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**QUALITY OF COLOMBIAN EARLY CHILDHOOD EDUCATION:  
AN EXPLORATORY STUDY OF TEACHER-CHILD  
INTERACTIONS**

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*Abstract*

Quality of adult-child relationships could be influenced by children's individual characteristics such as temperament. The examination of the association between temperament and teacher-child relationship has been limited within Latino population. Does regulatory temperament moderate the association between reactive temperament and teacher-child relationships in the Colombian early childhood education environment? Global research studies highlight the importance of quality of relationships to promote quality of early childhood education (ECE). Colombian ECE national evaluation reported association among teachers' interactions and child outcomes. From the ecological perspective, the present study aimed to examine how child temperament contributes to the teacher-child relationships in Colombian ECE environments. The sample included 316 children (58.3% Girls) and their teachers. Data were collected using Student-Teacher Relationship Scale (STRS) and Child Behavior Questionnaire (CBQ). First, a confirmatory factor analysis of STRS for the Colombian sample was conducted. Second, regression analysis was conducted to determine the strength of the relationship between the variables. Results from regression analyses showed that children's negative affectivity predicted teacher-child closeness ( $b = .06$ ,  $\beta = .15$ ,  $t = 2.46$ ,  $p = .01$ ). In addition, children's temperamental surgency predicted teacher-child conflict ( $b = .08$ ,  $\beta = .12$ ,  $t = 1.97$ ,  $p = .04$ ). Results from the current study highlight the importance of children's temperament in their relationships with teachers in the Colombian early childhood education environment. Intervention programs targeting improvement of teachers-child relationships could consider child temperament as children establish different patterns of relationships with teachers depending on their temperament.

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**Keywords:** Interactions, teacher, child, quality, temperament.



## 1. Introduction

Quality of relationships is an associated factor to explain early childhood education (ECE) from an ecological perspective (Bronfenbrenner & Morris, 2006; Hamre & Pianta, 2010). Children's positive relationships with their teachers provide an important support for the development of social, cognitive and academic skills in the early years (Baker, Fenning, & Crnic, 2011; Hamre & Pianta, 2001; Sabol & Pianta, 2012). Moreover, quality of teacher-child interactions is considered a key element to ensure good quality of learning environment; consequently, it is a critical indicator to measure quality of early childhood education (ECE) (UNESCO, World Bank, Brookings Institution & UNICEF, 2017).

### 1.1. Children's reactive components of temperament

Temperament is defined as constitutionally-based individual differences in reactivity and self-regulation, which are shaped by genetic endowment, social interactions and experiences (Rothbart, 1989; Rothbart, Ahadi, & Evans, 2000; Rothbart & Bates, 2006; Rothbart & Derryberry, 1981). For the purpose of this study, we examined children's regulatory temperament and reactive temperament. Reactivity refers to the intensity of arousability of motor, affective, and sensory response systems to the environment or situations (Rothbart, Derryberry, & Hershey, 2000). The components of reactivity include: i) surgency/extraversion, which is related to positive emotionality, activity level, risk taking, and impulsivity, and ii) negative affect, which refers to the tendency to experience negative emotions (i.e., fear, anger, sadness, and/or discomfort). Self-regulation refers to processes within an individual that regulate or modulate reactivity including attentional focusing and inhibitory control (Rothbart *et al.*, 2000).

### 1.2. Children's interactions with their teachers in the preschool environment

Quality of teacher-child relationships has been extensively examined in the literature, especially the association of this construct with children's academic outcomes (Birch & Ladd, 1997, 1998; Graziano, Reavis, Keane, & Calkins, 2007; Hamre & Pianta, 2001; Mashburn & Pianta, 2006; O'Connor & McCartney, 2007). Some studies have reported that negative teacher-child relationships, usually described by high conflict and dependency and low closeness, affect children's school success (Pianta, 1999; Rudasill & Rimm-Kaufman, 2009) because of associated factors such as dislike of school, poor academic performance, and others (Graziano *et al.*, 2007; O'Connor & McCartney, 2007).

Furthermore, a large body of empirical evidence has also been focused on demonstrating the association between quality of teacher-child interactions and children's socio-emotional development (Ewing & Taylor, 2009; Hamre & Pianta, 2001; Ladd, Birch, & Buhs, 1999; O'Connor & McCartney, 2007; Silver, Measelle, Armstrong, & Essex, 2005; Zhang & Nurmi, 2012) For instance, high teacher-child closeness and low teacher-child conflict may contribute independently to the prediction of social competence in preschool and the increase of externalizing problems from kindergarten through third grade (Ewing & Taylor, 2009; Silver *et al.*, 2005; Zhang & Nurmi, 2012). Besides, Silver and colleagues (2005) reported that teacher-child closeness contributes to a decrease in the externalizing problems for children with higher levels of externalizing upon school entry.

Conversely, the empirical evidence about teacher-child interactions in the Colombian context is limited. Some findings about the influence of teacher-child interactions and children's socioemotional and academic skills have been reported by Maldonado and Carrillo (2006), who showed that academic skills were significantly negatively associated with conflict and dependency of teacher-child relationships, while academic skills were significantly positively associated with the total quality of the relationships. Moreover, Maldonado and Carrillo (2006) reported that social competencies were not significantly associated with teacher-child relationships.

Several studies have reported that the perception of teacher-child relationships may vary according to children's characteristics (e.g. temperament, socioeconomic background) (Diaz et al., 2017; Ewing & Taylor, 2009; Rudasill, 2011; Stuhlman & Pianta, 2001) and their cultural contexts (Garner & Mahatmya, 2015; Hughes, Gleason, & Zhang, 2005). Regarding Latino population, teachers may have high expectations for compliant for Latino children in comparison to children from other racial groups (Delgado, 1992; Garner & Mahatmya 2015). In fact, Garner and Mahatmya (2015) reported that teachers tended to assign higher scores in conflict, and lower scores in emotion regulation and closeness to Latino children than African-American and White children.

In terms of culture, the development of measures to assess teacher-child interactions is a key element. Empirical studies about the validity of the STRS are mostly based on findings from the U.S (Pianta, 1992), Spain (Garcia & Martinez-Arias, 2008), and other countries, from mostly White, middle-class samples (e.g. Decker, Dona, & Christenson, 2007; Garner & Mahatmya, 2015; Saft & Pianta, 2001; Tsigilis & Gregoriadis, 2008; Yates & Marcelo, 2014). Maldonado and Carrillo (2006) showed that in Colombia the scores of closeness, conflict and dependency, and total quality of the relationship are similar to the scores reported by Pianta (1992) using the U.S. norms of the long version of the STRS (28 items). Furthermore, Escalante (2016) carried out a confirmatory factor analysis of the short form of the STRS (15 items). The results showed a good model fit of the factor closeness, while the factor conflict showed close model data fit. These findings suggest that more empirical validity studies (e.g. external validity, inferential validity) and psychometric analysis (e.g. confirmatory analysis, measurement invariance, and others) are necessary to (1) assure the relative relevance of the STRS for the Colombian population, and to (2) increase the accuracy and reliability of findings about teacher-child interactions in order to contribute to the literature about quality of ECE in this particular cultural context.

### **1.3. Child temperament and teacher-child relationships**

Several research studies have demonstrated that characteristics of the child such as temperament, and adult's perceptions of children's characteristics may determine the quality of the adult-child relationships (e.g. Graziano et al., 2007; Hamre, & Pianta, 2001; Rudasill & Rimm-Kaufman, 2009). For instance, Rudasill and Rimm-Kaufman (2009) reported that children who had higher scores of teacher-child conflict also showed lower scores of effortful control. The authors also found that children who had higher scores of teacher-child closeness also showed higher scores of effortful control (Rudasill & Rimm-Kaufman, 2009). Overall, children's temperament characteristics like high in approach, high in adaptation, low negative reactivity, low activity, low in withdrawal and positive emotionality tend to be associated with high quality teacher-child interactions, while temperament characteristics like high in withdrawal, high in

negative reactivity, high in activity, slow in adaptation, and high in negative emotionality tend to be related with conflictual and less closer teacher-child relationships (Valiente, Swanson, & Eisenberg, 2012; Walker & Henderson, 2012; Rudasill & Rimm-Kaufman, 2009; Eisenberg, Smith, Sadovsky, & Spinard, 2004; McClowry, 2002; Thomas & Chess, 1977). However, teachers may be also more supportive with children with negative behaviors, Bassett and colleagues (2016) explained this positive relationship may be explained by the provision of teacher's supportive reactions (i.e. making the child feel better, providing comfort to calm down, and others).

## **2. Problem Statement**

The evaluation of quality of early childhood education is the current challenge of the Colombian government, which is promoted by the State policy "De Cero a Siempre" (Verdisco, Cueto, & Thompson, 2016). Findings of the first national quality measurement of early childhood education, carried out in 2017 by the Ministry of Education, recommended to focus the efforts in promoting quality of interactions between teachers, children and the environment, given the low scores reported by the pedagogical quality scale about teachers' skills to encourage children to choose and make decisions in the classroom (Maldonado-Carreño et al., 2018). From this point of view, understanding quality of teacher-child interactions in terms of dependency, closeness, and its association with children's reactive temperamental characteristics may facilitate the improvement of learning environments in the Colombian context. Despite its increasingly acknowledged importance, the relationship between children's temperament and teacher-child interactions in the Colombian context has been scarcely addressed in the literature (it is limited mostly to dissertation works). Consequently, the present study is a contribution to close the literature gap about temperament and quality of teacher-child interactions in the ECE environments.

## **3. Research Questions**

The present study addressed the following research question: Does regulatory temperament (effortful control) moderate the association between reactive temperament (surgency and negative affect) and teacher-child relationships in the Colombian early childhood education environment?

## **4. Purpose of the Study**

The purpose of this study was to examine the associations between low-income preschool children's temperament and their relationships with teachers served by the national ECE program of Colombia. In addition, we examined the psychometric properties of Student-Teacher Relationship Scale (Pianta, 1992), as a potential measure to evaluate and understand the quality of teacher-child interactions and the quality of pedagogy in this cultural context.

## 5. Research Methods

### 5.1. Sample

Data come from a dissertation study, entitled “Feeding practices of families with pre-schoolers in Colombia and the USA: a cross-cultural multiple case study,” by Escalante (2016) in pursuit of her dissertation. The dissertation was funded by a Patrice L. Engle Dissertation Grant For Global Early Child Development from Society for Research in Child Development (SRCD) and Newman Dissertation/Thesis Research Travel Fund from the University of Nebraska- Lincoln. A total of 316 caregivers (58.3% girls) of low socioeconomic status families from the Caribbean region in Colombia, with 3 to 4 years old children, enrolled in early childhood education and care programs. There were slightly more boys than girls (58.3% girls) (Table 1). In addition, teachers of the sampled children were requested to complete the STRS-LF.

### 5.2. Measures

Student-Teacher Relationship Scale (STRS), Spanish version. The STRS (Pianta, 1992) is a self-report form completed by teachers to assess the perceptions of their relationships with students, and it is based on attachment theory (Bowlby, 1969). The instrument was developed in two versions which vary in the number of subscales and items: long (STRS-LF) and short (STRS-SF) forms. STRS-LF measures three subscales with 28 items, namely conflict (12 items), closeness (11 items) and dependency (5 items). Conflict measures the degree to which parents feel that their relationship with their child is characterized by negativity, while Closeness subscale assesses the extent to which parents feel that the relationship with the child is characterized by warmth, affection, and open communication. Dependency subscale measures possessive in terms of the clingy behavior and subjectiveness of the child in relation with the teacher. The STRS-SF measures two subscales with 15 items: conflict (7 items) and closeness (8 items). All the items are five-point Likert scale ranging from 1 (definitely does not apply) to 5 (definitely applies) and the subscale score is the average of all the items in the scale. In this study, the STRS-LF was used, but psychometric properties of STRS-SF can be assessed given that the latter is embedded in the former.

Child Behavior Questionnaire (Putnam & Rothbart, 2006), Spanish version. CBQ is a self-report instrument completed by parents that was used in the present study to measure parent’s perceptions of child temperament. The instrument was developed in three versions which vary in the number of subscales and items: long (195 items), short (94 items) and very short (36 items) forms. The present study used the very short form of CBQ (CBQ-VF). CBQ-VF measures three broad factors of child temperament such as effortful control, negative affect and surgency. Effortful control, which contain high positive loadings for Inhibitory control, attentional control, low intensity pleasure, and perceptual sensitivity sub-scales; negative Affect, which is defined by high positive loadings for sadness, fear, anger/frustration, and discomfort and negative loadings for falling Reactivity/soothability; and surgency/ extraversion, which is characterized by high positive loadings on the impulsivity, high intensity pleasure, and activity level scales and strong negative loadings on the Shyness scale. A 7-point Likert scale was used ranging from 1=extremely untrue of your child to 7=extremely true of your child. Parents were asked to rate how much the items describe the children’s behavior. Carranza, González-Salinas and Ato (2013) reported that Cronbach alphas ranged

from 0.62 to 0.93 for the Standard CBQ in Spanish (195 items). Scale scores are calculated as the mean of all applicable items.

### 5.3 Data Analysis

First, confirmatory factor analysis of STRS on the Colombian sample was conducted using Single-group Confirmatory Factor Analysis (SGCFA). Subscale' structures from the two versions of the instrument were tested individually. Due to the high level of item skewness (ranging between -7.7 and 2.8) and kurtosis (between -1.5 and 72.5), the analysis was done using robust weighted least square (WLSMV) estimator, available in Mplus 7.0 (Muthén & Muthén, 2012). This estimator has shown to perform well with ordered categorical data and small to moderate sample size (Flora & Curran, 2004). Model fit was considered good when  $CFI \geq .95$ ,  $RMSEA \leq .06$ , and  $WRWR < .90$  and adequate if A model is considered to be acceptable if  $CFI > .90$ ,  $RMSEA < .08$ , and  $WRWR < .90$  (Hu & Bentler, 1999; Little, 2013). Missing data at the item level ranges between 6.6% and 8.9%, no special treatment was given to the missing values due to its concentration in few participants (90% of cases have 1 or no missing responses). Second, bivariate Pearson's correlations were calculated to examine associations among child's temperament characteristics (effortful control, surgency and negative affect) and dimensions of quality of teacher-child interactions (closeness and conflict) using the STRS-SF. Finally, regression models were conducted to examine child's temperament characteristics (effortful control, surgency and negative affect) as potential moderators of teacher-child relationship. Bivariate Pearson's correlations and regression analyses were performed using SPSS (v. 16.0, Chicago, IL) statistical packages.

## 6. Findings

### 6.1. Confirmatory factor analysis of STRS in the Colombian Context.

Cronbach's alpha internal consistency measures were relatively low for the subscales in both forms of STRS (Table 1). Item average responses was higher for closeness (above 4.2) than for conflict subscale (below 2.7) in both versions of the instrument, meaning that the majority reported lower levels of conflict than conflict. Inter-item polychoric correlation reported low coefficients for some items, and in some cases positive relationship between items of different scales.

**Table 01.** Descriptives of STRS

Items	Mean	SD	Kurtosis	Skewness	MRF	% Missing
Closeness, $\alpha=0.539$ (short form), $\alpha=0.541$ (long form)						
STRS01*	4.92	0.401	63.793	-7.335	88.3	6.6
STRS03*	4.52	0.782	5.669	-2.168	59.8	7.0
STRS04*	1.70	0.959	3.015	1.766	47.8	7.6
STRS05*	4.69	0.807	12.201	-3.433	75.0	7.3
STRS07*	4.83	0.572	21.937	-4.421	82.0	7.3
STRS09*	4.34	0.901	4.521	-1.979	47.2	7.9
STRS12	4.05	1.235	0.894	-1.377	44.0	7.3
STRS15*	4.26	1.051	2.723	-1.778	48.4	7.9
STRS21	3.55	1.157	-.111	-0.930	50.9	7.9

STRS27*	4.48	0.846	6.714	-2.398	56.6	7.3
STRS28	4.94	0.349	72.523	-7.732	88.6	7.0
Conflict, $\alpha=0.668$ (short form), $\alpha=0.706$ (long form)						
STRS02*	1.44	0.872	8.403	2.800	64.9	7.3
STRS11*	2.15	1.170	-0.448	0.830	34.8	7.9
STRS13	1.87	1.118	0.590	1.276	45.6	7.6
STRS16	1.82	1.103	0.053	1.151	50.3	7.9
STRS18*	2.69	1.281	-1.495	0.023	34.8	7.9
STRS19	4.10	1.073	1.663	-1.470	39.2	8.5
STRS20*	1.86	1.212	0.831	1.394	49.7	8.2
STRS22*	1.97	1.184	-0.168	1.043	44.0	7.6
STRS23*	2.38	1.212	-0.803	0.620	38.3	7.3
STRS24	1.43	0.683	4.539	1.972	59.8	7.9
STRS25	2.69	1.387	-1.465	0.115	29.4	8.2
STRS26*	2.01	1.204	-0.132	1.020	42.1	7.6
Dependency, $\alpha=0.518$ (long form)						
STRS06	3.44	1.167	-0.133	-0.996	54.7	7.6
STRS08	3.56	1.078	-0.028	-0.840	48.4	7.6
STRS10	3.02	1.235	-1.167	-0.543	44.6	8.2
STRS14	3.42	1.216	-0.450	-0.898	54.1	7.9
STRS17	3.10	1.290	-1.135	-0.310	34.5	8.9

SD: item standard deviation; MRF: highest relative frequency among item categories

\* Items that correspond to STRS-SF

Closeness subscale in the short form ( $\chi^2_{(18)} = 35.649, p=0.078, CFI=.931, RMSEA=.058, WRMR=.0741$ ) showed adequate model-data fit (Table 2), although only one of the indices (*CFI*) did not reach the good fit criterion. The long version of this subscale reported good fit indices in all cases ( $\chi^2_{(38)} = 57.958, p=0.02, CFI=.946, RMSEA=.042, WRMR= 735$ ). All the factor loadings showed to be significantly different from zero in both versions of the subscale. Thresholds corresponding to three items were not statistically different from zero in the short form of closeness, and in the long form one additional item had one non-significant threshold.

**Table 02.** Subscales Cronbach's alpha and fit indices for the single-group CFA

Version	$\chi^2$	df	p	CFI	TLI	WRMR	RMSEA	90% CI
Conflict								
Short form*	15.222	9	0.085	0.993	0.984	0.397	0.048	[0.000 0.089]
Long form*	91.736	41	0.000	0.970	0.952	0.763	0.065	[0.047 0.082]
Closeness								
Short form*	35.649	18	0.008	0.931	0.893	0.741	0.058	[0.029 0.085]
Long form*	57.958	38	0.020	0.946	0.922	0.735	0.042	[0.017 0.063]
Dependency								
Long form	11.283	5	0.046	0.962	0.924	0.57	0.065	[0.008 0.117]

\* With non-zero residual error correlations

Good model-data fit was found in the short version of conflict subscale ( $\chi^2(9) = 15.222, p=0.085, CFI=.993, RMSEA=.048, WRMR=.0397$ ). In the long form ( $\chi^2(41) = 91.736, p=0.000, CFI=.970, RMSEA=.065, WRMR=.763$ ).

RMSEA=.065, WRMR=.0763), one of the indices (RMSEA) was above the cutoff criterion for a good fit. As with closeness, all factor loadings of conflict subscale showed to be significantly different from zero in both long and short forms, while there more non-significant thresholds in the long than in the short form of STRS. Finally, there was good model to data fit for dependency subscale ( $\chi^2(5) = 11.283$ ,  $p=0.046$ , CFI=.962, RMSEA=.065, WRMR=.057), although RMSEA was above the cut off value. All 4 item loadings were significantly different from zero and two thresholds were not.

## 6.2. Bivariate correlations

Results from bivariate correlations showed that children's temperamental effortful control was correlated with surgency ( $r = .24$ ) and negative affectivity ( $r = .28$ ). Children's negative affectivity was correlated with teacher-child closeness ( $r = .14$ ).

## 6.3. Child's Temperament and teacher-child relationship

In addition to bivariate analyses, we regressed teacher-child relationship on children's temperamental characteristics. Results from regression analyses showed that children's negative affectivity predicted teacher-child closeness ( $b = .06$ ,  $\beta = .15$ ,  $t = 2.46$ ,  $p = .01$ ). Finally, children's temperamental surgency predicted teacher-child conflict ( $b = .08$ ,  $\beta = .12$ ,  $t = 1.97$ ,  $p = .04$ ).

## 7. Conclusion

The purpose of the present study was to examine the association between low-income preschool children's temperament and their relationships with teachers served by the national ECE program of Colombia. Consistent with the ecological perspective (Bronfenbrenner & Morris, 2006; Hamre & Pianta, 2010), our results showed a significant association between child characteristics (i.e., temperamental characteristics like negative affect, effortful control and surgency) and interpersonal relationships in preschool environments (i.e., teacher-child interactions). As expected, this study found that children with surgency (e.g., higher levels of activity and impulsivity) were perceived as having conflictual relationship with teachers, a finding which is aligned with previous literature (Rudasill & Rimm-Kaufman, 2009; McClowry, 2002). This may be due to the fact that this kind of children would highly likely disrupt the classroom processes by which teachers feel that they should manage or frequently redirect these children's behaviors to continue the process as planned. This mismatch between children's behavior and teachers' preplanned classroom processes may lead teachers to perceive these children as having a conflict with themselves. From this perspective, teachers would develop pedagogical strategies to address children with surgency in order to improve the quantity and quality of their interaction with their students in the preschool context. In fact, Basset and colleagues (2016) explained that the frequencies of teacher-child interactions in preschool may be related to individual differences in surgency (i.e. low-surgency children interact less with their teacher, while high-surgency children interact more). Besides, results suggest that teachers may have perceived children with high negative affectivity as closer to themselves. An explanation of this finding could be that children with negative affectivity may feel that they should be closer to teachers to meet their emotional needs or teachers may perceive these children as they need extra support in their

classroom (Bassett et al., 2016). Therefore, teachers may have seen children's negative affectivity in a positive way in their relationships with them within Colombian early childhood educational context.

Regarding the examination of the psychometric properties of Student-Teacher Relationship Scale (Pianta, 1992), the factor structure of the subscales conflict, closeness and dependency was confirmed for the Spanish version of STRS in the Colombian context. However, it should be stressed the extreme level of skewness in some cases. For instance, there are items with as many as 80% or more participants that chose the same answer, and the rest is unevenly spread among the other category response options. This may indicate that the instrument could be adjusted to fewer response options, or that the Likert scale could be slightly more problematic for people not used to it or with difficulties to assigning degrees or levels to their feelings or thoughts or that the construct as such cannot be thought to be normally distributed. Likewise, it must be noted that holding the same structure (i.e., configural invariance) as other versions of the instrument (e.g., English) does not necessarily mean that the scores are comparable among each other. Further studies are needed in order to conclude higher order of invariance between groups or versions of STRS. Overall, the current study highlights the importance of children's temperament in their relationships with teachers in the Colombian ECE learning environments (Hamre, & Pianta, 2001; Rudasill & Rimm-Kaufman, 2009).

### **7.1. Limitations and future directions**

The present study provides a unique contribution to expand the literature on the relationship between child temperament and teacher-child interactions in Latino populations, especially in Latinos living in Colombia. However, a number of limitations must be noted, given the novel nature of this study in the geographical location. First, the study was only focused on a relatively small sample ( $n=316$ ) which included low-income and ethnically homogeneous population from the Colombian Caribbean region, limiting therefore the generalization of the findings. As a result, replication of the study with a larger group size is necessary. Second, the study examined the association between the three broad factors of children's temperament (effortful control, negative affect and surgency) and the two qualities of teacher child interactions (closeness and conflict). However, there are additional components that inform the nature of teacher-child relationship quality and children's temperament. For example, the exploration of dependency (Pianta, 1992), a key factor for a collectivistic country like Colombia, needs to be addressed in future studies. With regards to children's temperament, the use of the Very Short form of the CBQ limited the deeper examination of more specific domains of the structure of children's temperament (Putnam & Rothbart, 2006). Besides, the CBQ-VSF was only completed by parents. Thus, it is recommended to i) explore deeply additional components of teacher-child relationships, and ii) examine more domains of children's temperaments that are reported not only by parents, but also by teachers in order to test the differences across reporters. Lastly, despite the fact that the present study revealed the prevalence of the variables and their associations, the cross-sectional nature of the study limited the possibility of establishing causal relationships from the analysis. Future studies would do well to explore longitudinal data that provide a wider picture of the cause and the effect of the association between teacher-child interactions and children's temperament. These studies would allow to identify and understand the changes in the relationship between these variables over time.

## 7.2. Implications for practice and policy

Quality of teacher-child interactions is an indicator of quality of learning environment; consequently, it is a key factor that contributes to promote and guarantee quality of ECE. (UNESCO, World Bank, Brookings Institution & UNICEF, 2017). From this perspective, the design and implementation of intervention programs targeting the improvement of pedagogical quality in Colombia would need to include the quality of teacher-child interactions as a critical component (Maldonado-Carreño et al., 2018). This type of intervention programs would also consider child temperament as children establish different patterns of relationships with adults depending on their temperament. As a result, the Colombian government and school-wide administrators may promote professional development programs for in-service teachers, which are focused on the development of their socioemotional and pedagogical skills with the purpose to be responsive and provide specific support for different children's temperaments. In particular, teachers would need to be equipped to create warm, close and positive classroom climates for young children from an inclusive perspective. Finally, it is also necessary to conduct evaluative processes of the intervention programs aimed at improving the quality of teacher-child interactions in order to ensure their effectiveness and contextual relevance for Colombia. In the end, the present study provided psychometric evidences that contribute to confirm the validity of tools, such as the STRS, for assessing teacher-child interactions in the Colombian context. Overall efforts toward quality of teacher-child interactions may ensure the quality of ECE in Colombia.

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