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TOWARDS MORE EFFECTIVE PROFESSIONAL SECONDARY CAREGIVER PRACTICES: IMPLICATIONS OF THE CURRENT STUDY FOR CHILD DEVELOPMENT

Nouman Thompson, Department of Literature, University of California, Los Angeles

Abstract

Quality of care is a potentially important determinant of child outcomes. Professional Secondary Caregiver (PSC)-child interactions constitute the core of process quality. The purpose of the study was to examine the association between the PSC's sensitivity, child security -as assessed with the scores derived from Q-Sort descriptions (MBQS and AQS)- and socio-cognitive development (as derived from an assessment) in an accidental sample of 34 dyads trough a cross-sectional study. PSC were highly sensitive (M = .59) but children had less than 4 months interacting with them and showed it was insufficient time to establish a secure base relationship. Adequate and appropriate responses from the nonmaternal caregiver to communication and signs the infant is making relate to the child's socio-cognitive development. More stable and long term PSC-child relationships would lead to better outcomes in child development, therefore, allowing the PSC to spend more time with the same group of children would be ideal.

Keywords: Attachment theory; sensitivity; secure base behavior; child development; educational quality.

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Introduction

Globally, in the last decade, the number of infants attending Early Education Centers (CEI), popularly known as nurseries, daycare centers or nurseries, increased by nearly 40% (United Nations Educational Organization , Science and Culture UNESCO, 2012). Research on its quality documents that low-quality CEI attendance is a risk factor (e.g., Friedman & Boyle, 2008), while high quality is a protective factor in early childhood development (e.g. , Gunnar, Tagle, & Herrera, 2009; Vandell et al., 2010; Vermeer & Bakermans-Kranenburg, 2008).

Professional Secondary Caregiver (CSP)-infant interactions constitute the core of this process (Cárcamo, Vermeer, De la Harpe, van der Veer, & van Ijzendoorn, 2014). Attachment theory is an excellent framework for studying the sensitivity of CSPs and their connection with infants, generating possible indicators to evaluate educational quality (Salinas-Quiroz et al., 2015). A sensitive caregiver focuses attention on the infant's physical and emotional needs and is able to see things from her point of view. Likewise, it synchronizes the boy's or girl's activities with their own, negotiates in the face of conflicts and adjusts to their emotional states, evolutionary moment and particularities (e.g., Carbonell, Posada, Plata, & Méndez, 2005).

Recent research has reported that the secure-based infant-CSP relationship allows the child to transform the CSP into a resource for exploring the classroom (Oren, 2006) and to focus all of his or her attention and energy on learning (e.g., Howes & Richie, 2002). A protective secure base offers a variety of supervised learning opportunities: exploratory interactions with objects and people that reach their optimal levels with the support of the attachment figure

(Salinas-Quiroz et al., 2015). Secure base infant-CSP relationships predict, both in Initial Education (EI) and at higher levels: a) the behavioral adjustment of the infants; b) its social acceptance; c) their school attitudes and d) their academic engagement and performance (e.g., Baker, 2006; Kienbaum, 2001; Magnuson, Ryhm, & Waldfogel, 2004; Pianta & Stuhlman, 2004; Silver, Measelle, Armstrong, & Essex, 2005). Other studies have found that the quality of the infant-CSP relationship predicts better levels of social competence (e.g., Maldonado & Carrillo, 2006; Peisner-Feinberg et al., 2001; Pianta & Stuhlman, 2004) and decreases behavioral problems. (e.g., Mashburn, Pianta, Hamre, & Downer, 2008).

In Mexico, children's rights have been incorporated into the General Education Law (2011), which is why the Ministry of Public Education recognizes the right to EI as an inalienable right of children. The analysis of spending carried out by the Inter-American Development Bank in 2013 reveals inequities in EI services in the country: the amount allocated to the daughters and sons of beneficiaries of social security institutions (e.g., Instituto Mexicano del Seguro Social Security IMSS and Institute of Security and Social Services of State Workers ISSSTE) is equivalent to 2.5 times more than what is allocated for the non-entitled population, despite the fact that the number of infants is smaller (Myers, Martínez , Delgado, Fernández, & Martínez, 2013), Therefore, it is expected that the quality of care in the IMSS CEIs will be higher. The General Law on the Provision of Services for Comprehensive Child Attention, Care and Development (2011) recognizes that entities that provide child care and EI services must carry it out in accordance with quality standards, where the priority is the adequate care of the children. girls and boys, based on the

constitutional principle that protects their development and the fulfillment of their rights, that is, on the best interests of children.

Existing research on the effects of CEI attendance on early childhood development has been conducted primarily in Anglo-Saxon contexts. The largest longitudinal study carried out did not find interactions between temperament and the characteristics of the CEI, however, it did not consider in its design the evaluation of the infant-CSP interaction. Authors such as Roisman and Fraley (2008) suggest that the most appropriate model to explain the sensitivity-security correlation is the environmental one, not the genetic one, so the quality of care becomes an important variable. One way to approach these interactions is through the evaluation of attachment bonds and the sensitivity of the CSP.

Within the Latin American context, specifically in Chile, the infant-CSP interaction has been evaluated with the Experimental Child-Adult Relationship Index (Care-Index) (Crittenden, 2005) and with the Adult Sensitivity Scale (ESA) (Santelices et al. al., 2012). Both instruments require video recording of free play between the infant and the caregiver for 3 to 5 minutes and their indicators evaluate affective and cognitive aspects of the sensitive response (Santelices & Pérez, 2013; Santelices et al., 2012). The Chilean research team found that over time the sensitive response of CSPs in CEI is maintained; educational personnel decrease their controlling style in interaction (Santelices & Pérez, 2013) and cooperativeness increases significantly (Santelices, Greve, & Pereira, 2015). In 2015, evaluated the predictor variables of maternal sensitivity in a sample of 104 one-year-old mother-child dyads who attended CEI and found that at higher educational or occupational levels there is a greater probability that the mother will be more sensitive to her child.

However, with respect to infants, they did not find significant correlations between sex, age, age of admission, weekly hours in the CEI, type of child, or the place they occupy among siblings (Santelices, Farkas et al., 2015). Regarding the comparison of the sensitivity of Chilean mothers with the CSP, Farkas and collaborators (2015) compared the sensitivity of mothers and CSP through the ESA (Santelices et al., 2012). In the case of mothers, they found statistically significant correlations between higher levels of sensitivity and older age, educational level and socioeconomic level; CSPs with higher levels of sensitivity also had higher educational levels and less time spent caring for the evaluated infant (Farkas et al., 2015).

The evaluation of sensitivity and secure base infant-CSP relationships, as well as the sociocognitive development of girls and boys in CEI of Mexican social security institutions, is not only relevant for dissemination research purposes, with the respective contribution to the attachment theory regarding the multiplicity of caregivers and assistance to CEI in Latin American contexts, but rather it documents the quality of care and educational attention that infants receive with a view to improving it in compliance with the convention on the rights of girls and boys (United Nations International Children's Emergency Fund UNICEF, 1989). The starting hypothesis of the present study indicates that the sensitivity of CSP and infants' secure-base behavior will be associated with their sociocognitive development.

Method

Institutional linkage

Three different meetings were held with the coordination of the IMSS Daycare Service for Comprehensive Child Development during the first semester of 2013 to present the research project, request their participation and select CEI of

good or excellent quality. Once the negotiations were concluded, the authorities proposed that they participate in the CEI project for indirect provision only (subrogated), so four were selected that would probably have these quality levels, south of Mexico City to facilitate the transportation of the equipment. research. In August 2013, the research was formally presented to the management team of the four participating CEIs (CEI1, CEI2, CEI3 and CEI4) to proceed with the quality evaluation and,

CEI inclusion criteria

The selection of the CEIs was made based on the Quality Evaluation Scale of Initial Education Centers (EECCEI, v.4.0; UPN, 2011); Those who met good or excellent quality levels according to the instrument (> 80%) participated in the research. The EECCEI evaluates the quality indicators of the center and the room. The quality levels are: 1) Inadequate < 20%; 2) Incipient < 40%; 3) Basic < 60%; 4) Good < 80% and 5) Excellent = 100%. To apply the scale, the director of each of the four CEIs was interviewed; Subsequently, we proceeded with direct observation of the physical conditions of the infrastructure and resources of the CEI. The four dimensions of the scale were rated as follows: 1. Facilities and Material Resources; 2. School Management; 3. Educational Process and 4. Relationship with Families. Regarding Facilities and Material Resources, CEI1 complied with 95%; CEI2, 100%; CEI3 and CEI4, 80%. Regarding School Management, CEI1, CEI2 and CEI4 obtained 100% and CEI3, 92%. Regarding the Educational Process, CEI1, CEI2 and CEI4 complied with 100% and CEI3, with 80%. Regarding the Relationship with Families, only CEI2 obtained 100%, while CEI3 and CEI4, 93.3% and CEI1 86.7%.

Dyad inclusion criteria

In the case of the CSP, it was a requirement to be a woman, to have a technical degree as an educational assistant or childcare worker or to have experience in a nursery, MA: 18 to 24 months; B1: 25 to 30 months; or B2: 31 to 36 months, according to the IMSS nomenclature. In the case of infants, they must be 18 to 36 months old at the time of the evaluation and be healthy, according to reports from the different CEI services (health, vaccination, hygiene, nutrition and weight and height monitoring, psychology and work). social).

Participants

Of the 34 CSP-infant dyads: 50% were girls (n = 17) and 50% were boys (n = 17) from 20 to 36 months of age (M = 27.94; SD = 5.49). The CSPs were between 18 and 42 years of age (M = 29.26; SD = 6.30), all had at least a technical degree and between 1-240 months of professional experience (M = 67.41; SD = 60.88). The interaction time of the dyads fluctuated between 4 and 8 months (M = 3.69: SD = 1.76).

Instruments

CSP Sensitivity

The Professional Secondary Caregiver Behavior Q-Sort (QSCCSP; Salinas-Quiroz, 2014) was used, an adaptation of the Maternal Behavior Q-Sort (QSCM; Pederson & Moran, 1995). The Spanish translation of Posada and team (Posada, Jacobs, Carbonell et al., 1999; Posada, Jacobs, Richmond, 2002) and that of Juárez-Hernández (2004a) were reviewed; The language was adapted to the Mexican context and the caregiver, mother, was modified to the one in this study, CSP. For this adaptation, validation by judges was used (Salinas-Quiroz, Morales-Carmona, Cruz-Martínez, Posada, & Carbonell, 2014). The QSCM is associated with the quantitative methodology, since it assigns scores, it also

combines the strengths and methodology of the qualitative researcher, since it allows a systematic study of subjectivity (Salinas-Quiroz & Posada, 2015).

Posada, Waters, Crowell and Lay (1995), based on theoretical criteria, constructed seven scales that have been used in various investigations with mothers in Latin America (e.g., Posada et al., 2002), they are these: 1) Sensitive response (n = 12, α = 0.92); 2) Accessibility (n = 9, α = 0.88); 3) Infant acceptance (n = 6, α = 0.83); 4) Interference (n = 3, α = 0.76); 5) Active-Animated (n = 8, α = 0.89); 6); Creates an interesting environment (n = 5, α = 0.8) and 7) Concern about physical appearance (n= 3, 0.73). In 2014, Salinas-Quiroz and collaborators carried out a psychometric approach to the use of Q-Sorts in EI contexts, through an exploratory factor analysis in which 49 items of the original 90 were retained that converged in 16 interactions in 3 factors that explained 45.35% of the variance: 1) Sensitive behavior (n = 28, α = 0.92); 2) Rigidity and institutional guidelines (n = 8, α = 0.72) and 3) Promotion of learning (n = 13, α = 0.87) (Salinas-Quiroz et al., 2014).

For the present investigation, the global Q-Sort score was used, in addition to the scores of each of the Posada et al. scales. (nineteen ninety five). The overall score of the QSCCSP is obtained through a correlation between the prototypically sensitive caregiver and the evaluated CSP (-1 to 1).

Secure base behavior

The Attachment Q-Sort, QSA version 3.0 (Waters, 1995) was used, which has 90 items and has been previously translated into Spanish by Posada et al. in Colombia (Posada et al., 1999; Posada et al., 2002) and Juárez-Hernández in Mexico (2004b). Based on their translations, a version was designed with language adapted to the Mexican context and modifications in the type of

caregiver, adapted for CSP. For this adaptation, validation by judges was also used (Salinas-Quiroz et al., 2014).

Posada, Jacobs, Carbonell et al. (1999) and Posada, Jacobs, Richmond et al. (2002) constructed four scales based on theoretical criteria, namely: 1) Warm interactions (n= 17, α = 0.91); 2) Proximity (n = 13, α = 0.77); 3) Physical contact (n = 7, α = 0.8) and 4) Interaction with other adults (n = 13, α = 0.81). The average score of the items that make up each scale constitutes the level of said dimension in the secure base behavior of infants. Salinas-Quiroz et al. performed an exploratory factor analysis in which 47 items of the original 90 were retained, which converged in 48 interactions in 6 factors that explained 52.99% of the variance: 1) Harmonious interactions and search for proximity with the CSP (n = 15, α = 0.87) 2) Disposition and positive emotional responses to strangers (n = 7, α = 0.9); 3) Inconsistency in the link with the CSP (n = 11, α = 0.63); 4) Physical contact with the CSP (n= 4, α = 0.57); 5) Need for attention from the CSP (n = 6, α = 0.63) and 6) Positive emotional states (n = 4, α = 0.65) (Salinas-Quiroz et al., 2014).

The global Q-Sort score was used, in addition to the scores of each of the Posada et al. scales. (Posada et al., 1999; Posada et al., 2002). The overall QSA score is obtained through a correlation between the prototypically secure infant and the tested infant (-1 to 1).

Sociocognitive Development

It was measured with the Evaluation of Social and Cognitive Capacities Scale (EECSC; Juárez-Hernández et al., 2013). This scale evaluates the development indicators of the social and cognitive abilities of infants of one and two years of age. Two versions were used: one for infants from 12 to 23 months; another for those from 24 to 35 months. The first includes two categories: 1) Personal and

social identity and 2) Regulation; the second, three categories: 1) Reasoning, 2) Emerging deductive thinking and 3) Personal and social identity. While the one-year scale includes a total of seven items, the two-year scale has thirteen. Each cognitive or social capacity is measured in its two dimensions: product (response) and process (level of mastery of the response). The scales are Likert type and have the following structure: i. Indicator that is evaluated; ii. Evaluation situation; iii. Instruction or question and iv. Scale with five numerical values (1-5) to classify five possible qualitatively different types of responses: (1)No-answer, (2) Response-not-relevant, (3) Relevant-incipient, (4) Relevant-mastery and (5) Relevant-outstanding. Regarding its reliability, a Cronbach's alpha of $\alpha = 0.73$ was reported, explaining 46.32% of the variance for the one-year-old scale and = 0.83 for the two-year-old scale, explaining 52.33% of the total variance (Juárez-Hernández et al., 2013). The items were scored on a five-point scale based on the complexity of the infants' response. The subtotals of each category were used, as well as the total of the entire scale.

Ethical considerations

The directors of the 4 selected CEIs were asked to hold a brief meeting with the CSPs to read them the informed consent letter (Sociedad Mexicana de Psicología SMP, 2007), explaining the characteristics of the study and emphasizing the confidentiality of the information. As a thank you for your participation, a results return meeting was offered with the management of the 4 centers. In the case of infants, at the time of their admission to the CEI, the directors opened the call to parents to participate, giving them the informed consent letter (SMP. 2007), which explains the characteristics of the study, emphasizes the anonymity and confidentiality of the data, and specifies that no

type of result would be returned to them, This as a consequence of the real impossibility of offering a refund to the parents, in addition to the fact that it was assumed that no anomalies would be found in the development of the infants, since being healthy were inclusion requirements according to CEI reports. The EECSC proposes problematic situations for infants to resolve and has as prerequisites: a) having the presence and accompaniment of a known caregiver, and b) that the infant is willing to participate. If either of these two criteria was not met, the evaluation of their social and cognitive development was not carried out. The EECSC proposes problematic situations for infants to resolve and has as prerequisites: a) having the presence and accompaniment of a known caregiver, and b) that the infant is willing to participate. If either of these two criteria was not met, the evaluation of their social and cognitive development was not carried out. The EECSC proposes problematic situations for infants to resolve and has as prerequisites: a) having the presence and accompaniment of a known caregiver, and b) that the infant is willing to participate. If either of these two criteria was not met, the evaluation of their social and cognitive development was not carried out.

Procedure

Those infants who had signed consents were randomized through a lottery to be assigned to a particular CSP. The evaluation of each dyad lasted a week and at least four observers were involved: a pair of observers evaluated the sensitivity of the CSP at two different times (an hour and a half visit on Wednesday at breakfast time and another of the same duration on Thursday in the room); another pair of independent observers evaluated the infant's secure base behavior with the CSP at two different times (two visits of an hour and a half each on Monday and Tuesday; the one on Monday during breakfast and the one

on Tuesday in the living room or recess).). On Thursdays, two research assistants evaluated the sociocognitive development of the infants with the EECSC.

Results

Regarding the global sensitivity of the CSPs, an average of 0.59 (SD = 0.13) was found, which shows adequate sensitivity levels. Regarding the scales, there are differences between the means of the participating CSPs and the averages of the scales, which makes it possible to elucidate differences between the characteristics of maternal sensitivity and the traits of the CSPs studied. In Sensitive Response, the mean for CSP was 6.55, while the mean for the scale with mothers is 5.04; Regarding Accessibility, the CSP had a mean of 6.02 and the mothers M = 5.17; Infant acceptance, CSP M = 6.38 versus a mean of 4.78 in mothers; Interference, CSP M = 7.60, mean of the scale with mothers 1.56; Active-animated, M = 6.23 with CSP andM = 5.72 with mothers; Creates an interesting environment, CSP M = 7.59, mean of mothers equal to 5.9 and Concern about physical appearance, CSP M = 4, while the mean of the scale with mothers is 3.89.

Infants' secure base behavior with the CSP had a mean of 0.26, SD = 0.16, indicating that they have not built a secure base relationship with their CSP. Corresponding to the Attachment Q-Sort scales proposed by Posada et al. (Posada et al., 1999; Posada et al., 2002), there are also differences between the participants' means and the average scores of the scales, which illustrates the variability of the organization of secure base behaviors with different caregivers. . In Warm Interactions, participating infants had a mean of 7, while the mean of the scale with mothers is lower (M = 4.54); Regarding the pleasure in physical contact with the CSP, the girls and boys evaluated had an M = 4.52

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vs.M = 6.51 with mothers; Regarding Interaction with other adults, the average of the participating infants was higher (M = 6.11) than the average of the scale (5.08), finally, Proximity search with the CSP had an average of 3.66 in the sample studied. lower than that of infants with their mothers (M = 5.17).

Table 1 presents the correlation matrix between the sensitivity of the CSP, secure base behavior and the sociocognitive development of infants in CEI using Pearson product moment correlation analysis.

Tabla 1
Correlaciones Sensibilidad-Seguridad-Desarrollo

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Sensibilidad		0.682**	0.672**	0.556**	0.427*	0.767**	0.462**	0.26	-0.24	-0.11	-0.01	-0.07	-0.29	0.27	0.02	.944**	0.29	0.25
2	Respuesta Sensible			0.84**	0.739**	0.748**	0.846**	0.459**	0.17	0.14	0.14	0.12	0.21	-0.21	0.524**	0.406*	.819*	0.29	0.29
3	Accesibilidad				0.714**	0.613**	0.549**	0.63**	0.27	0.08	0.05	0.23	0.2	-0.1	0.549**	0.487*	0.72	0.34	0.455*
4	Aceptación					0.694**	0.723**	0.51**	0.25	0.22	0.21	0.21	0.31	0.1	0.28	0.33	0.6	0.32	0.22
5	Interferencia						0.617**	0.3	0.17	0.27	0.26	0.20	0.13	0.19	0.31	0.28	0.32	0.16	0.13
6	Activo-Animado							0.543**	-0.11	0.05	0.02	0.18	0.25	-0.16	0.507**	0.3	0.24	0.20	0.35
7	Crea ambiente								-0.05	-0.08	-0.07	0.11	0.23	-0.19	0.411*	0.19	0.4	0.494*	0.542*
8	Preocupación apariencia									0.23	0.436**	-0.11	0.05	0.19	-0.06	0.2	0.3	0.11	-0.12
9	Seguridad										0.682**	0.462**	0.485**	0.781**	0.421*	0.499**	-0.05	0.12	0.27
10	Interacciones Cálidas											0.12	0.26	0.427*	0.38	0.513**	-0.28	0.21	0.36
11	Contacto físico												0.486**	0.32	-0.03	0.34	0.09	-0.04	0.25
12	Interacción otros adultos													0.18	0.30	0.19	-0.03	0.31	0.20
13	Proximidad														0.21	0.39	0.05	-0.21	-0.11
14	Desarrollo															0.627**	0.866*	0.795**	0.87**
15	Identidad																0.52	0.24	0.466*
16	Regulación																	c	c
17	Razonamiento																		0.641**
18	Pensamiento																		
	M	0.59	6.55	6.03	6.38	7.6	6.23	7.59	4.01	0.26	7	4.52	6.11	3.66	37.5	12.69	13	15.7	12.65
	DE	0.13	0.91	1.09	1.16	0.84	1.42	0.77	0.93	0.16	0.54	0.55	1.17	0.75	10.83	3.27	3.41	4	3.42
	N	34	34	34	34	34	34	34	34	34	34	34	34	34	26	26	6	20	20

* La correlación es significativa al nivel 0.05 (bilateral).

** La correlación es significativa al nivel 0.01 (bilateral).

Fuente: elaboración propia

Discussion

The differences between the means of the sensitivity of the evaluated CSPs and the averages of the scales indicate that both the CSPs and the mothers: respond to the infants' communications and signals; They are skilled at taking them into account even though they compete with other demands, such as serving the rest of the group; They have a predominantly positive emotional tone when interacting with infants and organize stimulating and appropriate environments,

a consequence of their experience and professional training. However, sometimes CSPs are incapable of cooperating with certain behaviors of infants and are slightly more interested than mothers in the adequate physical presence of girls and boys. The differences between these sensitivity components are expected,

The fact that the infants had been interacting with the CSP for less than four months (M = 3.69: SD = 1.76) was insufficient to form a secure base relationship, in other words, to build an attachment bond. Unlike the bond with the mother, in the CEI the infants share and compete for the attention of the caregiver, which means that their demands are not always met immediately and that there is less time for one-on-one interaction, making it more difficult attend to particular needs (Santelices & Pérez, 2013). These findings indicate that infants are willing to interact with their CSP, as well as to follow their suggestions and orders, but they have less physical contact—and comfort in it—than that which girls and boys their age have with their mothers.

Likewise, their experience at CEI makes them more willing to interact and enjoy with different adults; they seek less closeness with the CSP; They are less aware of their location and their company does not become essential to carry out or start activities.

Although this research did not include a comparative group of infants who do not attend CEI, the scores obtained by the participating girls and boys are congruent on a theoretical level, since throughout their short lives they have experienced a diversity of care and styles. interactive, which makes them be more cautious in terms of seeking proximity with the CSP, making the continuity of the relationship with their mothers a primary source of security for exploration.

The sensitivity of the CSP and the secure base behavior of the infants found statistically significant associations with their sociocognitive development, therefore the research hypothesis is accepted. It was not possible to evaluate the sociocognitive development of the 34 infants, but only 26, since, as explained in the ethical considerations section, if the infant was unwell or refused to participate, the evaluation was not carried out. Another variable that must be considered is the fact that there are two versions of the instrument: one for one-year-old infants (with two categories) and another for two-year-olds (three categories): Personal and social identity is the only category. present in both versions, so, for example, Regulation, category of the one-year version, had only 6 responses.

Despite the above, the infants' global Security score was associated with their total level of Development (r = 0.401*) in general and, in particular, with their personal and social Identity (r = 0.499**) . , so the skillful use of the secure base in different times and contexts, as well as the certainty about the availability and responsiveness of the caregiver are related to the confidence of infants in their own interactions with the world, consequently developing self-control and reciprocity. , referents about themselves and others (Juárez-Hernández et al., 2013; Weinfield, Sroufe, Egeland, & Carlson, 1999). In line with this, Warm Interactions also correlated significantly with Personal Identity (r= 0.513**). Regulation was associated with CSP Sensitivity (r = 0.944**). The response of the Active-animated CSP found a link with the total level of development (r = 0.507*); Their Sensitive Response correlated with the Development of the infants (r = 0.524**); with your personal and social identity (r= 0.406*) and with its Regulation (r = 0.819*). These results, seen as a gestalt, indicate that the caregiver's timely and appropriate response to the

infant's communications and signals is associated with her ability to respond by her name; identify relationships; carry out exploration and hygiene activities on your own; follow orders; interact with peers and adults and contain oneself without resorting to tantrums/tantrums, as well as respecting a person's bodily limits; to the regulation of behavior in the face of adult refusal and to the expression of like/dislike and basic needs. The correlation between the sensitive response of the CSP and the cognitive and social abilities described above,

The ability of the CSP to take the infant into account despite competing with other demands—Accessibility—correlated with Emergent Deductive Thinking (r = 0.455*), referred to as children's reasoning that refers to the relationships between concrete objects and ideas. to solve problematic situations of daily life, this thanks to the notion of conservation, the establishment of similarity-difference, order and causality. This is an interesting result, since precisely the fact that CSP has various demands can cause infants in CEI to resolve problematic situations that are different from those of those who do not attend EI services, so their ability is put to the test. of using objects and people to resolve, among other things, competition with peers for CSP attention.(r = 0.549**) and Personal and social identity (r = 0.487*).

The organization that the CSP makes of the environment to make it stimulating and appropriate for the infant, defined as Creates an interesting environment, found statistically significant associations with the total level of Development (r = 0.411*), with Reasoning (r = 0.494) and with Emergent deductive thinking (r = 0.542*). Since development is a dynamic process in continuous transformation, a product of environmental interactions, the link with CSP has an impact on its course.

The IMSS CEIs have 2.5 more economic resources than what is allocated for the non-entitled population (Myers et al., 2013): it is known that within these, the surrogates usually have higher levels of quality, so the correct functioning of the centers, their equipped facilities, the quality of the interaction and the good results in the sociocognitive development of the infants participating in this study are not, under any circumstances, a reflection of the Mexican reality. It is necessary to carry out research in CEI attended by infants without access to social security in order to meet the objective proposed by the Ministry of Public Education (SEP) of being a process with educational purposes that favors the development and learning of all children and girls (SEP, 2012).

In accordance with the above, the CEI must establish routines according to the needs and development processes of the infants, since their stability and predictability favor the formation of attachment bonds, cooperativity and self-regulation via the CSP-infant interaction. (Santelices & Pérez, 2013). It is recommended that the authorities of the CEI consider the possibility of the CSP remaining with the same group of girls and boys throughout their stay in the CEI - approximately three school cycles of one year each - so that the probability of forming secure-based relationships and continuity of ties.

If it is taken into account that the CSP do not have blood ties with the infants and that it is a poorly paid job (receiving less than 250 dollars per month), in addition to being little recognized at a social level (mothers and popular culture call them " lullabies" and see their work as "little thing"), their sensitivity is extraordinary. Santelices and Pérez (2013) highlight the impact of physical and emotional exhaustion, associated with the exercise of educational care for early childhood, and affirm that this has an impact on the fulfillment of its objectives and the ability to respond to the demands of the infants. . Not only must the

continuous training of educational personnel be promoted, the family-school relationship strengthened and families supported in their parenting practices (Farkas et al., 2015), but before meeting these goals, It is necessary to create personnel selection and promotion mechanisms that prioritize non-academic factors, so that CSPs obtain a more decent remuneration and feel that their work is valuable. Sensitive, healthy, motivated and valued CSP are able to take as many courses as necessary to increase their academic level and knowledge about early childhood development, so it is suggested that decision makers broaden their vision and consider psychological and interpersonal aspects. interactive as necessary precursors (Salinas-Quiroz, 2014).

It is recommended that future research take into account the educational and socioeconomic level of CSPs and families (e.g., Santelices et al., 2015), as well as the hours of supervised practice performed by CSPs (Farkas et al. , 2015). Likewise, a comparison group composed of infants who do not attend CEI could be considered and/or mothers' sensitivity and the mother-infant secure base relationship could be evaluated to explore similarities and differences with the CSP-infant relationship.

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