

Nursery Educators' Implicit Mentalizing

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Abstract

Mentalizing capacity refers to people's ability to interpret their own and other's behavior in terms of mental states. This can be accomplished through implicit mentalizing, which tends to be employed by people most of the time, tends to be procedural and generally requires minimal attention and reflection. This study sought to assess the implicit mentalizing of nursery teachers that work with babies between four and eighteen months of age in Early Childhood Education schools. Four nursery teachers participated in the study. The following instruments were employed: Sociodemographic and Professional Data Questionnaire and video recordings of observation sessions – analyzed through the indicators teachers' response in the babies' actions; and references to mental states in the teachers' vocalizations. The results indicated that two of the participants stood out positively, while the other two exhibited greater difficulties. These results are discussed, along with factors that potentially interfere with mentalizing capacity. The study points out the importance of future research on the subject, focused on developing instruments and planning interventions aimed at improving mentalizing capacity so as to promote mental health.

Keywords: Mentalization, teachers, daycare nursery.

A Capacidade de Mentalização Implícita de Educadoras de Berçário

Resumo

Capacidade de mentalização refere-se à possibilidade de um indivíduo entender seus comportamentos e os dos outros em termos de estados mentais, o que pode ser feito a partir de sua capacidade de mentalização implícita. Esta tende a ser empregada pelo sujeito na maior parte do tempo, a ser procedural e a demandar pouca atenção e reflexão. Este estudo objetivou avaliar a capacidade de mentalização implícita de educadoras de berçário que atuam com bebês, entre quatro a dezoito meses de idade, em escolas de Educação Infantil. Participaram quatro educadoras. Empregaram-se os instrumentos: Ficha de Dados Sociodemográficos e Profissionais e filmagem das observações – analisada através dos indicadores respostas das educadoras frente às ações dos bebês e referências a estados mentais no discurso. Os resultados sugerem que duas participantes destacaram-se positivamente e as demais apresentaram

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dificuldades nesses dois indicadores. Discutem-se tais resultados e possíveis fatores intervenientes na capacidade de mentalização. Aponta-se a importância de novos estudos sobre a temática para a construção de instrumentos e planejamento de intervenções que almejem aprimorar a capacidade de mentalização para promover saúde mental.

Palavras-chave: Mentalização, docente, creche.

La Capacidad de Mentalización Implícita de Educadoras de Guarderías Infantiles

Resumen

La capacidad de mentalización se refiere a la posibilidad de un individuo entender sus comportamientos y los de otros en términos de estados mentales, lo que puede hacerse a partir de su capacidad de mentalización implícita. Esta tiende a ser empleada por el sujeto en la mayor parte del tiempo, a ser procedural ya demandar poca atención y reflexión. Este estudio objetivó evaluar la capacidad de mentalización implícita de educadores de guarderías infantiles que actúan con bebés, entre cuatro a dieciocho meses de edad, en escuelas de Educación Infantil. Participaron cuatro educadoras. Se emplearon los instrumentos: Ficha de Datos Sociodemográficos y Profesionales y filmación de las observaciones - analizada a través de los indicadores respuestas de las educadoras frente a las acciones de los bebés y referencias a estados mentales en el discurso. Los resultados sugieren que dos participantes se destacaron positivamente y los demás presentaron dificultades en estos dos indicadores. Se discuten tales resultados y posibles factores intervenientes en la capacidad de mentalización. Se apunta la importancia de nuevos estudios sobre la temática para la construcción de instrumentos y planificación de intervenciones que anhelan mejorar la capacidad de mentalización para promover salud mental.

Palabras clave: Mentalización, docente, guardería infantil.

Mentalizing is defined as an individual's potential to interpret his/her own behaviors and those of others in terms of mental states such as desires, feelings, thoughts and beliefs. This capacity plays an essential role in self-organization, as well as contributing toward emotion regulation – an individual's potential to modulate her/his emotional states (Bateman & Fonagy, 2016).

When properly developed, the ability to mentalize is considered essential to social functioning (Fonagy, Gergely, Jurist, & Target, 2002), for it facilitates an individual's adoption of diverse viewpoints (Allen, 2006). Accordingly, it is believed that such individuals are more sensitive, for example, to the feelings, attitudes and desires of others (Twemlow, Fonagy, & Sacco, 2005). The relevance of this construct can also be presumed from the increase in the number of studies investigating it around the world – studies originating in distinct areas (Bateman & Fonagy, 2013; Freeman, 2016).

The ability to mentalize is considered dynamic, since flaws are expected (Bateman & Fonagy, 2013, 2016). It is classified as robust when the individual soon recovers from such lapses and continues mentalizing even when faced with adverse circumstances that produce stress (Bateman & Fonagy, 2013). Such situations tend to make it more difficult for individuals to be able to reflect on both their own mental states and those of others, potentially producing, for example, difficulties in relationships and impulsiveness (Bateman & Fonagy, 2016).

Ever since early childhood, the promotion and development of an individual's ability to mentalize is based on interactions established in familial, scholastic and social contexts (Twemlow et al., 2005). Children's contact with individuals that are capable of tuning in to them and naming their emotions helps children feel they have a mind (Fonagy, 2006; Kårstad, Wichstrøm, Reinjfjell, Belsky, & Berg-Nilsen, 2015; Twemlow et al., 2005). Development of

children's mentalizing capacity is facilitated, in part, when their caregivers express mental terms when conversing with them (Longobardi, Lonigro, & Laghi, 2016), which also contributes to developing their language concerning mental states (Howe, Rinaldi, & Recchia, 2010; Mendes & Pessôa, 2013; Razuri, Howard, Purvis, & Cross, 2017; Taumoepeau & Ruffman, 2006).

When adults are sensitive persons, they address a baby in a way in which they recognize the baby as someone who is separate from themselves (Ordway, Webb, Sadler, & Slade, 2015) and they consider its mental states, identifying the baby as an individual with feelings, desires, intentions and needs. Such recognition of subjectivity is indispensable since, in order to understand others' minds, one must first perceive others as persons who have a mind (Fonagy, 2006).

One can observe the extent to which parents recognize their baby as an individual by, for example, ascertaining whether they imitate the sounds uttered by the baby (this only occurs if they identify such sounds as intentional and meaningful) and whether their verbalizations are associated with the baby's mind (designating mental states and establishing temporal associations). Furthermore, one can observe whether they stimulate the baby's autonomy (which they would not do if they did not believe in its capacity and intentionality) and how they respond to changes in the direction of the baby's glance and to changes in the baby's actions aimed at objects: Do the parents perceive them and keep track of them? If they do, it is presumed that they distinguish their own interests from those of the baby; if not, one assumes that they did not recognize the changes made by the baby or that they ignored them, perhaps hoping that the baby will again focus on the same point of interest as theirs (Meins, Fernyhough, Fradley, & Tuckey, 2001).

In one of the dimensions of mentalizing, there is one polarity that is known as explicit mentalizing and another that is called implicit mentalizing. The former demands effort on the part of the individual when it becomes activated, requiring attention and intention and involving

reflection. Since interviews are typically verbal (Bateman & Fonagy, 2016), they are a common way of evaluating it (Shai & Belsky, 2011). In contrast, implicit (or automatic) mentalizing involves rapid processing, requires little attention and usually does not demand reflection (Bateman & Fonagy, 2016). It tends to be procedural (Allen, 2006) and can be studied via observation (Shai & Belsky, 2011). It is the first one that is developed in an individual (Schuwerk, Jarvers, Vuori, & Sodian, 2016). It is noteworthy that the processes underlying these forms of mentalization are distinct, yet not totally independent (Shai, Dollberg, & Szepeswol, 2017). Further studies are necessary in order to comprehend the manner in which the relationship between them functions (Nijhof, Brass, Bardi, & Wiersema, 2016; Rosenblau, Kliemann, Heekeren, & Dziobek, 2015; Shai et al., 2017).

When compared to explicit mentalizing, implicit mentalizing is employed predominantly (Bateman & Fonagy, 2016; Twemlow et al., 2005). This is because, in everyday interpersonal relations, there is no need to frequently employ greater reflection and attention, especially when there is secure attachment. Encounters between friends and playful moments between parents and children are an example. In such situations, explicit mentalizing would need to be activated only when a change occurs, i.e., an occurrence that is different from what is expected, such as if the friend were to alter his/her tone of voice or the child were to cry (Bateman & Fonagy, 2016).

Assessment of the implicit dimension of mentalizing is absent in many studies, yet it would be essential to investigate it in order to better understand it (Camoirano, 2017; Shai et al., 2017). One way of assessing it was proposed by Shai and Belsky (2011, 2016) via the parental embodied mentalizing (PEM) construct, which recommends being attentive of the parents' ability to understand their baby's mental states via the movements and expressions of the baby's body. Based on PEM, one mainly observes modifications in the baby's body patterns during moments of interaction with the parents: muscular fluidity or contraction, the direction

and speed of the baby's movements for example, as well as the manner in which the parents adapt their gestures to the infant's needs (Shai & Belsky, 2011, 2016).

In the literature on the subject, one comes across studies that emphasize parents' mentalizing capacity (Camoirano, 2017; Schiborr, Lotzin, Romer, Schulte-Markwort, & Ramsauer, 2013; Shai et al., 2017) – an essential skill for promoting the mentalizing capacity of children, who develop through their interactions with their caregivers (Fonagy & Campbell, 2015). Upon analyzing the current Brazilian scenario, one perceives that over 3 million children between the ages of 0 and 3 are enrolled in schools (a number that increased 23.8% from 2014 to 2018), 56.6% of whom are enrolled as full-day students (Brazilian Ministry of Education, 2018); that being the case, the mentalizing capacity of teachers also requires attention (Ochoa & Arango, 2015). This is because such professionals, as important caregivers, influence the development of their students' mentalizing capacity (Fonagy, 2006; Valle et al., 2016). Investigating such capacity amounts to a form of prevention, for educators with a well-developed mentalizing capacity can make interventions that contribute to fostering children's mental health (Ochoa & Arango, 2015) – especially in the case of babies, who need to learn about themselves and others (Keller, 2011) and their mental states, and thus discover that they possess a mind and can develop their mentalizing capacity (Fonagy, 2006). Hence, it is important that teachers comprehend and deal with their own feelings and those of others (Kotaman, 2014).

Focusing on nursery teachers' mentalizing is also justified by its influence on the care given to babies (Camoirano, 2017): In order to provide surroundings that are appropriate to baby development, it is initially essential to recognize the babies' needs, the possible latent meanings of their behaviors and their intentionality (Ordway et al., 2015). Mentalizing thus sustains sensitive care (Borelli, Burkhart, Rasmussen, Brody, & Sbarra, 2017; Camoirano, 2017).

Considering the pertinence of reflecting on nursery educators' mentalizing capacity, as well

as the indispensability of new studies that assess this construct's implicit dimension (Suchman, DeCoste, Leigh, & Borelli, 2010) – so as to better comprehend its relation to the explicit dimension (Nijhof et al., 2016; Rosenblau et al., 2015) –, the present study sought to assess the implicit mentalizing of nursery teachers that work with babies between four and eighteen months of age in Early Childhood Education schools. Through this study, we seek to demonstrate the theme's relevance, as well as collaborating toward new studies that conduct interventions with the aspiration of promoting the mentalizing of such professionals, which, in turn, would affect their job performance and the mental health of babies.

Method

Participants

This study enjoyed the participation of four nursery teachers selected via convenience sampling, employing the following inclusion criteria: educators 18 years of age or older who work with 4 to 18-month-old babies for at least four hours daily, have at least one year of experience as Early Childhood Education professionals and possess a high school diploma.

The ages of the participants (E1, E2, E3, E4) ranged from 32 to 45 years, and they had from 1 to 8 years of experience with nurseries. All of them were teachers, and two of them (E2 and E3) were specialists in the area. Educator E1 worked at a private school in the city of Porto Alegre; and the others, at public schools in the Metropolitan Region of Porto Alegre. These teachers were the individuals responsible for their respective classes, each of whom received support from one assistant. Their responsibilities ranged from care-related procedures (such as personal hygiene, nutrition and sleep) to the organization of the class routine and the planning of educational activities.

In E1's class, nine babies were enrolled, seven of whom were present at the school on the first day of observation; and six, on the second day. In the other participants' classes,

all ten available slots for babies were filled, yet not all the babies were present on the days of the video recordings. Two babies were present in E2's classroom on the first day; and four, on the second. In E3's classroom, four babies were present on both days; and, in E4's class, four babies. The mean age of the 27 babies appearing in the videos was 9.15 months ($SD = 2.70$).

Instruments

Sociodemographic and Professional Data Questionnaire. This instrument was employed to collect sociodemographic and occupational information. It consisted of 16 questions, four of which were open questions.

Observational Video-Recordings. This resource was employed with the aim of obtaining data that would enable us to assess implicit mentalizing. Each teacher was filmed during her work routine with the babies in her respective group, recorded on two occasions, one week apart, each of which lasted one hour. The recordings were performed at different times in order to observe distinct moments of each class's daily routine (e.g., personal hygiene, nutrition and playtime), focusing on the participants' attitudes when interacting with the babies.

Data Collection Procedures

Subsequent to receiving authorization from the administration of each of the three schools – as well as approval by the School Board of one municipality in the Metropolitan Region of Porto Alegre (state of Rio Grande do Sul, Brazil), in the case of the public schools –, the initial meeting with the participants was held. At the meeting, they signed an informed consent form (specific version for teachers) and filled out the sociodemographic and professional data questionnaire. They also received letters describing the study and informed consent forms specifically designed for the babies' parents/guardians. The participants later distributed these letters and forms among the parents/guardians, who then signed them. The video recordings began approximately two to four weeks after the initial meeting. Data collection was performed

in the educators' respective workplaces. The sociodemographic and professional data questionnaires were filled out in an available classroom at each participant's school, while the video recordings were performed in each participant's respective classroom.

Data Analysis Procedures

A descriptive qualitative analysis of the recordings of the observation sessions was conducted – focusing on the participant interacting with her class. The recordings of each teacher were viewed twice: initially without audio and subsequently with audio in order to better recognize the nonverbal information. Attention was given to two indicators that were constructed based on our review of the literature: (1) the teachers' responses to the babies' actions; and (2) references to mental states in the teachers' vocalizations. The professionals' reactions to the babies' movements, their encouragement or lack of encouragement of the babies' autonomy, and their responses to the babies' vocalizations are considered in the first indicator. The teachers' references to mental states make up the second indicator, encompassing mentions of feelings, thoughts, desires and beliefs (Bateman & Fonagy, 2013, 2016). Verbs with a clear cognitive connotation were classified as thoughts (e.g. verbs such as *get to know*, *observe*, *know* and *consider strange*). With respect to beliefs, we included those that emerged in the educators' verbalizations and others that were inferred by the authors based on the participants' attitudes; after all, beliefs are frequently implicit (Degotardi, Torr, & Cross, 2008). The belief that it is the teacher's duty to actively stimulate the baby's motor development is one example; we observed verbal indications – “*you have to walk*” (E1) – and attitudes such as seating the babies or standing them on their feet. Based on such indicators, we sought to ascertain the extent to which the participants identify the babies as individuals that possess mental states, the manner in which they respond to the babies' actions and whether they attribute intentionality to the babies.

Ethical Procedures

The present study complies with the ethical recommendations for human research set forth in Brazilian National Health Council Resolution No. 510/2016. It was approved by the Research Ethics Committee of the University of Vale do Rio dos Sinos (CAE 62408116.7.0000.5344).

Results and Discussion

Educators' Responses to the Babies' Actions

With respect to the teachers' responses to the babies' movements, we observed that the participants warmly welcomed the babies' explicit demands for affection (e.g., by returning a hug). E4 was an exception: At times, she decided not to do so, although she did recognize such demands as intentional. On one occasion, a baby reached out to her and she responded, *"I'm not going to hold you in my arms, no sir. What whim is this, of wanting to be held?"* There is a difference between E4's stance of refusing to hold the baby and E2's stance, who explained the following to the baby: *"Teacher is going to leave you here for just a second because she's going to wash her hands. Teacher will be right back; it'll be really quick"*.

E2 and E3 stood out: They revealed themselves to be curious about and attentive of the movements of each baby; it would thus appear that they identified such movements as intentional and frequently guided by mental states. This could explain their more respectful attitudes when compared to the other teachers, given that they often took into consideration the babies' actions during their interactions. E3 was the protagonist of an episode that illustrates this issue: She noticed that the baby boy in her arms had positioned his body so as to be able to see the researcher that was filming him. She commented, *"What are you looking at over there? Shall we go see what it is? Shall we go see what that young lady over there has?"* and then took him there.

In a similar way, recognition of the babies' intentionality could be the factor that enabled

the professionals to allow them to exercise their autonomy without interrupting them frequently, for adults' mentalizing bolsters their encouragement of a baby's autonomy (Sadler, Slade, & Mayes, 2006). For example, E2 recognized that a baby boy was trying to pick up a toy, and instead of just handing it to him, she first observed him and then asked, *"Can you pick it up?"* Occasionally, E2 and E3 obstructed the babies' autonomous activity, and misunderstandings occurred, although to a lesser extent when compared to the other participants. E1 coordinated group games, and the moments in which she permitted the full exercise of the group's autonomy were infrequent; opportunities for the babies to experience the intrinsic pleasure of accomplishing something on their own were thus wasted (Falk, 2013). She organized a game of hiding with cloths and made efforts to involve all the babies, yet it was she who decided which baby would be the next one to hide. Upon proposing singing in a circle, she encouraged the class to choose the songs, yet she refused to repeat a song when requested. E4 left her group free to play as they wished (toys were spread out on the floor and could be manipulated according to each baby's desires), but an uncertainty remains: Did she do this because she recognized the babies' competence to make their own choices or because she took a more distant stance? Moreover, when she did interrupt them, she did it suddenly without providing explanations, as the following scene illustrates: On the way to the cafeteria, she opened the classroom door and invited the babies that were already moving around to head there on their own. Suddenly, without warning them, she picked each of them up and carried them there.

Failures to comprehend babies' mental states occur; they are even expected. Thus, the most important thing to do is to observe the extent to which the adult is capable of rectifying such interaction at those times (Shai & Fonagy, 2014). Accordingly, in the cases analyzed here, what concerns us is not only the misunderstandings caused by the participants' responses to the babies' movements or their obstructions of the babies' exercise of autonomy, but also the fact

that we rarely observed such rectification of the interaction. The following scene illustrates a positive episode: E3 handed a toy to a baby, but she soon perceived the baby's lack of interest in it. So, she abandoned her initial intention and allowed the baby to choose another toy among various options.

With respect to the participants' responses to the babies' vocalizations, we observed that all of the teachers imitated some of the sounds uttered by them, which indicates that they perceived such sounds to be intentional and meaningful (Meins et al., 2001). The extent to which the participants continued the conversation after the baby vocalized was considered even more relevant. E1, for example, mostly did this only when she understood the word pronounced by the baby. E4 was the most silent (despite having imitated the babies more than the rest of the educators had), for she responded succinctly and simply, merely saying, "huh?" "uh-huh" "okay" and "yeah", and only once did she add, "yeah, clean up". E2 and E3 stood out. They responded to the babies' vocalizations with comments and questions – for example, "And you, did you eat everything? And was it good? Tell me . . . was your potato good? It was? Have to tell your mom that you ate everything" (E3) –, insinuating that they perceive the babies as persons with mental states whose verbalizations are purposeful. Thus, the educators' mentalizing capacity's importance to verbal exchanges between them and the babies stands out: From an adult's standpoint, talking with babies only makes sense if the adult is capable of attributing mental states to the babies and recognizing their actions as intentional. If this does not occur, the adult most probably will not converse spontaneously and naturally, or will do so sparingly.

References to Mental States in the Educators' Verbalizations

E1's verbalizations mostly involved the establishment and management of limits, instructions during activities coordinated by her and responses to the behavior of a specific baby. In contrast, E2's verbalizations encompassed

themes that are more diversified due to a rich discourse. She described and commented on the environment and what happened in it, establishing connections between the past, present and future. As such, she links facts and contributes to constructing continuity in the babies' lives. Something similar occurred with E3, who also narrated what she did and anticipated events. E4 revealed herself to be silent. Her longest comment during the recordings was the following: "Do you see the lady with the camera over there? Huh? Yep . . . you guys are going to be famous. You're gonna be artists. You don't even know it, but you are objects of study".

In the present study, attention was given to the teachers' use of mental terms when conversing with the babies, given that, when caregivers mention such terms to children, they help foster the children's mentalizing capacity (Howe et al., 2010; Mendes & Pessôa, 2013; Razuri et al., 2017; Taumoepeau & Ruffman, 2006). For this reason, it is widely advocated that it is important to refer to mental terms in everyday school life (Frampton, Perlman, & Jenkins, 2009; Ribeiro, de Batista, & Rodrigues, 2014). In addition to employing such terms, Early Childhood Education professionals can involve children in dialogues concerning the mind (Ornaghi, Brockmeier, & Gavazzi, 2011).

In the present investigation, upon examining the participants' references to mental states, we observed that, although there were no significant discrepancies in relation to the diversity of such references among the professionals, there were discrepancies as to their frequency: E2 and E3 stood out positively. We identified the prevalence of feelings and desires in all four participants' discourses. With respect to desires, the verbs *like* and *want* were the only verbs employed by all the educators; other allusions to desires involved variations of those verbs: *enjoy* (E3 and E4), *desire* (E1) and *adore* (E2).

The predominance of desires in their discourses can perhaps be explained by the fact that a significant part of early infancy involves satisfying desires (Taumoepeau & Ruffman, 2006), as well as the fact that desires

are accompanied by attitudes and/or facial expressions that facilitate the perception of such desires when contrasted, for example, with thoughts (Taumoepeau & Ruffman, 2008). This affirmation can be illustrated by an American study that assessed 35 mother-and-child pairs at six different moments, between 12 and 52 months of age of the children. The researchers proposed a task with blocks, subsequently transcribing the words that emerged during the task. The mothers' utterances of the verbs *want*, *think* and *know* and their derivatives were quantified, and predominance of the verb *want* was identified (Razuri et al., 2017).

Children's learning about feelings – their own and those of others – is driven by the mention and appreciation of such feelings by their caregivers (Kårstad et al., 2015). In the present study, E1 named three different feelings, with sadness being repeated the most by her: “*You shouldn't mistreat your friends or else they'll get sad*”. E2 referred to five feelings, while E3 and E4 referred to four feelings each. References to feeling happy, angry and lonely were the only feelings mentioned by two educators; other feelings were referred to by only one.

Most of the feelings named by the participants concerned the mental state of the baby itself and not that of the participant or of the other babies, which also occurred in relation to desires and thoughts; for example, “*But why all this anger? . . . Huh? What happened? Will you tell me? Ah! So, come here into my arms*” (E1). Such a result is understandable given that references to other people's mental states increase as the child's age increases (Taumoepeau & Ruffman, 2006). This is because one must first get to know one's own inner world in order to later comprehend that of others (Taumoepeau & Ruffman, 2006, 2008).

With respect to words classified as thoughts, *know* was the word most frequently cited by E1 and E4. Both educators employed it when imposing limits; for example, “*Look at me; you know you can't hit [others]. You know you can't, so why did you?*” E2 mentioned the verb *get to know*, E3 spoke of *read* and *consider strange*, and E4 referred to *be curious about something* and *observe*.

Thoughts were the analyzed mental states that were least frequent in the statements of the teachers, a fact that is consistent with the findings of other studies (Longobardi et al., 2016; Taumoepeau & Ruffman, 2006). In New Zealand, for example, 79 pairs (3 father-child pairs and 71 mother-child pairs) were assessed at two different moments: at 15 months and at 24 months of age of the children. The parents described two illustrated books to their children, and the mental terms they named during the task were classified by the researchers, who identified an increase in the number of references to mental states in accordance with the child's age (Taumoepeau & Ruffman, 2006). An Italian study analyzed the use of mental terms by 15 mothers when their babies were 16, and later 20, months old. The pairs were filmed for 20 minutes while freely playing at home. Next, the mothers' words were transcribed and coded, and the researchers discovered an increased presence of thoughts at the second moment of the study (Longobardi et al., 2016).

Mothers increase their mentions of thoughts in accordance with the increased age of their children, possibly because they imagine that older children are more apt to understand them (Taumoepeau & Ruffman, 2006). Accordingly, considering that the average age of the babies in the present study was 9.15 months, it is understandable that thoughts were the scarcest mental states. It is thus sustainable that the mental state-related vocabulary employed by the participants is appropriate. With respect to the use of mental terms, on the whole the participants seemed to be able to adapt their language according to the development of each baby, as mothers are expected to do (Longobardi et al., 2016; Taumoepeau & Ruffman, 2008).

Regarding beliefs, we chose to discuss them in this study due to their influence on individual behavior (Fonagy & Campbell, 2015; Frampton et al., 2009) and on the decision-making process (Heisner & Lederberg, 2011). Beliefs derive from various sources, such as an individual's personal experiences and schooling, not to mention beliefs that are part of a person's social context (Degotardi & Sweller, 2012).

We consider that the present study's educators unanimously believe that the babies they look after think about and understand the educators in their own way; and we imagine that otherwise they would not converse with them – although they do so with different intensities. We imagine that another belief shared by all the participants is that it is up to them, as educators, to actively stimulate the babies' motor development. We consider that this belief impelled the participants' directive behaviors, which usually interrupted the babies' movements and explorations (as evidenced by the educators responses to the babies' actions indicator), causing conflicts between the babies' interests and the professionals' interests. E2, for example, said, "*Let's get big, really big,*" and then lifted up a baby that was lying face down playing with a mirror, thus obstructing the baby's activity. The participants' standpoints prevailed on these occasions; and, in general, they apparently did not recognize the babies' imbalance, their rigid or disorganized body postures, the discomfort expressed on their faces, or even the verbal "complaints" uttered by them, not to mention, and above all, the mental discomfort underlying such behaviors. Such was the case of a five-month-old baby girl who was seated by E4 despite losing her balance and falling.

In a similar way, E1, E2 and E3 seem to share the belief that cognitive stimulation is also their responsibility, so much so that they sought to teach something to their classes. It is possible that this belief impelled them to interrupt the babies' autonomous activity, resulting in conflicts that at times were not identified by the educators. Nonetheless, there were situations in which they decided to propose an activity despite recognizing the intentionality of the baby's behavior and the underlying mental state, perhaps because they considered the activity more important to the baby's education than what the baby was already doing on its own initiative. A scene involving E3 exemplifies an interruption that was caused by such a belief in cognitive stimulation: She was holding a baby boy in her arms and wanted to show him a mirror, but his attention was focused on something in

the opposite direction. "*Have you already seen this over here, Gugu? Huh, Gugu?*" Since she was unable to get his attention, she turned him around so he could see what she wanted him to see and tapped her fingertips on the mirror, aiming at attracting his attention to it.

The tendency to believe that a child only learns through the intervention of an adult – a tendency that still exists in the teaching field (Martins & Delgado, 2016) – can be pointed to as one of the elements that sustain beliefs regarding the need for cognitive and motor stimulation, which, in turn, seems to make up the identity of teachers. In Rio Grande do Sul (Brazil) a study was conducted in which 60 teachers who work with babies younger than 18 months of age were interviewed. The researchers discovered that belief in such a need for stimulation was an integral part of the participants' image as teachers (Carvalho & Radomski, 2017).

Implicit Mentalizing: Integration of the Results

In both of the indicators analyzed, educators E2 and E3 exhibited fewer lapses in their implicit mentalizing than did E1 and E4. In an attempt to comprehend these data, we will now discuss our hypotheses regarding factors that could have influenced the participants' performance.

We begin with the hypothesis that beliefs as to the obligatory nature of stimulating cognitive and motor skills impaired, to a certain extent, the teachers' implicit mentalizing aimed at the babies, an ability that is commonly employed in everyday interactions when they do not require significant attention (Bateman & Fonagy, 2016). Likewise, such beliefs could have kept them from reflecting on what was happening (i.e., from employing explicit mentalizing), given that there is no need to stop and reflect when one is convinced about what one must do – one continues acting automatically.

In light of such possibilities, it is worth emphasizing that teacher-focused courses and training that stress the indispensability of direct stimulation can end up obstructing such professionals' ability to identify babies as individuals that possess mental states. Reasoning

that is centered on an adult's viewpoint and on early schooling, both of which are excessively present in certain teaching institutions (Martins & Delgado, 2016), apparently does not encourage educators to think about the individualities of each baby.

With the aim of preventing this potential negative consequence, we stress the importance of such courses discussing the concept of an active, competent baby – a concept that is implicit in the babies' own projects and activities, driven by their interests (Falk, 2011). We point out that teachers' recognition of babies as individuals that are capable of acting intentionally, motivated by mental states, could reduce directive behaviors in schools by increasing the teachers' curiosity about the babies' minds. In light of such a stance, which is more attentive of and interested in each baby's singularity, another potential consequence would be an increase in the teachers' contemplation of their own professional performance. In this sense, there is corroboration of the notion that a well-developed mentalizing capacity would make it easier for educators both to think about the way they interact with children and to consider applying teaching methods in a creative manner (Ochoa & Arango, 2015).

Lapses in the participants' baby-focused implicit mentalizing can be partially explained by the aforementioned beliefs in stimulation, as well as by the affective intensity of each situation (Bateman & Fonagy, 2016; Shai et al., 2017). In most of the scenes in which such lapses occurred, the babies were acting in a manner contrary to the professionals' expectations, which seems to have mainly occurred in relation to E1 and E4.

Disputes over toys that required E1's intervention were frequent in her class. In response, she imposed limits, which were rarely respected. A conflict was thus created between her expectations of being obeyed – possibly supported by the presumption that controlling babies is necessary – and, at the opposite extreme, curious babies that either explore objects in an “incorrect” manner (from an adult's standpoint) or want to turn face down when they are on the changing table. At times, when their attitudes differed from what she wanted, she would get

annoyed, altering her facial expression, firmly addressing them directly in a higher tone of voice and considering them disobedient. In such situations, she apparently did not query herself as to the diverse plausible reasons that could justify the baby's conduct; hence, her own understanding was the only one present and she acted according to it. It is believed that individuals with a low mentalizing capacity are more likely to attribute negative intentions to others (Sadler et al., 2006; Twemlow et al., 2005) and to construct distorted representations of others (Sadler et al., 2006). Accordingly, one may presume that E1 believed that the babies' intention was, in fact, to oppose her. It has been emphasized that care that is characterized as sensitive requires attention to transformations in the baby's mental states (Slade, 2005) – whether or not they are expected by the adult – and responses that are consistent with such transformations.

Regarding the episodes involving E4, one event during lunchtime stood out: Babies were crying without receiving a word or a glance from her. The educator was following her routine instead of helping them modulate their negative emotions (Ochoa & Arango, 2015). On those occasions, it is plausible to presume that the babies were not feeling well-liked or emotionally involved with others (Hyman, 2012), or even recognized as individuals. Consequently, they would not have experienced the security that arises when one experiences intense emotions without remaining maladjusted for a long time (Twemlow et al., 2005).

From the above scene, one concludes that merely recognizing the baby's mental state is not enough. The heart of the question is the adult's response to such recognition: Will the adult change her/his stance or not? (Fonagy, Gergely, & Target, 2007; Shai & Belsky, 2011; Shai & Fonagy, 2014). It has been pointed out that rigidity and inflexibility are attributes of individuals whose mentalizing capacity exhibits flaws (Twemlow et al., 2005).

We believe that the affective intensity experienced by E1 and E4 in the aforementioned situations influenced their mentalizing capacity,

given that intense emotions impair it (Bateman & Fonagy, 2016; Shai et al., 2017). Faced with such intensity and the decrease in the capacity in question, adults tend to seek to reorganize themselves by way of intense behaviors, such as being assertive and raising their tone of voice (Bateman & Fonagy, 2016) – behaviors that are occasionally observed in the video recordings of E1 and E4. Studies that investigated maternal behavior that is hostile (Stacks et al., 2014) or intrusive and aggressive (Ensink, Rousseau, Biberdzic, Bégin, & Normandin, 2017) toward babies found a negative correlation between such attitudes and the mothers' capacity to think about their own mental states and those of their babies, thus reinforcing the coherence of characterizing E1 and E4's mentalizing as being impaired at the times in which they displayed this type of conduct.

Another strategy aimed at recovering coherence is self-organization, whereby one constructs a view of others that confirms the veracity of one's own notions (Bateman & Fonagy, 2016) – for example, the baby is in fact disobedient. Due to this, as a result of mirroring the teacher, the baby receives, in return, a negative self-image. While the recommended course of action would be for the baby to be recognized as an individual that needs help regulating his/her emotions, in this case the baby ends up being forsaken, left to fend for itself with its own resources alone, perhaps because the way the adult perceives the baby is a construction of the adult's mind (Keller, 2011): the product of a projection (Slade, 2005), someone from the adult's past or a person that disrupts his/her class (Keller, 2011), the result of a conception based on prior experiences or on expectations (Fonagy et al., 2007).

In addition to hindering self-organization, decreased mentalizing has another consequence: It undermines the process of emotion regulation (Bateman & Fonagy, 2016), which we believe occurred in the case of E1, who became annoyed, and in the case of E4, who did not welcome the babies' crying, perhaps to protect herself from the intense emotional content of the situation. It could be that such a lack of consideration of the babies' feelings indicates the teacher's

difficulties to tolerate her own emotions (Keller, 2011).

Implicit mentalizing is usually employed in extremely stressful situations, in which it is difficult to activate explicit mentalizing (Bateman & Fonagy, 2016), although relevant – considering its contemplative nature – and essential for solving relationship problems (Allen, 2006). Hence, rationalizing about the situation becomes more complicated. If, under adverse circumstances, the educator were to succeed in considering the baby's attitudes and her own subjective experiences (employing explicit mentalizing), it would perhaps be easier for her to regulate her emotions. As a result, she would not respond to the baby in such a way as to add even more stress to the scene (Ensink, Bégin, Normandin, & Fonagy, 2016). As a final point, it is worth emphasizing that the main issue is the extent to which the adult is able to maintain his/her mentalizing capacity in stressful situations and the amount of time it takes to recover it if a breakdown occurs (Bateman & Fonagy, 2013, 2016). In this respect, we affirm that E1 and E4 exhibited greater difficulty.

Final Considerations

The present study assessed the implicit mentalizing of nursery teachers that work with babies between 4 and 18 months of age in Early Childhood Education schools. We sought to highlight the importance of the theme and contribute to increasing knowledge about the implicit dimension of the capacity under study. Difficult access to instruments capable of assessing it (Brazilian instruments and instruments validated for the Brazilian context) can be considered a potential limitation of this study. We allude to the need for future studies that develop and test instruments for evaluating implicit mentalizing and thus augment the number of studies on the subject. We emphasize that this can be an objective that goes beyond the scholastic context.

It is hoped that the results and discussions presented here contribute to developing interventions aimed at improving nursery

teachers' implicit mentalizing because that is one way of promoting the mental health of such professionals and the babies they look after. We believe that training courses for teachers provide an opportunity to do just that; they could, for example, analyze videos and hold group discussions about the possible mental states underlying babies' behaviors. We also point out the relevance of encouraging such professionals to reflect on their own thoughts, feelings, desires, needs and beliefs, which drive their attitudes.

We furthermore recommend that future studies assess such educators' mentalizing capacity and seek to relate it to environmental factors, such as the number of babies and educators per class, the academic background of the professionals and the support they receive from the administrations of the nursery schools they work for. Possibly, such factors by themselves cannot explain the quality of the mentalizing capacity, yet they could perhaps exert an influence.

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