Relationship between Maternal and Infant Behaviour during Story Time

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Abstract

Shared story time reading promotes psychological abilities which are important in child development, including linguistic, conceptual and socio-emotional skills. The propose of the study was to analyse the relation between the actions of preschool children´s mothers with the types of interaction and the behaviour showed by their children during dyadic story time activities. This was an observational-analytic study. We studied 30 mothers with children (13 girls and 17 boys; average age five years) registered in third-grade preschool from a public school of low sociocultural level. Each pair was filmed in two sessions and analysed through taxonomy of behavioural categories. Initial data showed that most mothers presented limited skills as storytellers, readers, promoters of linguistic interactions and as informal teachers. The differences between groups and the correlations among maternal-infant behavioural categories indicated synchrony between the behaviour in the mothers and the performance on the child, particularly on the linguistic interactions.

Keywords: interactions, mother-infant pair, story time activities, preschool children.

1. Introduction

Human development in childhood is possible because of social interactions, particularly those that are carried out in dyadic from here, the child can be educated to develop cognitive, linguistic, social and emotional skills. This dyadic form has been defined as a "system in which two persons pay attention to each other … to establish social ties" (Solla, 2012, p. 150). The interaction between two individuals always generates a communicative exchange and the expansion of several abilities and knowledge that comes into play in any activity. When the interaction occurs during an activity in which one participant has experience, and the other doesn't, the experienced person becomes the tutor, and the other one becomes the learner. It is important to mention that in several cases these roles can be exchanged depending on the activity.

From early childhood, infants interact with older persons that became their caregivers or educators; these persons exercised most of their practices of upbringing through everyday situations that have very little structure. This type of education is referred as informal because it doesn´t have a specific guideline, the teaching-learning process uses daily living activities. On a family life context, informal teaching on a dyadic form is the most common one (Sénéchal & LeFevre, 2014).

When a child develops a specific conduct the adults or older children around him will guide him in the proper way of developing this behaviour and often provide him with feedback and possible consequences about it; this is how they warned him about conducts that could be potentially dangerous or socially unacceptable, the same way they let him know if his/her behaviour was correct and accepted.

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The reactions of parents to social behaviours, children´s emotions and the support they provide for the solution of conflicts are related to the emotional understanding that children achieve and their ability to establish better social relationships with their peers and friends (McElwain, Halberstadt & Volling, 2007). Growing up the child´s educators will introduce a moral judgement by commenting on the child´s behaviour, the behaviour of others around them or in television programs and books as well. In an ideal situation, adults help children to express their own opinion and start conversations that allow them to develop cognitive, linguistic, social and moral skills that promote the psychological growth of the child.

Muñoz and Jiménez (2005) referred many studies that analyse the way father-son interactions inspire and promote the child´s psychological development. This encouragement could present itself in one of two forms. The first one is using support and demands that children get from their parents, these are in the cognitive-linguistics area that includes negotiation, shared definitions, interactions, and regulating the child´s participation in specific activities (e.g. learning a manual ability), problem solving or activities with linguistic interactions (e. g. story time); these activities come with motivational and affective situations to encourage the child´s autonomy, conciseness and creativity.

Furthermore, it is necessary that parents through interaction with their children, encourage them to progressively distance themselves from the immediate present to develop cognitive and linguistic improvement, which establish the second way of stimulation. The progressive spatial and temporal partition allows children to achieve language usages like "better abstraction and argument skills" in a more gradual way (p.53).

The ability to understand and produce oral narratives is one of language most important aspects and is regulated by the socio cultural environment of the child. Therefore, children's books are an excellent way to initiate an adult-child dialogue, especially in a pre-reading phase. A story describes events that are related, so it can promote linguistic abilities to find temporal or causal factors between events, and with adult support, children are able to understand the story´s structure. The dyadic involvement in reading activities helps the child to obtain linguistic and cognitive skills, through listening and commenting. Additionally, by understanding that images in the book match the words spoken by the parent, make him aware of the written language, and how the written symbols appear in the book (Cárdenas, Padilla & Guevara, 2017).

Reading and discussing the story is an ideal situation to promote oral expression and questions interaction on children, this association is important because it helps their ability to relate events, experiences and comprehend concepts. Also, children can be encouraged to search for explanations and generate theories about world events; it can impact various psychological functions such as cognitive behavioural, affective emotional and motivational areas (González, Solovieva & Quintanar, 2011). González-García (2009) describes that our manner of speaking carries the way we think and structure our own experiences and knowledge. If we consider different parts of knowledge, the progressive understanding of practical tasks and logical sequences it is necessary to start "from the known to the unknown", and when it comes to fantastic stories it is necessary to add creative capacity, that indicates going "from concrete to the abstract" (p. 399).

Everyday cognitive activities help children to increase their problem-solving abilities, including their own safety and self-esteem by creating the bases to relate assertively with others (Ferretti & Bub, 2016). It is important to consider that moral acquisition and ethical evolution is only possible through interactions with the environment; Moral development is only possible through cognitive stimulation of logic thinking (Cortés, 2002). Socialization and morality are two interlocking concepts that must be developed through the child´s daily cultural practises (Prencipe & Helwig, 2002). Therefore, language plays a fundamental role for the adult to encourage the development of moral behavioural patterns and social skills, including problem-solving (Barrios, 2016). Köster, Cavalcante, Vera, Dôgo and Kärtner (2016) highlight the role of caregiver´s practices, including interpersonal responsibility, for the early development of children's social behaviour.

Extensive longitudinal research (Cline & Edwards, 2013, 2017; Ferretti & Bub, 2016) have provided evidence that established routines in preschool children's homes (including reading habits) can predict the development of academic, social-emotional and school readiness skills. Advanced level routines are associated with higher prosocial behaviours and academic skills and with fewer behavioural problems (hyperactivity, lack of attention).

Moreover, the emotional value and teaching style that parents use during interactive reading activities with their pre-schoolers have a strong impact on children's aptitudes. This is an important element that shows a relation between the sensitivity of parents take advantage of everyday activities (including reading stories) to teach their children. Similarly, children´s participation in daily activities in which reading and writing are involved, suggests a benefit for their following performance in conventional reading (Cline & Edwards, 2013, 2017; Ferretti & Bub, 2016; Sénéchal & LeFevre, 2014) and academic achievements (López, Duque, Camargo & Ovalle, 2014; Suárez-Coalla, García de Castro & Cuetos, 2013).

Learning how to read is a complex social process in which more than isolated academic skills are involved (Clingenpeel & Pianta, 2007). Research has shown that the way adults interact with children, regarding a book, is even more important than reading the full text (Duursma, 2016). The best way to promote child development is reading and discussing a story using interactive strategies, here the importance of studying different types of dyadic interaction during diverse activities, particularly, when reading children's books.

There are factors that can influence family interaction forms, like literacy and upbringing actions in the home, among these are aspects such as education, culture and socio-economic level. Multicultural research by Köster et al. (2016) suggests that cultural context influences the explanations and teaching that mothers give to their children. For example, Brazilian mothers showed more austere and insistent requests to their children, while German mothers used cautious support, such as asking and explaining.

Furthermore, families with lower economic, social and educational levels often show limited literacy practices (Aram & Besser, 2009; Korat, 2011), which translates into behavioural limitations on children. Research studying low socio-cultural Mexican families (Guevara, García, López, Delgado & Hermosillo, 2007; Rugerio & Guevara, 2014) have reported linguistic, pre-academic and conceptual skills deficiencies on preschool students and early first graders, these children may show deficits in word´s meaning, understanding stories, spontaneous expression, spatial-temporal relation, description and narration. These findings describe that children from a low sociocultural level may be at risk of school failure.

Family interactions, especially between mothers and children, have an influence even on the motivational and attitude levels that children show on school activities. When mothers maintain a joyful and affective environment during the performance of several tasks, children perceive those activities as pleasant, which promote their intrinsic motivation, confidence and dedication (Jiménez, Ito & Macotela, 2010). Based on the previous information, the propose of the present study was to analyse the relation between the actions of preschool children´s mothers with types of interaction and the behaviour showed by their children during dyadic story time activities. The study focused on the different types of interaction that mothers promote in their children and the informal teachings they do during the activity.

2. Method

The present research was observational-analytic. The interactions between mothers and preschool children were filmed during story time activities. Each pair was filmed in two sessions.

2.1 Participants

We studied 30 mothers with their children (13 girls and 17 boys; average age 5 years) registered in third-grade preschool from a public school in Mexico City; this school is on a low socio cultural level neighbourhood.

2.2 Materials

The mother-infant interactions were films using a video camera Sony DCR-DVD108 and video discs. The fifteen storybooks used in this study were 16 paragraphs long, from the Illustrated classics collections (Clásicos Ilustrados, Editores Mexicanos Unidos), these included stories known by the participants (Little Red Riding Hood, The Cat in Boots, The Ugly Duckling, etc.); there were a short text and an image, large enough for the participants to see, on each book page. The registration and analysis of the interactions between mothers and their children were analysed through a taxonomy of behavioural categories designed specifically for the activity of reading stories (Appendix 1) and record forms were marked, each 20 second period, to register the behavioural categories that occurred in each segment of time.

2.3 Procedure

At the beginning of the school year, the commissioners of a preschool were contacted to explain the research project to them. With their consent to develop the project in the school premises, each administrator called a group of mothers with children enrolled in third grade. A member of the investigation explained them the project guidelines and the terms that the volunteering in this research was anonymous and unpaid. The mothers that volunteered to participate signed a written consent form authorising being filmed individually within a multipurpose classroom of the school, during the interaction with their children, at two times thru the academic year. The first session was filmed at the beginning of the school year and the second one was filmed four months later. Each mother chose a storybookprior the film session; it was given the instruction to start the reading with the child, the mother indicated to the researcher the moment of start and finish of the activity.

After the end of the first film session, the mothers ask the researcher some feedback about their performance during the story time activity. During this feedback, it was pointed to them the importance of this type of activities at home because it promotes the development of conceptual and linguistic abilities such as vocabulary, description, narrative and concepts about objects, persons, events and the relationship between them.

Some guidelines were given to the mothers on how to improve their performance on shared reading; these were ensuring that the child observes the book while they read, pointing out words and describing images, rephrasing the story, making questions to expand understanding, encourage dialogue and asking the child´s opinions about the story. Four months later, in the middle of the school year, the second session was filmed following the same mode as the first one. After the second recording, mothers again received some feedback about their performance.

2.4 Data analysis

Mother-child interactions were examined in the laboratory, by two trained psychologists, who analysed each video using 20-second intervals to keep score of the behavioural categories presented in both the mother and the child during the whole sessions. Both researchers had to reach an agreement on the behavioural categories they had to register, a taxonomy of behavioural categories was used to this purpose; in the event of a disagreement between researchers, they could ask for a third opinion (this resource was not necessary). The graphics shown in the present study illustrate the behaviour of the mothers and children. In order to analyse the possible relation between the behaviour presented by the mothers and the one presented by the children, we performed a statistical correlation analysis using Pearson coefficient.

3. Results

3.1 Average frequencies of behavioural categories presented by mothers

For the analysis the maternal behaviour during the storytelling was considered into three general categories: a) reader – narrator skills b) promotor of linguistic interactions in her children, and c) informal teaching skills (on moral, conceptual or linguistic correction). Three groups were created based on the performance of the mothers during the first session of storytelling, considering the frequency of behaviours displayed in the general category (reader – narrator skills). The first group included 14 mothers who were placed in the low-level reader-narrator skills (Group I), showing a frequency between 0 and 5 intervals during the reading activity. The second group included 11 mothers, whose skills were at an Intermediate level (Group II), showing at least one of the skills of this general category on a frequency between 6 and 10 occasions per session. The third group included five mothers who performed at least one of the behaviours within a frequency of 11 intervals or more per session; this was considered the High level (Group III).

Figure 1 shows Group I average frequencies. In the first session, the mother's limited skills as reader-narrators included the sporadic use of appropriate tone of voice (Utv), monitoring the child´s attention (Mca), pointing to the images (Pi) and pointing part of the text as they read it (Pt). Regarding the second category, promoting linguistic interactions in her children, behavioural frequencies were even lower, but some initiations of response were present in children and mothers showed some behavioural reinforcement on their children through eye contact (Rf). The rest of the behaviours were not present. No changes were observed in the frequencies of the behavioural categories in this group on the second session. Informal teachings were absent in both sessions.
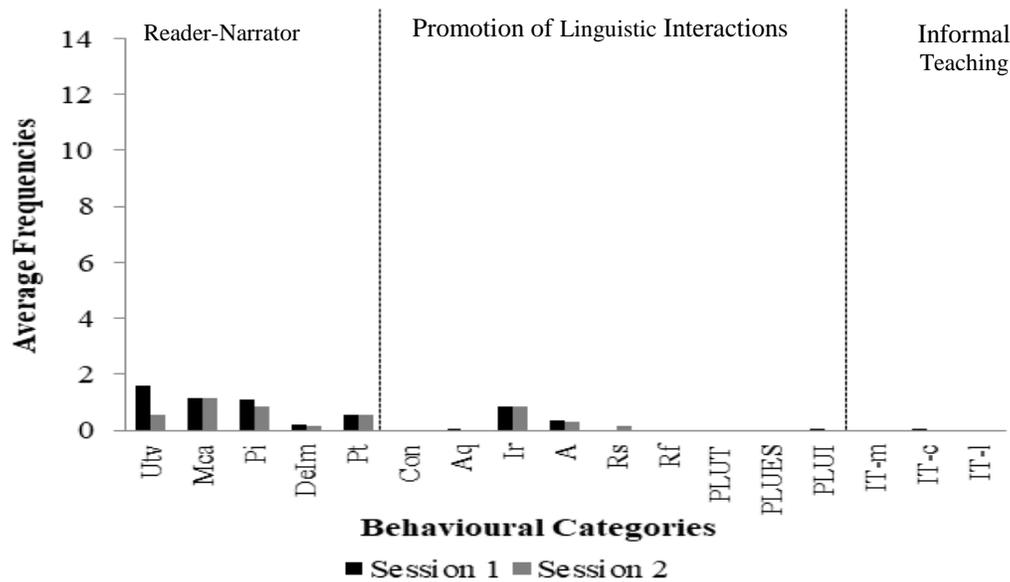
Figure 1. Shows the average frequencies in which the behavioural categories were presented by mothers placed in the low-level group *(Group I)*. N=14

Utv: Use of appropriate tone of voice.**Mca:** Monitoring the child´s attention. **Pi:** Points to the images. **DeIm:** Describes the book´s images. **Pt:** Points part of the text as they read it. **Con:** Describes or narrates any situation connected with aspects mentioned on the text. **Aq:** Asks questions **Ir:** Initiation of response. **A:** Answers. **Rs:** Rephrasing story. **Rf:** Reinforces using eye contact or smiles. **PLUT:** Promotes language interactions using the text. **PLUES:** Promotes language interactions using everyday situations. **PLUI:** Promotes language interactions using images in the book. **IT-m:** Informal Teaching moral. **IT-c:** Informal Teaching conceptual. **IT-l:** Informal Teaching and linguistic correction.

Figure 2 shows Group II average frequencies. On the first session, they used appropriate tone of voice (Utv), they pointed to the text (Pt) and some images (Pi) while reading it; to a lesser extent, they monitored their child´s attention (Mca), behaviours that correspond to skills as readers-narrators. Regarding the second category, promoting linguistic interactions in her children, they sporadically rephrased part of the story (Rs) and asked their children questions (Aq). No episodes of informal teaching were observed. On the second session, Group II showed a noteworthy increase of frequency on reader – narrator skills, the only exception was describing images (DeIm) which were sporadic. Regarding the promotion of linguistic interactions in her children, Group II continued asking questions (Aq) and rephrasing the story (Rs), intermittently. Also, they presented other behaviours that did not appear in the first session, such as initiation of response on their children (Ir), promoting language interactions using the text (PLUT) and the images in the book (PLUI). The reinforcing (Rf) of behaviour on their children was occasional, using eye contact or smiles. Again, no episodes of informal teaching were observed.
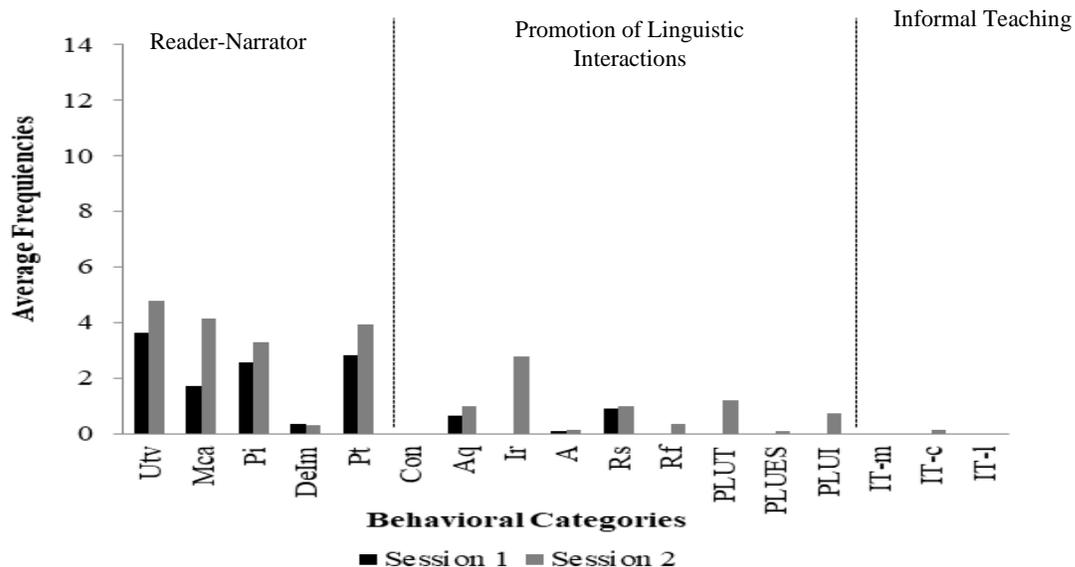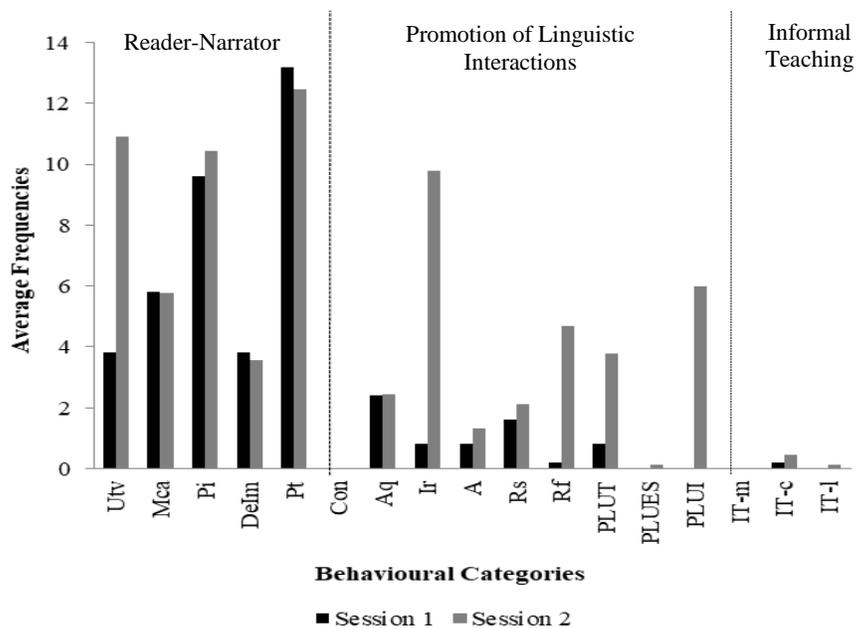
Figure 3 shows Group III (High-level group) average frequencies. During the first session, this group completed all the behaviours on the general category of Reader-Narrator skills; one of the most frequent behavioural category was pointing part of the text as they read it (Pt). Although less frequently, Group III presented behaviours in the general category promotion of linguistic interactions in her children, such as asking questions (Aq) and rephrasing the story (Rs), initiation of response on their children (Ir) and even promoting language interactions using the text (PLUT) Some of these mothers presented informal conceptual teaching (IT-c).On the second session, the participants on Group III continued showing all the skills as reader-narrators, with frequencies like those on the first session, and even one category (appropriate tone of voice, Utv) showed an increase of more than 50%.

Regarding the promotion of linguistic interactions in her children, Group III increased their abilities on, initiation of response on their children (Ir) and promoting language interactions using the text (PLUT); On the second session we observed some behavioural categories that did not appear in the first session, such as promotion of language interactions using the images in the book (PLUI) and reinforcing (Rf) of their children's responses using eye contact or smiles. The skills on informal teaching did not increase.

Figure 3.Shows the average frequencies in which the behavioural categories were presented by mothers placed in the high-level group *(Group III)*. N=5

Utv: Use of appropriate tone of voice.**Mca:** Monitoring the child´s attention. **Pi:** Points to the images. **DeIm:** Describes the book´s images. **Pt:** Points part of the text as they read it. **Con:** Describes or narrates any situation connected with aspects mentioned on the text. **Aq:** Asks questions **Ir:** Initiation of response. **A:** Answers. **Rs:** Rephrasing story. **Rf:** Reinforces using eye contact or smiles. **PLUT:** Promotes language interactions using the text. **PLUES:** Promotes language interactions using everyday situations. **PLUI:** Promotes language interactions using images in the book. **IT-m:** Informal Teaching moral. **IT-c:** Informal Teaching conceptual. **IT-l:** Informal Teaching and linguistic correction.
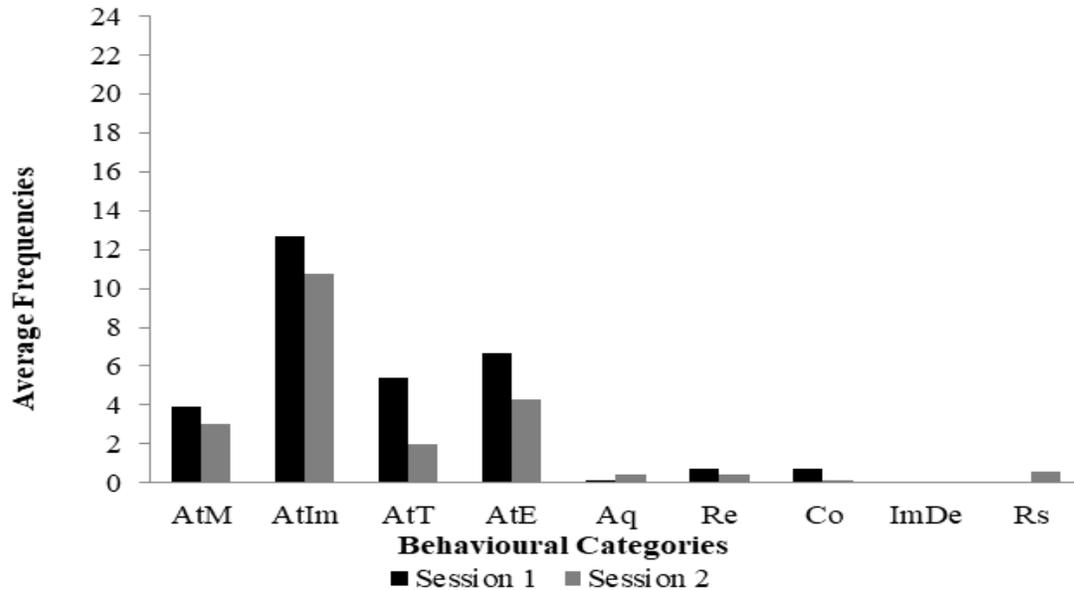
3.2 Average frequencies of behavioural categories presented by children

Figures 4, 5 and 6 show average frequencies of children that performed the storytelling activity with their mothers. For this research proposes the children's data was separated taking their mother's assigned group as a reference, to detect a possible relation between maternal and infant categories.

Figure 4 shows average frequencies of children whose mothers were in Group I (Low level). In the first session, these children paid more attention to the pictures in the book (AtIm), and less attention to their mother (AtM), to the text she read (AtT), and to the environment (AtE). The other categories were practically absent, this means, they did not ask questions (Aq), commentaries (Co), made image descriptions (ImDe) or any story description (SDe). On the second session, children showed lower levels of attention and did not show any other behaviour relevant to this research.
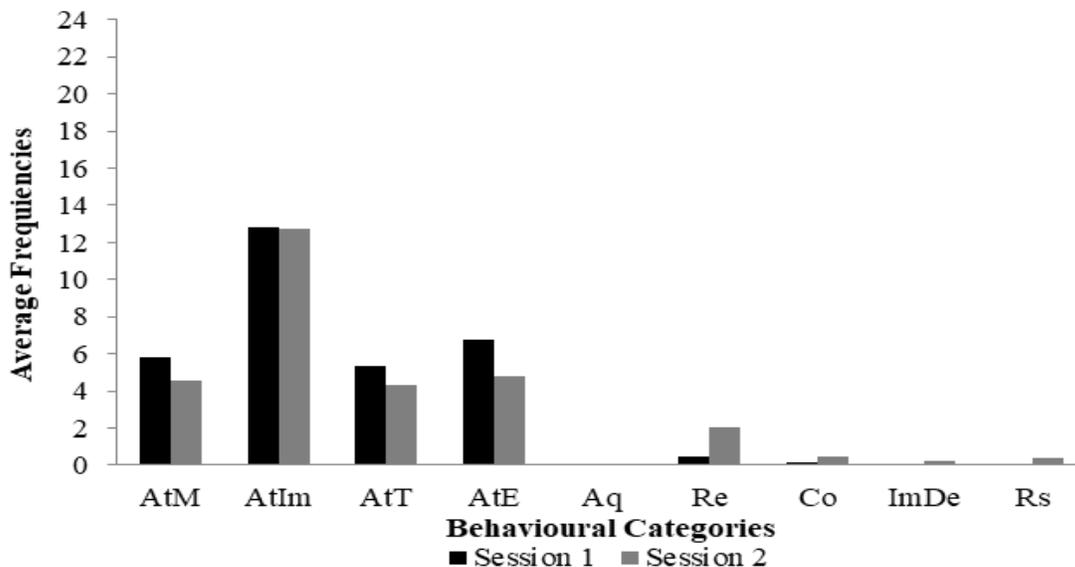
Figure 5 shows average frequencies of children whose mothers were in Group II (Intermediate level). During the first session, the level of attention in this group did not differ from those shown by children in Group I, in any aspect. We did not observe major differences in the other categories.

They did not ask questions, comments, descriptions or narrations. On the second session, we didn´t observe significant changes in this group; in sporadic occasions, they described images from the book or narrated some part of the sto

Figure 4.Shows the average frequencies in which the behavioural categories were presented by the children whose mothers were in the low-level group *(Group I)*. N=14

AtM: Paid Attention to the Mother. **AtIm:** Attention to the images. **AtT:** Attention to the text. **AtE:** Attention to the environment.**Aq:** Interaction by asking questions. **Re:** Interaction by responses. **Co:** Interaction by commentaries. **ImDe:** Image Descriptions. **Rs:** Rephrasing the story.

Figure 5.Shows the average frequencies in which the behavioural categories were presented by the children whose mothers were in the intermediate-level group *(Group II)*N=11.
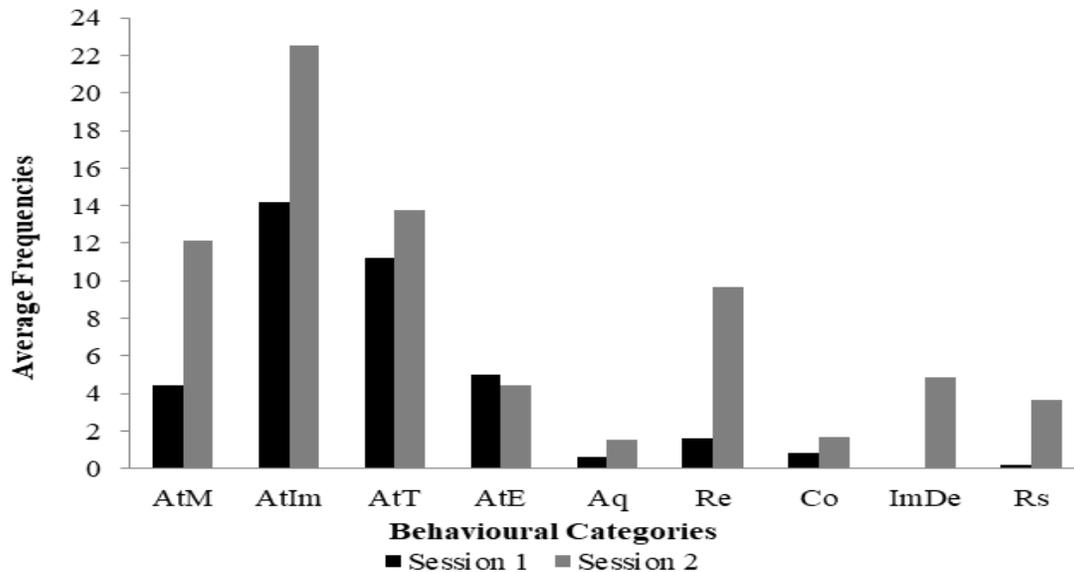
AtM: Paid Attention to the Mother. **AtIm:** Attention to the images. **AtT:** Attention to the text. **AtE:** Attention to the environment.**Aq:** Interaction by asking questions. **Re:** Interaction by responses. **Co:** Interaction by commentaries. **ImDe:** Image Descriptions. **Rs:** Rephrasing the story.

Figure 6 shows average frequencies of children whose mothers were in Group III (Hight level). Since the first session the attention of these children had higher frequencies in behaviours that involve attention to images (AtIm) attention to the text (AtT), and lower attention levels to other environment aspects (AtE). Although the frequency of questions, answers, commentaries and narrations did not differ from children in other groups. On the second session, these children improved the attention to their mother (AtM) as well as attention to the text (AtT) and images (AtIm) also their attention level to other aspects of the environment diminished. It was also noted that these children asked questions (Aq) and made commentaries (Co). The categories that increased the most were the interactions through responses (Re), the description of images (DeIm) and rephrased of the story (Rs).

Figure 6. Shows the average frequencies in which the behavioural categories were presented by the children whose mothers were in the high-level group *(Group III)*. N=5.

AtM: Paid Attention to the Mother. **AtIm:** Attention to the images. **AtT:** Attention to the text. **AtE:** Attention to the environment. **Aq:** Interaction by asking questions. **Re:** Interaction by responses. **Co:** Interaction by commentaries. **ImDe:** Image Descriptions. **Rs:** Rephrasing the story.

3.3 Correlation

The results of the present study were analysed with Pearson Correlation Coefficient to observe the possible correlation between the behavioural skills shown by mothers and those presented by their children, during storytelling activities.

Data analysis on all three groups indicated positive correlations among some infant and maternal behavioural categories considered as highly significant ($r \geq 0.8$) and moderately significant ($r > 0.6; < 0.8$). On Group I the fact that children showed attention to the text has a correlation with mothers asking questions; interacting through questions, monitoring the child's attention and answering their questions. Children's interaction through comments was associated with mothers replying. Similarly, the children's interaction through responses showed correlation with mothers describing images, asking questions, prompting responses, promoting linguistic interactions with the book (pointing to the text) and the images (describing). The infant responses showed lower but significant correlations, with the mothers indicating the pictures.

Compared to Group I, the number of correlations on the second group was higher. However, Group III was the group that showed a higher number of significant correlations between infant and maternal behaviours. Data from the first session (Table 1) indicated that mother's behaviour of pointing at the words she was reading correlated negatively with the child's diverting attention to other environmental aspects.

The child's interactions through questions and commentaries correlated positively with the mother using an appropriate tone of voice, answering questions and carrying out informal conceptual teaching. Infant responses were more frequent when the mother pointed pictures, asked questions and rephrased the story; while the child's narrative correlated with the mother's prompting, reinforcing the child's responses, and with promoting interactions with the storyline.

Table 1. Shows Pearson correlations obtained from the principal behavioural categories on Group III on the first session.

Behavioural Categories on the Mothers		Behavioural Categories on Children				
		Attention to the environment	Interaction by asking questions	Interaction by making comments	Interaction by producing responses	Rephrase the story
Use of appropriate tone of voice	r	_	0,981	0,981	_	_
	Sig.	_	0,003**	0,003**	_	_
Points to the images	r	_	_	_	0,925	_
	Sig.	_	_	_	0,024*	_
Points part of the text	r	-0,969	_	_	_	_
	Sig.	0,006**	_	_	_	_
Asks questions	r	_	_	_	0,946	_
	Sig.	_	_	_	0,015*	_
Initiation of response	r	_	_	_	_	0,943
	Sig.	_	_	_	_	0,016*
Answers	r	_	1,000	1,000	_	_
	Sig.	_	0,000**	0,000**	_	_
Rephrasing the story	r	_	_	_	0,952	_
	Sig.	_	_	_	0,012*	_
Reinforces	r	_	_	_	_	1,000
	Sig.	_	_	_	_	0**
Language interactions using the text	r	_	_	_	_	0,943
	Sig.	_	_	_	_	0,016*
Conceptual teaching	r	_	1,000	1,000	_	_
	Sig.	_	0,000**	0,000**	_	_

Note: * = Sig. ≤ 0.05; ** = Sig. ≤ 0.01

Data from the second session (Table 2) shows more correlations between child and maternal behaviours on Group III, although it should be mentioned that data from the second session (Group III) were very similar to those in the second session of Group II.

The fact that the child paid attention to the images and to the text correlated positively with the mother's pointing these elements during her reading; The child's attention also correlated with the mother asking questions, reinforcing the child's responses and promoting linguistic interactions with the book. The highest number of correlations were found between three child behaviours and five maternal conducts. These infant behaviours were: 1) interacting through responses, 2) describing images and 3) rephrasing part of the story, these correlated positively with the maternal behaviours: 1) asking questions, 2) prompt and 3) reinforce their answers, as well as 4) promote linguistic interactions with the content and 5) with the storybook.

Table 2. Shows Pearson correlations obtained from the principal behavioural categories on Group III on the second session.

Behavioural Categories on the Mothers		Behavioural Categories on Children							
		Attention to the mother	Attention to the images	Attention to the text	Interaction by asking questions	Interaction by making comments	Interaction by producing responses	Describes the images	Rephrase the story
Use of appropriate tone of voice	r	_	_	_	-0,695	_	_	_	_
	Sig.	_	_	_	0,037*	_	_	_	_
Points to the images	r	_	0,818	_	_	_	0,672	0,843	_
	Sig.	_	0,007**	_	_	_	0,047*	0,004**	_
Describes images	r	_	_	_	_	_	0,767	_	_
	Sig.	_	_	_	_	_	0,015**	_	_
Points part of the text	r	_	_	0,693	_	_	_	0,724	_
	Sig.	_	_	0,038*	_	_	_	0,027*	_
Asks questions	r	0,884	0,800	_	_	_	0,944	0,808	0,781
	Sig.	0,001**	0,009**	_	_	_	0,000**	0,008**	0,012**
Answers	r	_	_	_	0,863	_	_	_	_
	Sig.	_	_	_	0,002**	_	_	_	_
Rephrasing the story	r	_	_	_	_	0,723	_	_	_
	Sig.	_	_	_	_	0,027*	_	_	_
Reinforces	r	0,703	0,868	0,762	_	_	0,788	0,855	0,979
	Sig.	0,034*	0,002**	0,017**	_	_	0,011**	0,003**	0,000**
Language interactions using the text	r	0,701	_	_	_	_	0,757	_	_
	Sig.	0,035*	_	_	_	_	0,018**	_	_
Language interactions using images or book	r	_	0,848	_	_	_	_	0,928	0,675
	Sig.	_	0,003**	_	_	_	_	0,000**	0,046*
Linguistic Correction	r	_	_	_	_	_	0,656	_	_
	Sig.	_	_	_	_	_	0,055	_	_

Note: * = Sig. ≤ 0.05; ** = Sig. ≤ 0.01

4. Discussion

It is important to remember that the data in the present study was placed in three groups according to the mother´s performance (low, intermediate or high), depending on their reader-narrator skills, however, during the first evaluation all participants showed limited abilities for the promotion of linguistic interactions in their children, and to provide them with informal teachings while reading stories. This first result confirms the information reported by previous researchers (Aram & Besser, 2009; Korat, 2011; Guevara et al., 2007) that indicate how mothers of families with a low socio cultural level may display some limited abilities to establish dialogue and to encourage linguistic and conceptual interactions to allow children´s proper development. When comparing performances and advances of the mothers and children that participated in the present study, we observed some differences between the groups. The largest group (n = 14) was the one where mothers showed low initial performance; they just limit themselves to read the story, without verifying if the child, saw the images, noticed the text or understood the story. They did not take the chances the story offered to start a dialogue, which would have provided opportunities for conceptual and linguistic development by describing objects, people, places or actions.

These activities could improve children's vocabulary and sentence structure. They didn't show abilities for the promotion of linguistic interactions by associating the narrated aspects with events or activities in their daily life either. Basically, this group of mothers did not demonstrate significant changes from the first to the second session, even though after the first session they received feedback and guidance from the researcher. In general, they continued showing very little ability for dyadic interactions. The children of these participants didn't display behavioural changes from one session to another; they practically limited themselves to pay attention without asking questions, comments or any other type of linguistic interaction.

The data of this first dyadic group indicates synchrony between the behaviour promoted by the mothers and the conducts shown by the infants, mostly referring to dialogues between mother and child (González-García, 2009; Muñoz & Jiménez, 2005). In this case, a negative pattern was observed, since mother-child dialogues were practically missing.

We could say something similar about the 11 dyads on the intermediate level group. These mothers showed some changes in their skills by monitoring child's attention and pointing the text as they read it. They also promoted some linguistic interactions related to the story´s content, asked some questions and promoted answers. However, their ability to establish dialogues with their children remained on a very limited level. The conducts shown by the infants in this group were not very different from those shown by the children of Group I.

The five mothers with the highest level on the first session were those who also showed the most advances on the second session, after receiving feedback. In addition to improving their skills as reader-narrator, they increased their behaviours related to promoting language interactions in their children using story´s content, book´s images, asking questions, initiating responses and reinforcing by eye contact or smiles.

In line with their mother´s skills, the children showed high levels of attention to book´s images and text since the first session, with fewer episodes of distraction than children in other groups. On the second session, when their mothers improved their dialogue skills, they did too by increasing their questions, comments, answers, descriptions, and some of them participated in the narration of the story. These data suggest that reading stories involving the child and using dialogue encouraged children to develop observation, memory and attention skills. It also helps to the development of oral language to formulate questions, allowing them to understand concepts and narrate events and experiences (Cline & Edwards, 2013, 2017; González et al., 2011).

It also provides information on the synchronicity between the mother's behaviours to promote linguistic skills and abilities shown by their children in a positive way. Using a correlation based on Pearson´s coefficients the interactive synchrony was shown by analysing the behavioural categories of the participants in this study. Furthermore, the comparison of mother´s and children´s performance on all three groups inevitably leads to consider factors such as motivation and involvement of both dyad members. We can assume that higher initial level of reader-narrator skills of mothers on group III was an indicator of their motivation to participate with their children in activities such as storytelling, we can also assume that they did not show the ability to promote language interactions because they did not know how to do it. After they received feedback information, these participants incorporated dialogues to upgrade the interactions and improved their children´s involvement in the activity. Moreover, mothers who showed low initial reader-narrator skills did not incorporate changes in any of their interactive abilities, regardless of having the same information.

These differences are consistent with those reported in several studies (Bus & van Ijzendoorn, 2013; Clingenpeel & Pianta, 2007; Jiménez et al., 2010), which demonstrate that when mothers involve themselves in activities with their children, assuming a formative role and promoting a enjoy full and emotive environment, children perceive those activities can be pleasant, they participate more and develop intrinsic motivation. If mothers show lower interest and involvement in activities, children are less motivated and less interested inparticipating. Finally, it cannot be ignored the fact that informal teachings (conceptual, moral and linguistic correctness) were practically missing in all the interactions observed in this study. This is worrying fact because, as several authors already pointed out (Barrios, 2016; Ferretti & Bub, 2016; Köster et al., 2016;Solla, 2012), the family continues to be the main source of infant´s socialization, therefore, the family must be assumed as a promoter, not only of cognitive and linguistic development, but an emotional example and moral educator as well (Prencipe & Helwig, 2002). This is an important point to consider for future research, by studying this part of the family more broadly an intervention system could be developed, this would allow parents to participate more adequately in important childhood education, through their dyadic interactions.

References

Aram, D., & Besser, S. (2009). Early literacy interventions: Which activities to include? at what age to start? and who will implement them? Infancia y Aprendizaje, 32(2), 171-187. Retrieved from http://www .tandfonline. com/doi/a bs/10.1174 /021037009788001806

Barrios, A. (2016). Concepciones de conflictos interpersonales y desarrollo moral en la educación infantil brasileña. Revista de Psicología, 34(2), 261-291. Retrieved from http://www.redalyc.org/articulo.oa?id=337846349003

Bus, A. G., & van Ijzendoorn, M. H. (2013).Patterns of attachment in frequently and infrequently reading mother-child dyads. The Journal of Genetic Psychology, 153(4), 395-403. doi: 10.1080/00221325.1992.10753735

Cárdenas, E., Padilla, A., & Guevara, Y. (2018).Children's story reading: Its effects on the predictability of reading and writing in pre-academic children. Journal of Education and Human Development, 6(3), 75-85. doi: 10.15640/jehd.v6n3a9.

Cline, K. D., & Edwards, C. P. (2013).The instructional and emotional quality of parent–child book reading, and early head start children's learning outcomes. Early Education and Development, 24(8), 1214-1231. DOI:10.1080/10409289.2012.697431

Cline, K. D., & Edwards, C. P. (2017).Parent-child book-reading styles, emotional quality, and changes in early head start children's cognitive scores. Early Education and Development, 28(1), 41-58. doi: 10.1080/10409289.2016.1177392

Clingenpeel, B. T., & Pianta, R. C. (2007).Mothers' sensitivity and book-reading interactions with first graders. Early Education and Development, 18(1), 1-22. doi: 10.1080/10409280701274345

Cortés, A. (2002). La contribución de la psicología ecológica al desarrollo moral. Un estudio con adolescentes. Anales de Psicología, 18(1), 111-134. Retrieved from http://www.redalyc.org/articulo.oa?id=16718107

Guevara, Y., García, G., López, A., Delgado, U., & Hermosillo, Á. (2007). Habilidades lingüísticas en niños de estrato sociocultural bajo, al iniciar la primaria. Acta Colombiana de Psicología, 10(2), 9-17. Retrieved from http://www.redalyc.org/articulo.oa?id=79810202

Duursma, E. (2016). Who does the reading, who the talking? Low-income fathers and mothers in the US interacting with their young children around a picture book. First Language, 36(5), 465-484. doi: 10.1177/0142723716648849

Ferretti, L. K., & Bub, K. L. (2016).Family routines and school readiness during the transition to kindergarten. Early Education and Development, 28(1), 59-77. doi: 10.1080/10409289.2016.1195671

González, G. J. (2007). Debates en el aula preescolar a partir de cuentos. Estudio comparado en España y México. Perfiles Educativos, 29(118), 54-78. Retrieved from http://www.scielo.org.mx/pdf/peredu/v29n118/v29n118a4.pdf

González-García, J. (2009). Lectura compartida de cuentos: Una experiencia en España y México. Magis, Revista Internacional de Investigación en Educación, 2, 397-411. Retrieved from https://www.researchgate.net/publication/28315944_Lectura_compartida_de_cuentos_una_experiencia_en _Espana_y_Mexico

González, C., Solovieva, Y., & Quintanar, L. (2011). Actividad reflexiva en preescolares: perspectivas psicológicas y educativas. Universitas Psychologica, 10(2), 423-440. Retrieved from https://www.academia.edu/2061148/Actividad_reflexiva_en_preescolares

Jiménez, E., Ito, E., & Macotela, S. (2010). El papel de las madres en la motivación de sus hijos(as) hacia el aprendizaje escolar. Revista Mexicana de PsicologíaEducativa, 1(1), 59-74.

Korat, O. (2011). Mothers' and teachers' estimations of first graders' literacy level and their relation to the children's actual performance in different SES groups. Education and Treatment of Children, 34(3), 347-371. doi: 10.1353/etc.2011.0021

Köster, M., Cavalcante, L., Vera, C. R., Dôgo, R. B., & Kärtner, J. (2016).Cultural influences on toddlers' prosocial behavior: How maternal task assignment relates to helping others. Child Development, 87(6), 1727–1738. doi: 10.1111/cdev.12636

López, S., Duque, C., Camargo, G., & Ovalle, A. (2014).Comprensión y producción textual narrativa en preescolares. Psicología desde el Caribe, 31(1), 39-58. Retrieved from http://www.scielo.org.co/pdf/psdc/v31n1/v31n1a03.pdf

McElwain, N. L., Halberstadt, A. G., & Volling, B. L. (2007).Mother and father reported reactions to children's negative emotions: Relations to young children's emotional understanding and friendship quality. Child Development, 78(5), 1407–1425. doi: 10.1111/j.1467-8624.2007.01074.

Muñoz, A., & Jiménez, J. (2005).Interacciones educativas en la familia. La estimulación del desarrollo cognitivo y lingüístico de los hijos. Estudios de Psicología, 26(1), 51-65. doi: 10.1174/0210939053421434

Prencipe, A., & Helwig, Ch. C. (2002).The development of reasoning about the teaching of values in school and family contexts. Child Development, 73(3), 841–856. doi: 10.1111/1467-8624.00442

Rugerio, J.P. & Guevara, Y. (2014). Habilidades lingüísticas en niños prescolares mexicanos de bajo nivel sociocultural. Enseñanza e Investigación en Psicología, 19(1), 77-89. Retrieved from
    http://www.cneip.org/documentos/revista/CNEIP_19_1/Juan.pdf

Sénéchal, M., & LeFevre, J. A. (2014).Continuity and change in the home literacy environment as predictors of growth in vocabulary and reading. Child Development, 85(4), 1552–1568. doi: 10.1111/cdev.12222

Solla, C. R. (2012). La díada en el desarrollo de la condición humana. Telos, 13(2), 149-159. Retrieved from http://publicaciones.urbe.edu/index.php/telos/article/viewArticle/1892

Suárez-Coalla, P., García de Castro, M., & Cuetos, F. (2013). Variables predictoras de la lectura y la escritura en castellano. Infancia y Aprendizaje, 36(1), 77-89. doi: 10.1174/021037013804826537

Appendices

Appendix 1: Taxonomy of Behavioural Analysis. Designed for Story Time Activities. Taxonomy of Behavioural Categories on the Mothers:

Reader – narrator skills.
Use of appropriate tone of voice to express different emotions like sadness, angry, interest, joy, surprise, dude (Utv); Monitoring the child´s attention (Mca), Shows the storybook to the child so he/she can see the text and pictures (Sb), Points to the images (Pi), Describes the book´s images (DeIm), Points part of the text as they read it (Pt).

Promotion of linguistic interactions skills.
Describes or narrates any situation connected with aspects mentioned on the text (Con) Interacts with the child by asking questions (Aq), Initiation of response on their children (Ir), Answers (A) or Rephrasing the story (Rs). During the interaction, Reinforces (Rf) the children's responses using eye contact or smiles. Promotes language interactions using the text (PLUT), using images in the book (PLUI) and using everyday situations (PLUES).

Informal teaching skills.
The mother presents Informal Teaching by commenting, asking questions or giving advice. It couldbemoral (IT-m), conceptual (IT-c) and linguistic (IT-l) correction.

Taxonomy of Behavioural Categories on the Children:

PaidAttention: to the Mother (AtM), Attention to the images in the book (AtIm), Attention to the text (AtT), and Attention to the environment (AtE).
Interaction with the mother: by Asking questions (Aq), Commentaries (Co), producing responses (Re).
Interaction with the story: making Image Descriptions (ImDe) or Rephrasing the story (Rs).