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Introduction

Aims

Children with different disability conditions have varied developmental trajectories, which perhaps influences parent-child interaction. For these and all infants, an optimal home environment that includes good parenting and positive parent-child interactions predicts better developmental outcomes (Spiker et al., 2005). Interventions using a family-centered, parenting-focused approach result in better parenting behavior that contributes to improve early child development (Avellar & Suplee, 2013; Roggman & Cardia, 2016). Information on parent-child interaction patterns is needed to guide intervention in natural contexts of families (Fuligni & Brooks-Gunn, 2013).

- To study parenting and its relation to child's developmental outcomes in mothers and fathers of the same family unit with a child with a disability.

Method



Participants:

The sample was 44 families with a child with Intellectual Disability (ID) or with Autism Spectrum Disorder (ASD). The mothers ($N = 44$) were 27 to 45 years old ($M = 37.2$, $SD = 4.2$). 16% of the mothers had received only elementary schooling, 44.5% had completed high school, and 39.5% had university degree. The fathers ($N = 35$) were 27 to 60 years old ($M = 39.4$, $SD = 5.6$). 25% of the fathers had received only elementary schooling, 37.5% had completed high school, and 37.5% had an university degree. All families were urban and mostly were middle SES. The children (34 boys and 10 girls), aged between 23 to 47 months ($M = 33.6$, $SD = 6.3$), were recruited from eight Early Intervention Centers (EIC) in Spain. Their cognitive development age was measured with Bayley's Scales of Infant Development (BSID-III) ($M = 22.11$, $SD = 7.53$). The children degree of disability was mild (59.5%), moderate (38.1%) or severe (2.5%).

Instruments:

- The PICCOLO is a checklist of 29 observable behaviours that assess parenting interactions with children across four domains: affection, responsiveness, encouragement, and teaching (Roggman et al., 2013). Each domain includes 7-8 items, and each item is coded on a 3-point scale. We used the Spanish version of the PICCOLO (Vilaseca et al., in developing).
- Children's development was assessed with the BSID-III scales (Bayley, 2015).

Procedure:

- Mothers and fathers, separately, auto-recorded 10-minute play sessions at home. They sent the recordings by mail or we collected them at the EIC through the professionals of each family. Two independent observers coded the interactions; strong intra-class correlation coefficients were found (.82 to .97 for mothers, .77 to .89 for fathers).

Results

Mothers scored slightly higher than did fathers but no statistically significant differences were found in any of the PICCOLO domains scores and total score between mothers and fathers. Scores varied by PICCOLO domains but were consistent with other PICCOLO studies of typical developing children (Roggman et al., 2013).

Mother and father's scores correlated indicating that higher the scores of mothers in any dimension, the higher were those of the parents combined.

Mothers and fathers scored highest on the affection domain, and lowest on the teaching domain. Therefore, mothers and fathers shown a similar pattern of scores in the different domains of parenting.

Positive significant Pearson correlations were found between parenting and child's development with different patterns of father and mother domains predicting better language and cognitive outcomes.

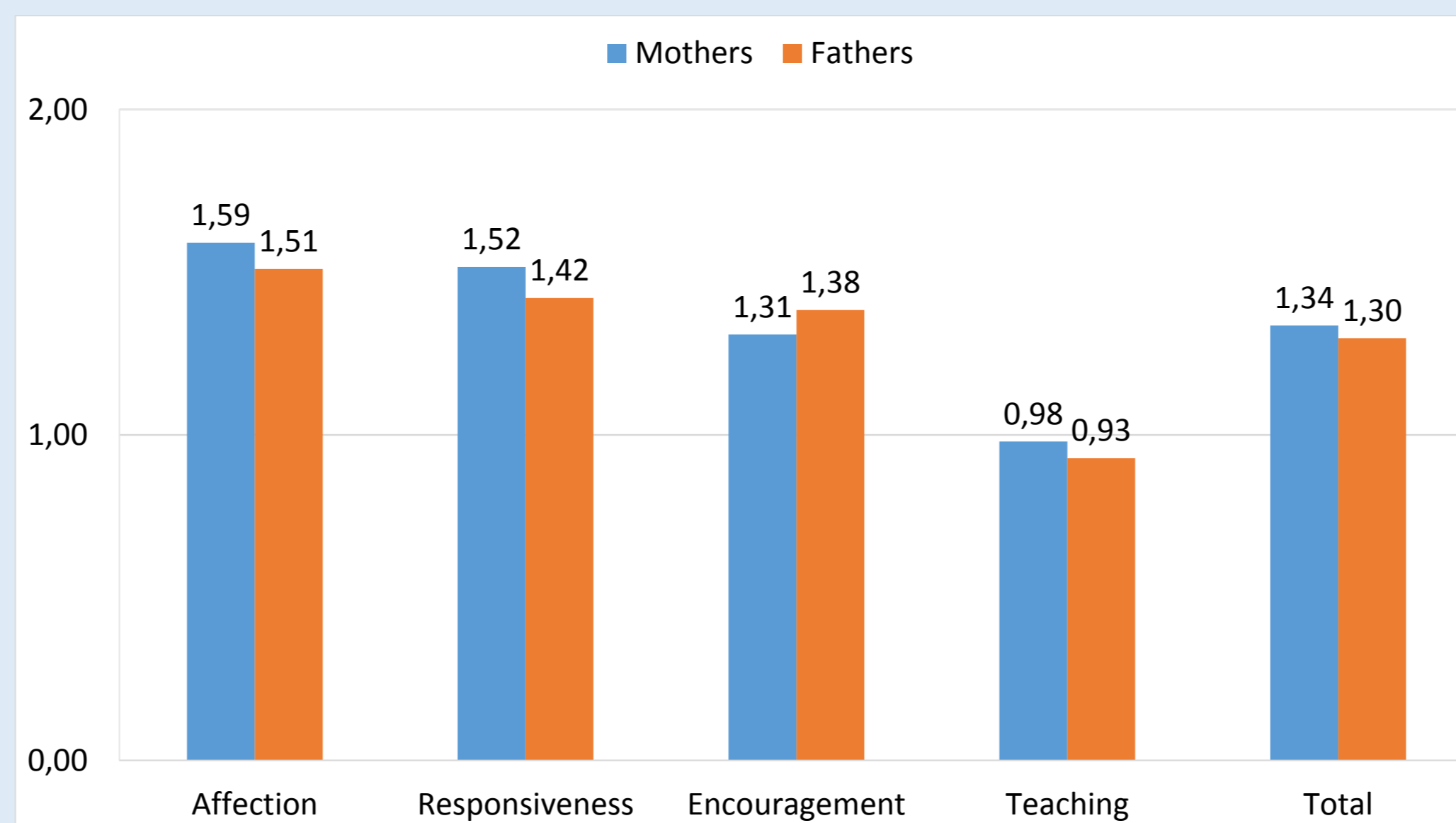


Figure 2. Means of PICCOLO domain scores for mothers and fathers



		BAYLEY Cogn PC	BAYLEY Lang Total PC	BAYLEY Motor Total PC
PICC_Afe_M	Pearson Correlation	-.219	.019	-.251
	Sig. (bilateral)	.153	.905	.159
	N	44	42	33
PICC_Res_M	Pearson Correlation	.230	.354*	.076
	Sig. (bilateral)	.133	.021	.675
	N	44	42	33
PICC_Encou_M	Pearson Correlation	.107	.218	.100
	Sig. (bilateral)	.491	.165	.579
	N	44	42	33
PICC_Teach_M	Pearson Correlation	.142	.329*	.083
	Sig. (bilateral)	.358	.034	.647
	N	44	42	33
PICC_Total_M	Pearson Correlation	.117	.297	.042
	Sig. (bilateral)	.448	.056	.818
	N	44	42	33

*. The correlation was significant at the 0.05 bilateral level

Table 1. Correlation of mother scores in PICCOLO and Bayley scores

Par		N	Correlation	Sig.
Par 1	PICC_Afe_M y PICC_Afe_F	35	.354*	.037
Par 2	PICC_Res_M y PICC_Res_F	35	.420*	.012
Par 3	PICC_Encou_M y PICC_Encou_F	35	.354*	.037
Par 4	PICC_Teach_M y PICC_Teach_F	35	.617*	.000
Par 5	PICC_Total_M y PICC_Total_F	35	.469*	.004

Figure 1. Correlation between PICCOLO scores in fathers and mothers.

		BAYLEY Cogn PC	BAYLEY Lang Total PC	BAYLEY Motor Total PC
PICC_Afe_F	Pearson correlation	-.304	-.141	-.287
	Sig. (bilateral)	.076	.428	.156
	N	35	34	26
PICC_Res_F	Pearson correlation	.288	.288	.040
	Sig. (bilateral)	.093	.098	.845
	N	35	34	26
PICC_Encou_F	Pearson correlation	.346*	.379*	.195
	Sig. (bilateral)	.042	.027	.340
	N	35	34	26
PICC_Teach_F	Pearson correlation	.391*	.403*	.068
	Sig. (bilateral)	.020	.018	.743
	N	35	34	26
PICC_Total_F	Pearson correlation	.273	.325	.038
	Sig. (bilateral)	.112	.061	.855
	N	35	34	26

Table 2. Correlation of father scores in PICCOLO and Bayley scores

Conclusions

Mothers and fathers of children with disabilities engage in more types of affection behaviors (warmth, closeness...) and fewer teaching behaviors (conversation, play, cognitive stimulation...), similar to younger normally developing children (Peterson et al., 2014; Roggman et al., 2013) with similar patterns in mothers and fathers.

Most of the children have Bailey scores below their chronological age, so developmental delays may be making a difference in parenting since optimal parenting behaviors could sometimes be a challenge for families with children with disabilities (Innocenti et al., 2013).

Positive significant Pearson correlations were found between parenting and the child's development. Our results suggest that early parenting intervention can improve developmental outcomes for children with a disability (Spiker, Hebbeler, & Malik, 2005).

The PICCOLO can be a useful tool to support optimal parenting in families with children with disabilities. PICCOLO behaviors could help early intervention practitioners that work in collaboration with mothers and fathers, as this measure focus on parental behaviors that can be easily recognized and incorporated in intervention plans (Roggman & Cardia, 2016).

Further analyses with larger samples of mothers and fathers with children with disabilities are needed to determine the consistency of our findings.

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