also been a factor negatively associated with childcare quality (e.g., [NICHD Early Child Care Research Network 1996](#); [Phillips et al., 2000](#)).

Recent data shows that about 20% of Portuguese children enter childcare during their first year of life, a number that is almost twice the European average ([OECD, 2019](#)); and those infants spend a high number of hours in childcare ([Coelho et al., 2019](#)), with childcare being mostly attended by children of working families.

In this context, it is particularly critical to understand how to support parents who do have to and want to place their infants in childcare centers. Because infants cannot tell their parents what happens in their classroom, or their teachers what happens at home, parent-teacher partnership is the primary (or even the only) way that both parents and teachers have to know what the child does in each setting to better respond to child needs. Literature is scarce on partnerships during infant care ([Cadima et al., 2020](#)). So, the present study was designed for analyzing parents and infant teachers' perspectives about the partnership practices being implemented as well as the partnerships idealized.

## The Current Study

Earlier work suggests that both families and teachers need to have knowledge, skills, and dispositions for partnering with each other (Chiu et al., 2017), with several barriers influencing the effective implementation of partnership practices during infant care (e.g., Bang et al., 2021). Thus, knowing the relationship between teachers' and families' perceptions of the relevant partnership practices is important, as well as what would be the characteristics of an ideal partnership for them. Therefore, the goals of this study were to: (a) describe and compare teachers' and mothers' reports regarding real and ideal partnership practices, and (b) explore the associations between teacher and mother reports of partnerships and characteristics of the child (i.e., temperament, gender), family (i.e., home environment, mother education), and childcare program (i.e., quality of teacher-child interaction, teacher education).

## Method

### Participants

This study is part of a broader project about infants' transition and adjustment to childcare (FCOMP-01-0124-FEDER-029509; FCTDC PTDC/MHC-CED/4007/2012). Participants were 90 mothers of infants attending centre-based childcare, and the 90 lead teachers in the classrooms attended by these families' children. All ECEC centres from the greater metropolitan area of Porto, Portugal, registered at the Ministry of Solidarity, Employment and Social Security website, were randomly sequenced and contacted until 90 institutions that met the criteria for the broader study (i.e., having a list of infants registered to start attending childcare at the first school-year semester) agreed to participate. Only one infant classroom per centre participated. Among all families that had their infant registered to start attending the centre, one family in each center was randomly selected.

The study recruited 90 of the 232 programs that met the criteria. Ninety-one percent were private non-profit and 8.9% were private for-profit centers. Classrooms had, on average, 6.38 children enrolled ( $SD = 2.34$ , range = 1 - 12). Infant:adult ratio ranged from 1:1 to 8:1 ( $M = 3.38$ ,  $SD = 1.49$ ). All lead-teachers were female. Their age ranged from 20 to 64 years old ( $M = 42.5$ ,  $SD = 9.97$ ). Note that lead-teachers are the adults responsible for the infant

classrooms. Lead-teacher education level ranged from elementary school (four years of formal education) to a higher education degree (Master in ECEC). Overall, 92.5% had no higher degree in ECEC. Professional experience in childcare varied between 1 month and 37 years ( $M = 8.36$  years,  $SD = 6.5$ ).

Regarding family characteristics, mothers were, on average, 30 years old ( $SD = 3.55$ ), with high educational levels. Fifty-nine percent of mothers had a university degree, 38% had a high-school degree (12 years of formal education), and 3% had less than the basic level of education (less than 9 years of education). Ninety three percent of mothers were married; the number of family members ranged between 2 and 6 ( $M = 3.67$ ,  $SD = 0.68$ ). Thirteen percent of mothers were unemployed, while 86.8% were working. Mothers employed spent, on average, 38 hours ( $SD = 16.6$ ) in out-of-home tasks related to their jobs (e.g., working hours, traveling to work). Family income was on average 1640 euros ( $SD = 678$ ).

### Measures

Real and ideal teacher-family partnership practices were assessed with the Real-Ideal Teacher-parents Partnership Scale: childcare (Gaspar, 1996). The questionnaire has two versions: the parent version and the teacher version. It includes 41 partnership practices. For each practice, parents and teachers were asked to report if it was being implemented (real practice) and if they would like it to be implemented for a good teacher-family partnership (ideal practice; Figure 1). So, for each of the 41 practices, respondents could mark it was being implemented and they thought that ideally it should be implemented; the practice was being implemented but ideally this would not be necessary; the practice was not being implemented and, ideally, it should be done; or the practice was not being implemented and, ideally, they believe it was not necessary. A total score (sum) is calculated for real practices being implemented (maximum of 41) and for practices that respondents think would be ideal (maximum of 41).

**Figure 1**

*Example from the Real-Ideal Teacher-parents Partnership Scale: childcare (Gaspar, 1996) – parent version*

| A  |    | B   |    |
|--|----|---|----|
| In the crèche, I have been informed about: |    | I think it would be a good idea that the crèche informs me about: |    |
| YES  | NO | YES   | NO |
| My child progresses.                       |    |   |    |
| My child behavior.                         |    |   |    |
| The childcare regulation.                  |    |   |    |

Both dimensions of the parent and teacher questionnaires – real and ideal practices – presented good reliability in this study (Cronbach’s alphas of .70 and .74 for teachers real and ideal practices, respectively; and .84 and .81 for mothers real and ideal practices, respectively).

Classroom quality was observed with the Classroom Assessment Scoring System - Infants (CLASS-Infants; Hamre et al., 2014). The CLASS-Infants assesses the quality of interactions between teachers and infants in ECEC, comprising one overall construct composed by four dimensions (relational climate, teacher sensitivity, facilitated exploration, and early language support). For this study, all observers received certified training and reached the authors’ training standards through a certified test. During data collection, a gold standard observer made 25.6% of observations with another observer. The exact agreement average was 68.8%, within-one point agreement was 98.9%, and weighted kappa was 0.72. In this study, the global score was used ( $\alpha=.94$ ).

Childcare structural characteristics were documented through the Infant Classrooms’ Structural Characteristics Questionnaire. This questionnaire collects structural indicators such as number of teachers in the classroom, teachers’ education level, experience in childcare, number of children per classroom. Regarding education level, a dichotomic variable was created: 1 = no degree in ECEC; 2 = higher-education degree in ECEC.

Child temperament was assessed using the Infant Behavior Questionnaire – Short Version (IBQ-R; Rothbart, 1981). This is a widely used measure of infants’ temperament. Evidence of its adequacy, reliability and validity is shown in several studies (e.g., Clark et al., 1997; Klein et al., 2009; Rothbart,

1981). Three broad factors can be computed (Gartstein & Rothbart, 2003): Surgency/Extraversion, Negative Affectivity, and Orienting/Regulation. In this study, all factors presented good reliability ( $\alpha = .82$  for Surgency/Extraversion;  $\alpha = .89$  for Negative Affectivity; and  $\alpha = .81$  for Orienting/Regulation). In this study, only the Negative Affectivity factor was used considering previous literature identifying that a more difficult temperament can affect teacher-family partnership (e.g., Pirchio et al., 2011).

Home environment was documented with the Home Observation for Measurement of the Environment Inventory (HOME; Caldwell & Bradley, 1984). This inventory captures both the quality and quantity of support and stimulation provided to the child in home environment. The Infant-toddler version of the HOME includes 45 items organized in six subscales: responsiveness, acceptance, organization, play/learning materials, involvement, and variety of experience. Items are scored based on direct observation of parenting behaviour and on a semi-structured interview. All observers received training in the measure. In this study, a HOME Global score was computed by combining all the items from the scale. Cronbach's alpha for the global HOME environment score was acceptable ( $\alpha = .69$ ).

### **Procedures**

The Portuguese National Data Protection Authority approved all measures, data collection and confidentiality procedures. Informed consents were obtained from the centres' directors, the teachers responsible for the infant classrooms, and parents. Data was collected in two moments. The first moment – before infant transition to ECEC– the HOME measure was completed during a home visit. Home visits lasted, on average, 2 hours; all families considered mothers as the main respondents. Mothers completed a socio-demographic questionnaire.

The second moment was 6 months after infants entered centre based ECEC. This time frame was chosen to ensure that mothers and teachers had time to establish a partnership. At this moment, each classroom was observed during a full morning with the CLASS-Infant. Teachers completed a questionnaire on structural and socio-demographic data. Teachers' and mothers' reports on real and ideal partnerships were collected. Mothers completed the IBQ-R.

### Data Analyses

Analyses were conducted using the Statistical Package for the Social Sciences (SPSS) 26. Analysis began by exploring measuring reliability and examining all measures descriptively. Pearson correlations were conducted for exploring associations between mothers and teachers reports on real and ideal practices. Then, variance analyses were conducted. Paired t-tests were used to compare mother and teacher reports. Effect sizes were estimated as Cohen's *d* (Cohen, 1992) to interpret significant associations. Finally, linear regression analyses were performed to understand child, family and childcare level predictors of teacher-family partnership practices. Kolmogorov–Smirnov test for dependent and independent variables show that the distributions were normal for all variable except for: Real Partnership - Mother Report, Ideal Partnership - Mother Report, Maternal Education; Teacher-child Interactions and Teacher Degree in ECEC. For these variables, data was visually explored through histograms and P-Plots. Graphics showed the variables' distribution was not extremely asymmetric. Additionally, the behaviour of the sample was further analysed through the exploration of means, standard deviation, skewness, and kurtosis for the variables to be included in the regression analysis. Means and SD showed the data presented some variability; skewness, and kurtosis were between -1 and +1 for all variables, except for teacher education (skewness = 3.207; kurtosis = 8.47). Thus, considering the reasonable sample size ( $N = 90$ ), and the information above, we can consider that no major violations of normality were found (Field, 2009). However, we underline that our results may be interpreted carefully considering this. Four models were tested for predicting: mothers' reports on real practices; mothers' reports on ideal practices; teachers' reports on real practices; teachers' reports on ideal practices. For models predicting mothers' reports, child gender and temperament, home environment, maternal education, quality of teacher-child interactions and teacher qualification/degree in ECEC were included as predictors. In models predicting teachers' reports, only ECEC characteristics were entered as predictors, namely quality of teacher-child interactions and teacher qualification/degree in ECEC.

## Results

### Real and Ideal Partnerships: Mothers and Teachers Reports

Teachers reported that about 48.8% ( $M = 20.5$ ,  $SD = 4.39$ ) of the practices listed in the Real-Ideal Teacher-parent Partnership Scale were implemented for meeting infants' needs, while mothers reported, on average, the implementation of about 37.4% of practices ( $M = 15.7$ ,  $SD = 6.32$ ; Table 1). Among the partnership practices mentioned as being implemented by most of teachers (above 90%) were: giving information to families about the centre's attendance rules, child's progress, difficulties and behaviour, using informal conversations with parents during pick-up and drop-off moments, and inviting parents to celebrations at the centre (e.g., Christmas, family day).

On the other hand, most teachers did not involve parents in defining the global activities planning (92%), did not discuss the planned activities with parents (85.6%), or send a written plan of activities for families' information (86.7%). On their ideal practices' reports, only 14% of teachers agreed that, ideally, it was a good idea to have a partnership practice that promotes the involvement of families in defining the activities plan and 18% reported that it would be a good idea to discuss the activities plan with families. Regardless, 83.9% agreed that, ideally, families should receive a written plan of activities for being informed about the child activities in childcare. The same practices that were identified by most teachers were also mentioned by most mothers. For example, a high percentage of mothers reported that the centre shared with them information about attendance rules (100%), child progress (94.4%), child behaviour (91.1%), and child difficulties (95.6%), and families were invited to celebrations at the centre (e.g., Christmas celebrations, family day; 82.2%). Among the practices that were seldom used, 88.9% of mothers reported that families were not involved in planning childcare activities; 75% of mothers reported that families did not participate in the childcare evaluation, 77.8% mentioned that families were not invited to individual meetings, and 77.5% mentioned that they were not invited by the childcare teachers to participate in sessions about relevant themes (e.g., about child development and/or parental practices).

**Table 1**

*Mean, Standard Deviation, Minimum and Maximum Values for Real an Ideal Teacher-Family Partnership Practices, Family, Child, and Childcare Variables*

|                                     | <i>N</i> | <i>M (SD)</i> | <i>Min. – Max.</i> | <i>Scale</i> |
|-------------------------------------|----------|---------------|--------------------|--------------|
| <i>Teacher-family partnership</i>   |          |               |                    |              |
| Real Partnership – Mother Report    | 90       | 15.7 (6.32)   | 4-35               | 0-41         |
| Ideal Partnership – Mother Report   | 90       | 24.8 (5.19)   | 11-35              | 0-41         |
| Real Partnership – Teacher Report   | 90       | 20.5 (4.39)   | 12 -31             | 0-41         |
| Ideal Partnership – Teacher Report  | 90       | 21.6 (4.59)   | 13-34              | 0-41         |
| <i>Family level variables</i>       |          |               |                    |              |
| Maternal Education                  | 90       | 14.4 (3.57)   | 4-22               |              |
| Global HOME Environment             | 90       | 32.8 (4.16)   | 23-42              | 0-45         |
| <i>Child level variables</i>        |          |               |                    |              |
| Negative Affectivity                | 90       | 3.89 (0.79)   | 1.99-5.91          | 1-7          |
| <i>ECEC level variables</i>         |          |               |                    |              |
| Teacher-child Interactions          | 90       | 3.25 (0.82)   | 1.63-5.75          | 1-7          |
| Teacher Degree in ECEC <sup>1</sup> | 90       | 92.5%         |                    |              |
| (no; %)                             |          |               |                    |              |

*Note.* 1 = no degree in ECEC; 2 = degree in ECEC.

Particularly for these seldom used practices as perceived by mothers, we note that mothers believe such practices are important. Thus, 80% of mothers would like (ideal practices report) to be invited for sessions about relevant themes, 81% would like to participate in the childcare evaluation, and 76% would like to be invited for individual meetings with teacher. Regarding the participation in defining the childcare activities plan, only 41% of mothers would like this practice to be implemented; however, 87.1% mention that they would like to receive information about the activities plan, with 70% reporting that receiving a written document with the activities plan would be a good partnership practice.

Despite the similarities between teacher and parent responses, there was high variability across informants, with a minimum of 4 practices (out of 41),

and a maximum of 35 practices as reported by mothers. The same variability was present in teachers' reports, although the minimum number of reported implemented practices was higher (12) for this group of participants (Table 1). Overall, teachers tended to identify and report more partnership practices, when compared to mothers,  $t(89) = 6.84, p < .001, d = 0.88$ .

Reports of mothers and teachers were significantly associated both for real and ideal partnership practices ( $r = .27, p < .001$  for real practices;  $r = .21, p < .05$  for ideal practices), pointing to some attunement regarding the importance of partnerships. Moreover, both mothers and teachers reported that partnerships during infant care would, ideally, include greater number of practices ( $M = 21.6, SD = 4.59$  for teachers' report;  $M = 24.8, SD = 5.19$  for mothers' report) than what was implemented (real practices vs. ideal practices:  $t(89) = -3.69, p < .001, d = 0.26$  for teachers' reports;  $t(89) = -13.9, p < .001, d = 1.56$  for mothers' reports). When comparing the number of ideal partnership practices for teachers and mothers, mothers showed the desire for a greater number of partnership practices,  $t(89) = -4.86, p < .001, d = 0.68$ .

### **Predictors of Real and Ideal Partnership Practices**

Regarding the childcare level predictors included in the model, descriptive data (Table 1) showed that the quality of the classrooms was moderate, with a CLASS-Infant mean of 3.25 ( $SD = 0.82$ ) for teacher-infant quality of interactions. Concerning the family level predictors, the quality of the home environment (Caldwell & Bradley, 1984) was, on average, moderate ( $M = 32.8, SD = 4.16$ ), and showed a wide range, from 23 to 42. Overall, mothers rated low Negative Affectivity values ( $M = 3.89, SD = 0.79$ ) regarding child temperament, indicating that most mothers did not perceive their infants as temperamentally difficult. In models predicting teachers' real and ideal practices only ECEC characteristics were entered as predictors. Four models were tested (Table 2) to identify relevant factors affecting real and ideal teacher-family partnership practices.

**Table 2**

*Family, Child and Childcare Predictors of Mother and Teacher Real and Ideal Reports of Partnership Practices*

|                               |              | Mother           |                   | Teacher          |                   |
|-------------------------------|--------------|------------------|-------------------|------------------|-------------------|
|                               |              | Real Partnership | Ideal Partnership | Real Partnership | Ideal Partnership |
| <i>R</i> <sup>2</sup>         |              | .18**            | .09               | .26*             | .29*              |
| <i>Family level variables</i> |              |                  |                   |                  |                   |
| Global HOME Environment       | $\beta$ (SE) | -0.01(0.16)      | -0.08(0.13)       |                  |                   |
| Maternal Education            | $\beta$ (SE) | -0.13(0.19)      | 0.28(0.17) *      |                  |                   |
| <i>Child level variables</i>  |              |                  |                   |                  |                   |
| Negative Affectivity          | $\beta$ (SE) | 0.19(0.87)       | 0.21(0.76) †      |                  |                   |
| Gender (male = 1; female = 2) | $\beta$ (SE) | -0.20(1.27) †    | -0.11(1.10) †     |                  |                   |
| <i>ECEC level variables</i>   |              |                  |                   |                  |                   |
| Teacher-child Interactions    | $\beta$ (SE) | 0.06(0.16)       | 0.09(0.68)        | 0.07(0.67)       | 0.02 (0.58)       |
| Teacher Degree in ECEC        | $\beta$ (SE) | 0.27(1.39)*      | 0.06(1.20) †      | 0.24(0.99)*      | 0.29(1.04)*       |

Note. †  $p < .08$ . \*  $p < .05$ . \*\*  $p < .01$ .

Teachers having a university degree in ECEC was the only significant predictor of real partnership practices reported by teachers ( $\beta = .24, SE = 0.92, p = .023$ ), as well as their perceptions about ideal practices ( $\beta = .29, SE = 1.04, p = .007$ ). The percentage of variability of teacher reports on real and ideal practices explained by the variables included in the model ranged between 26% and 29%. Models for the mothers' reports on real practices showed that teachers with a university degree in ECEC was the only significant predictor, although the  $R^2$  coefficient is weak. Mothers' reports on ideal practices were only predicted by the mothers' educational level (Table 2).

## Discussion

The importance of teacher-parent partnerships for children's positive developmental outcomes is widely recognized, although information about such partnerships in infant centre-based care is limited. The present study showed that mothers and teachers of infants in center based childcare reported a moderate number of partnership practices being implemented (real); and seemed to be aligned regarding the need for more partnership practices than the ones currently being implemented. This is in line with finding from previous studies conducted in preschools (e.g., [Einarsdottir & Jónsdótti, 2019](#)). Our study also showed that mothers' and teachers' reports on partnership practices were similar, in line with other studies reporting that teachers' and parents' rates of centre-related aspects tend to be correlated (e.g., [Drugli & Undheim, 2012](#); [Leavitt, 1995](#)), and that teachers and parents tend to agree on the factors that contribute to positive partnerships ([Galinsky et al., 1994](#)).

Examples of the most reported practices by both teachers and families suggest that most practices involve communication whereas families' involvement practices in daily ECEC activities is seldom. For example, very few teachers and very few mothers mentioned that parents were involved in the definition and discussion of the ECEC activities or that parents visited or spent time in the classroom on a regular basis.

The teacher-family partnership in ECEC implies a collaborative process in which frequent and bidirectional communication, opportunities for families' involvement in ECEC activities and a shared decision-making process are pivotal ([Owen et al., 2000](#); [Weiss et al., 2014](#)). Our results highlight that teacher-family partnership practices considered in infant centre-based care are especially those related to informational communication, pointing to the need to further expand these practices to other dimensions. The training of ECEC professionals for a broader understanding of what partnerships with families mean and how they can be achieved, could be delivered in coursework or in-service professional development. It is noteworthy that teacher education level, namely, having a degree in ECEC, was found to be a significant predictor of more implemented partnership practices as reported by teachers and mothers. This can suggest that teacher qualification in ECEC has the potential to affect practices and can be pivotal in improving partnership practices in centre-based infant care. As mentioned, in Portugal there are no legal requirements regarding levels of education for teachers working in infant classrooms

(Cadima et al., 2022; Portaria n. ° 262/2011, 31 de Agosto), with no specific guidelines regarding educational practices for infant classrooms. This study contributes to the understanding that teacher qualifications are important for both teachers' and mothers' communication and collaboration, particularly regarding the identification of the desire of more partnership practices.

Teachers and mothers generally agreed on which real partnerships practices were being implemented, although teachers reported implementing a significantly higher number of partnership practices compared to mothers. These different perceptions are possibly related to the fact that parents and lead teachers do not always have compatible schedules and time to communicate is often scarce. Drugli and Undheim (2012) analyzed teacher-family communication during the pick-up and drop-off situations and reported that, although most parents and teachers were satisfied with their daily communication, parents more than teachers felt that the quality of communication could be improved, particularly during the pick-up moments.

In addition, although both teachers and mothers reported that, ideally, more partnership practices could be implemented, mothers reported the desire for a significantly greater number of partnership practices compared to teachers. This is in line with previous research involving preschoolers, which identified that, although teachers and families both value partnership and communication as a way of collaborating with each other, mothers tend to report the need for more communication than teachers (Cantin et al., 2012; Owen et al., 2000). Similarly, some studies highlight that families often feel a general lack of knowledge of what happens in ECEC, pointing out that the partnership practices being implemented are not ideal or are not responding to all family needs (Drugli & Undheim, 2012; Leavitt, 1995). For example, parents working for longer hours tend to report a higher desire for the continuity of practices in family and centre-based settings, as well as the desire for better partnerships (Baumgartner et al., 2017). Thus, we underline that this desire for more partnership practices can also be related to the parents' working situation.

In Portugal in 2020, 75% of mothers and 87.2% of fathers with children under 6 years old were employed, and only 9.4 of mothers and 4.8 of fathers worked part-time (Eurostat, 2022). This situation probably increases the number of hours children, including infants, spend in childcare, as well as the need of closer partnerships with their infants' teachers. Note that in Portugal most childcare centers work for long hours: 84% open between 7:00 and 8:00 a.m. and close between 6:00 and 7:00 p.m. (56%) or between 7:00 and 8:00

p.m. (40%) (Gabinete de Estratégia e Planeamento / Ministério da Solidariedade, Emprego e Segurança Social, 2021). Previous studies highlighted that parent, more than teachers, felt, that the quality of communication could be improved, particularly during the pick-up moments (Drugli & Undheim, 2012).

Literature also suggests that socioeconomic status (SES) may play a role in families' and teachers' ideas and practices regarding continuity of care and childcare quality (e.g., Baumgartner, 2005). Although SES is not known for families in this study, we highlight the fact that a relatively high proportion of mothers participating in this study had university degree, a factor that may contribute to their desire for more partnership practices. Studies show that higher maternal education and higher family SES tend to be associated with increased use of ECEC in infancy (Petitclerc et al., 2017) and with the selection of higher-quality ECEC (e.g., Vandebroek et al., 2008).

In this study, child temperament was not related with either teacher or mother reports. Previous studies found mixed results concerning the relations between child temperament and teacher-family partnership in childcare (Pirchio et al., 2011; Swartz & Easterbrooks, 2014). In our study, we underline that low levels of negative affect regarding child temperament were reported, which may have hindered the study's ability to capture relations. Additionally, the few studies on relations between temperament and teacher-family partnerships in childcare were conducted with older children, and not infants. Thus, the lack of associations between child temperament and teacher-family partnership may be related to child age. Particularly for children under 12 months, it is possible that the implementation and desire of partnership practices may be more associated with the characteristics or challenges of this developmental period (for parents and caregivers), namely the fact that parents with infants are mostly dependent on teachers to have information about how their child fared during the childcare day, than related to children's characteristics such as temperament. Indeed, previous studies have reported that teachers and parents communicate more when caring for infants and toddlers than when caring for preschoolers (e.g., Endsley & Minish, 1989; Rimm-Kaufman & Pianta, 1999). Regardless, the mentioned studies did not consider temperament. More research is needed for better understand how child temperament affects partnerships, particularly during infant care.

Childcare teachers with a university degree in ECEC were more likely to implement more partnership practices as evidenced by the teachers' reports on

the number of practices being implemented, as well as by the mothers' corroborating reports. Considering the importance of connecting early education centres and families, frequently stated in early education and development literature, governmental guidelines, and legislation (e.g., [Drugli & Undheim, 2012](#); [Portaria n.º 262/2011, 31 de Agosto](#); [Owen et al., 2008](#)), our results have important implications for teacher initial training and teacher recruitment for infant classrooms. Specifically in Portugal and other countries where legislation requirements for infant ECEC classrooms do not mandate that teachers have a specific qualification; these results highlight that teachers who are well prepared are able to implement more partnership practices and ideally would like to implement even more. These findings add to previous studies highlighting the importance of teacher initial education for ECEC quality ([Barros et al., 2018](#); [Barros & Aguiar, 2010](#)), showing that teacher qualifications are not only relevant for high quality practices but also for stronger partnerships with families. Teacher qualifications can potentially play a role in shaping teacher ideas or practices in partnering with families. Thus, the relevance of both initial qualification and on-the-job training, particularly for building positive partnerships between infants' teachers and families, requires further examination and research.

In this study, the quality of teacher-child interactions was not related to mothers' or teachers' reports about real and ideal partnership, contrary to previous research in childcare. We note that previous research focused on partnerships in infant classrooms is scarce, so more studies are needed to better understand such partnerships. In this scope, we highlight that our study focuses exclusively on infant classrooms and registers low variability regarding teacher-infant interactions quality, which may have influenced the ability to capture significative relations between teacher-infant interactions and implemented partnership practices. Additionally, the lack of significant associations may be related with the method for data collection, as teacher-child interactions were assessed through observation by trained researchers and partnership was assessed using a self-report measure. Future studies collecting data through observation both for quality and partnerships practices are needed to clarify such relations in infant centre-based childcare.

Some limitations of this study must be acknowledged. First, we point out than the use of a self-report questionnaire to assess teacher-family partnerships might have captured some social desirability answers, reflected in a greater number of practices being reported as implemented both by teachers and

mothers. Regarding study participants, on average mothers who participated had a relatively high education level, which may not be representative of the Portuguese population. This bias in the mothers' level of education may be due to the criteria for participation in the broader study in which these data were gathered. In the scope of the larger project, childcare professionals were asked to present the study to mothers who had registered for their infant to enter the centre in advance, i.e., mothers who had planned their infant's entrance in childcare in due time. This might have led to the selection of more educated working mothers who, besides planning this moment in advance, were also sensitive to the relevance of partnerships with the professionals caring for their child at the centre. Some variability was registered in mothers' educational level, with 3% of mothers in the study having a basic level of education. Nonetheless, this study was not able to further explore if patterns of associations were different for mothers with higher or lower levels of education. Future studies are thus needed to address this issue. Educational level was a significant predictor of mothers' report on ideal practices, showing that more educated mothers are eager of more partnership practices in the scope on their infant care arrangements.

Although this study was conducted before the COVID-19 pandemic in 2020, we are aware that the pandemic contributed to an increase in the challenges faced by ECEC professionals in communicating and establishing strong and positive partnerships with families. A recent study in ECEC (Otero-Mayer et al., 2021) found that families believe they don't have the tools and time for educating their children at home, underlining the need for improving school-family cooperation at the start of the child's education, i.e., beginning with attendance in infant centre-based childcare. It is noteworthy that, in many countries, both mothers and fathers of young children return to work during their infant's first 6 weeks to 12 months of life and, thus, the need to place the child in centre-based care is becoming more prevalent. At the same time, the role played by the quality of centre-based care in fostering children's social and cognitive development from an early age, while providing a caring and safe environment for parents to leave their children when they are at work, is emphasized (e.g., Castro et al., 2004; Swartz & Easterbrooks, 2014). Therefore, future studies are needed, particularly about how the pandemic affected the partnership between teachers and families caring for and educating infants.

## **Conclusion**

Teacher-family partnerships are crucial for the development of young children who attend out-of-home ECEC settings. This study is among the first to document the various forms of teacher-family partnerships in infant classrooms and to examine the alignment between mothers' and teachers' perspectives on ideal and real practices. Results underline the need for greater investment in continuous opportunities for family involvement in childcare, and effective participation. Finally, it highlights the importance of teacher education for partnerships, suggesting the need of further studies for a broader characterization of teacher-family practices in infant care.

## **Conflict of Interest**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## **Author Contributions**

VC, SB, MP, JC, DB and CP made substantial contributions on (a) to the conception and design of the study; (b) to the acquisition, analysis, and interpretation of data; (c) in the drafting process of the manuscript; and (d) in ensuring that questions related to the accuracy or integrity of any part of the manuscript were appropriately addressed.

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## Notes

1 For parsimony we refer to professionals working in infant classrooms as “teachers”, although they may only have a basic level of education (elementary school).

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