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Maternal Responsivity in Mothers of Young Children with Down Syndrome

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Abstract

The purpose of this study was to examine maternal responsivity and directive behaviours in 22 mothers with a young child with Down syndrome (DS) compared to 22 mothers of chronologically age-matched typically developing children (TD) using a cross-sectional design. The dyads participated in video-taped structured activities that were coded for responsive and directive behaviours. Results indicated that mothers of children with DS used a more facilitative style with the older children while these behaviours decreased with older children with TD; one directive behaviour, request for behavioural comply, increased with the older children with DS. The mothers of children with TD did not use directive behaviours with a greater frequency than the mothers of children with TD.

Keywords

intellectual disability; maternal responsivity; mother-child interactions; language development

Maternal responsivity refers to a healthy, growth-producing relationship characterized by warmth, nurturance, and stability as well as specific behaviours such as responses contingent to child initiations. Maternal responsivity has been shown to have a cumulative impact on children's cognitive, emotional, and language development [1–2]. A mother who is highly responsive will often engage in a style of parenting that maintains her child's focus of attention, expands on her child's initiations, and relatively rarely redirects her child to a new topic. On the other hand, high rates of directiveness, which is typically defined as maternal control of children's behaviour and/or attention, may at least modestly impede children's cognitive and language development [3–4]. Developmental disabilities such as Down syndrome (DS) can present a number of challenges for parents such as delayed language and cognitive development [5–7] as well as behavioural problems [8]. These challenges may at times hinder mothers of children with DS from optimally employing a highly responsive style of parenting despite their best intentions. Over time a cumulative deficit in highly

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responsive parenting could further exacerbate communication and language delays in these children [9].

Although studies have examined responsivity and directiveness in mothers of young children with DS, there are some important gaps in the literature. Many of the studies have focused on broad constructs of responsivity and directiveness, but have not examined potentially important sub-components that may make unique contributions to development (e.g. gestures, expansions on child speech). This is important, since a mother might be highly responsive on some dimensions, but not others that are important for language, cognitive and/or social development. For example, vocal and turn-taking behaviours are common indexes of maternal responsivity reported in some studies in the developmental disabilities literature [10–11]. However, maternal behaviours such as gestures and language expansions have not been examined in this population. Additionally, the majority of published studies report either no comparison group or only mental age matched controls, ignoring the potential cumulative impact of history on responsivity as represented by child chronological age. The use of a chronological age matched group of children at various ages allows for two things: an estimate of how much cumulative exposure to a high or low responsivity style of parenting a child experiences and secondly, an analysis of how child language level and chronological age interact with responsivity.

The purpose of this study was to evaluate differences in directive and language facilitating behaviours (i.e. maternal responsivity) in mothers of children with DS compared to mothers of children with typical development, while examining differences related to the chronological age of the child. We measured several components of maternal responsivity and directiveness observed in a group of mothers who have a young child with DS in comparison with mothers of chronologically age-matched TD children. Given that numerous studies have indicated that maternal education level can have a significant impact on maternal responsivity [12–13], the mothers were also matched at the group level on maternal education.

Down syndrome is the most prevalent genetically caused neurodevelopmental disorder, occurring in approximately one in every 800 live births [14–16]. Individuals with DS typically have the trisomy 21 form, which is caused by the presence of a third chromosome 21 [17]. Individuals with DS typically fall within the moderate range of intellectual disability, with IQs ranging from 35 to 70 [5]. It is associated with significant language delays, which are apparent within the first year of life [7, 18–20].

Maternal responsivity is impacted by a number of factors, including child factors. Although children with DS have been characterized as affectionate and relatively easy in temperament, they have also been characterized as lacking task persistence [21], being inattentive and mildly oppositional, particularly in high demand situations [8, 22]; these are all behaviours that may impede a highly responsive parenting style. Other child characteristics common to children with DS that are likely to decrease maternal responsivity are passivity and relatively low initiation rates [8, 21–22]. These child characteristics, alone or in combination, could substantially hamper a mother's ability to maintain a highly responsive parenting style over time despite their best intentions [23].

There have been a number of studies examining maternal-child interaction in young children with DS. One study [24] examined social-interaction patterns between mothers and infants with DS ($n = 23$) and infants with typical development ($n = 23$). The quality of the interaction and social behaviours in infants were measured at 8 and 20 weeks. The authors reported differences in both infant behaviour, as well as maternal behaviour. In terms of the infant behaviour, the infants with DS were more fussy and inert at 8 weeks compared to infants with typical development at the same age. Although the infants with DS became more-lively at 20 weeks, it was at levels well below children with TD. In terms of the maternal behaviours, the mothers of infants with DS were rated as less sensitive and more remote at 20 weeks compared to the mothers of infants with TD. The analyses suggest that by 5 months of age, mothers of infants with DS begin to show a different profile of parenting, perhaps adjusting to the challenges presented by their young infant (i.e. fussier and more inert).

Another study [11] examined parenting style in mothers who had a child with DS between the ages of 15 and 57 months ($n = 11$), compared to mothers with a typically developing child at the same developmental level ($n = 11$; mean chronological age 18 months). Mother's use of response (e.g., commands, questions), topic maintenance (e.g., introducing something the child is not actively attending to), and turn-taking controls were measured. The mothers of children with DS tended to take more frequent and longer turns compared to mothers of developmentally matched typically developing children. Mothers of children with DS used these strategies to support and encourage participation during their interactions. Mothers of the children with DS used topic control more frequently as compared to the control group.

Roach et al. 1998 [10] also examined maternal parenting style within a play-based context. Their primary focus was on directive (e.g. using vocal restrictions and commands), supportive (e.g. vocal praise), and nondirective behaviours (e.g. demonstrations of objects) of 28 mothers of very young children with DS between the ages of 16 and 30 months (mental age range 10–17 months) compared to mothers of 28 developmentally matched children with typical development and 28 chronologically matched typically developing children. Mothers of children with DS were significantly more vocally directive compared to mothers of chronological and developmental age matched children. The mothers of the children with DS tended to shoulder the responsibility of the interaction compared to the other mothers in the study. The authors interpreted these findings as the result of children with DS being less active during the parent-child play session as compared to the control group children. However, this study did not look at key language facilitating behaviours, such as language expansions (i.e. recasts), or the use of gestures to supplement language.

Given the specific aim of this study a cross sectional chronological age matched design was utilized. This matching design takes into account the cumulative history of the maternal-child interaction, and how over time this can impact maternal responsivity. The main research question for this study was: Are there differences in facilitative and/or directive behaviours in mothers of children with DS compared to mothers of chronologically age-matched children with typical development?

Hypotheses:

- A. It was predicted that the mothers of older children with DS would use fewer facilitative behaviours relative to child communication acts, compared to mothers of age-matched typically developing children; on the other hand, it was predicted that there would be no difference in the younger children regardless of diagnosis. The Tannock et al. [11] study demonstrated that the mothers were involved in their interactions with their children (e.g. using more frequent and longer turns), thus the prediction that the mothers of the younger children with DS would show the same use of facilitative behaviours. However, the literature indicating the DS phenotype characteristics which could impede a mother's ability to maintain a responsive style of parenting (e.g. inattention, passivity, low rates of initiation) [8, 21–22], as well as the literature documenting the language delay in DS [7], set up the prediction that over time, mothers of children with DS would use fewer of these facilitative strategies.
- B. It was predicted that mothers of children with DS would use more directive behaviours, particularly mothers of older children. This hypothesis is congruent with previous research demonstrating a directive parenting style [11]. Specifically, the Roach et al. [10] paper found that mothers of very young children with DS were more vocally directive compared to mothers of children with TD, specifically in their use of vocal commands and restrictions, which are similar to the codes used in this study.

Methods

Participants

Participants in the study included two groups of mother-child dyads: 22 children with DS and 22 children with TD. Children were matched at the group level on chronological age, $t = .368, p = .715$. Additionally, the mothers were matched at the group level on maternal education, $t = -.883, p = .383$. Table 1 describes the study participants and their demographic information.

Down syndrome—This group included 22 children with DS, ranging in age from 26 to 63 months and their mothers. Children with DS were recruited from early intervention agencies, support groups, local clinics, and the Kansas City Down Syndrome Guild in Kansas and Missouri. The majority of the families in the study came from early intervention agencies and local support groups. Parent report indicated that 21 of the children had Trisomy 21, and one child had Mosaicism. Twenty of the children were Caucasian, 2 African American, and 1 Hispanic.

Typically developing children—This group included 22 children with typical development and their mothers. The children in this group were recruited from area preschools and daycares, word-of-mouth, and from the Infant Cognition Research Laboratory at the University of Kansas.

Procedures

All assessments were completed in the children's home in the course of a single visit lasting from 1–2 hours. The mothers and children were asked to participate in three videotaped, 10-minute structured activities: free play, book reading, and making and eating a snack. A standard set of toys, books, and snack materials were presented to each dyad, and a standard set of instructions read to each dyad.

Measures—Each child was assessed using the Mullen Scales of Early Learning (MSEL) [25]. This standardized developmental test for children ages 3 to 60 months involves five subscales: Gross Motor, Visual Reception, Fine Motor, Receptive Language, and Expressive Language. Since the Gross Motor subscale is not used in calculating the composite score, it was not administered. The test was typically completed near the end of the home visit in order to allow time for the child to warm up to the assessor. All of the children with DS completed the MSEL. Two typically developing children refused to complete the test.

Coding

All video files were digitized and clipped into 7-minute segments for each interaction, resulting in three 7-minute video files for all but two participants (21 minutes total for each participant). Two children with DS were not eating solid food; therefore, these children had two 10.5-minute video files (i.e. free play and book reading). Each video file was then coded by a primary and reliability coder, and all discrepancies were discussed using a consensus-style of resolution. The files were coded for both child and adult communication acts.

All coding was done using Noldus™ Observer software, version 5.1 [26]. The program allows for time-sensitive coding. In the observation window, the coder can view the video while simultaneously coding and transcribing. A video control in the observation window allows for second-by-second coding. Both the primary and reliability coders were trained on The Observer coding system. A primary file was created where every utterance was transcribed. The reliability coder created a separate file, and transcribed one of the three files for each participant, varying the type of file transcribed. Reliability was at or above 84% for each file (description of reliability coding to follow). All discrepancies were discussed during consensus coding, since the majority of discrepancies affected the coded utterance.

Child Coding—The child was given credit for a communication act if they pointed to an object while making eye contact with the mother, used sign language, spoken words, or gestured (e.g. waving “hi” or “bye bye”). The coder transcribed the child's speech in the comment line of the coding program.

Maternal Coding—Each videotaped observation file was also coded for maternal responsivity using the Noldus™ software. We coded the mother's speech on a behaviour-by-behaviour basis. The coding system used was adapted from Landry et al. [1, 27], and has been used in studies examining responsivity in other populations [28]. All maternal behaviours and communication directed toward the child were coded using the codes defined in Table 2. When mothers' communication included several utterances in

succession, the last utterance spoken to the child was coded based on the assumption that the child's response would typically be anchored to the mother's final utterance.

Coding reliability—Research assistants were trained to identify and code the behaviours listed above to a training criterion of at least 80% agreement across three different samples before being allowed to code participant files from the current investigation. Once this criterion was met, two trained coders independently coded child and maternal behaviours for each observation file. Following this, we compared transcripts and any disagreements were resolved through consensus. This process was implemented to ensure consistency across coders and over time. To determine the interjudge reliability for the variables analysed, we calculated intraclass correlation coefficients (ICCs), using the absolute agreement and single measure values for each score [29]. ICCs were calculated between the primary and reliability scores. This procedure was used to determine whether the consensus coding procedure biased the data.

The ICCs were high for all the coded behaviors (see table 3 for reliability values). On average the maternal behaviors that facilitate language were .96 between the primary and reliability ratings. The ICCs were similarly high for the directive maternal behaviors, with an average rating of .84 between primary and reliability data. These strong correlations indicate that differences in the final behavior codes derived from consensus coding had a very small effect on the reported performances of participants.

Results

The main research question for this study was *are there differences in facilitative and/or directive behaviors in mothers of children with DS compared to mothers of chronologically age-matched children with typical development?* A between-subjects univariate ANOVA was used to examine the differences between the DS and TD groups. The purpose of the analyses was to examine group differences in order to test the hypotheses; age served as a continuous variable, while diagnosis was a fixed factor.

Results for Hypothesis A

The first hypothesis for this study was that the mothers of older children with DS would use fewer facilitative strategies relative to child communication acts, compared to mothers of typically developing children; however, it was predicted that there would be no difference in the younger children regardless of diagnosis. There were five dependent variables indicated by the literature which play a facilitative role in language development: maintaining, request for verbal comply, comments, recodes, and gestures. Each of the five variables was evaluated using a between-subjects univariate ANOVA. Diagnosis (TD versus DS) served as the fixed factor, while age was continuous. Four of the five dependent variables yielded significant interactions between diagnosis and age: maintaining $F(1,40) = 18.67, p = .00$, partial $\eta^2 = .318$, request for verbal comply $F(1,40) = 10.24, p = .003$, partial $\eta^2 = .204$, recodes $F(1,40) = 27.95, p = .00$, partial $\eta^2 = .411$, and gestures $F(1,40) = 10.89, p = .00$, partial $\eta^2 = .214$ (see Table 3). The fifth dependent variable yielded a marginally significant interaction: comments $F(1,40) = 3.74, p = .06$, partial $\eta^2 = .085$. However, there was a significant main effect of diagnosis for comments: $F(1, 40) = 5.34, p = .03$, partial $\eta^2 = .085$.

Due to the fact that 5 separate ANOVAs were completed in order to examine group differences in the facilitating group of variables, it was necessary to control for type I error. The method used was Holms' modification of Bonferroni [30]. This method controls for type I error by assigning more stringent significance levels, thereby reducing the type I error rate. The new significance rates were calculated by dividing the traditional significance rate of .05 n number of times, with n = the number of dependent variables (e.g., .05/5, .05/4, .05/3, .05/2, .05/1). The original significance values were re-evaluated using the new values, .01, .0125, .017, .025, and .05. The variables were ordered based on significance values. Maintaining and recodes were assigned the most strict levels, $p = .01$ and .0125 based on significance levels. The third lowest significance level was gestures $p = .002$, followed by request for verbal comply $p = .003$, and finally comments $p = .060$, which did not meet the criteria of .05. However, the main effect of diagnosis for comments did meet the .05 criterion ($p = .026$). All differences were significant in accordance with the Holms' modification.

In order to further investigate the four significant interactions, and the marginally significant interaction for the first set of maternal behaviors, the relationship between each dependent variable and the continuous factor, age, was evaluated, separated by diagnosis group. The results of these correlations are presented in Table 4. The correlations revealed a significant increase in four of the maternal facilitative behaviors in the older children with DS. The use of gestures was not significant. For the mothers of children with TD, only two of the behaviors were correlated with age, gestures, and recodes, and both correlations were negative. In other words, for this group of mothers, these behaviors were not as common for the mothers of the older children. Figures 1–5 display the data for these maternal behaviors.

Results for Hypothesis B

The second hypothesis for this study involved the directive maternal behaviors. Specifically, we predicted that the mothers of children with DS would use more directive behaviors, particularly mothers of older children. Three dependent variables measured directive behaviors: redirects, requests for a behavioral comply, and zaps (see table 2 for coding description). Redirects did not yield a significant interaction, however there was a significant main effect of age: $F(1,40) = 4.91$, $p = .033$, partial $\eta^2 = .109$. There was a significant interaction between age group and diagnosis for requests for behavioral complies, $F(1,40) = 7.67$, $p = .008$, partial $\eta^2 = .161$. The zaps variable did not yield a significant main effect or interaction.

Follow-up analyses for requests for behavioral complies yielded only a marginally significant correlation between age and the behavior for the mothers of children with DS, $r = .399$, $p = .066$, and a marginally significant correlation for the mothers of children with typical development, $r = -.410$, $p = .058$. However, the trend is apparent. The mothers of children with DS, although only marginally significant, used more requests for behavioral compliance in older children, while the mothers of children with typical development used this behavior with less frequency with older children (see figure 6). The use of zaps did not yield significant main effects or an interaction. However, the redirecting the child's attention did yield a significant main effect for age. Figure 7 displays the data for rate of maternal

redirecting. Regardless of diagnosis, this maternal behavior was observed to occur less often with older children. This was an unexpected finding, given the past literature noting high levels of topic control and directiveness with children with DS [10–11].

Discussion

The main purpose of the study was to measure facilitative and directive behaviors in mothers of children with DS compared to mothers of children with TD, while examining differences related to the chronological age of the child. The children were matched on chronological age, and the mothers were matched at the group level on maternal education. We had two major hypotheses: (A) It was predicted that the mothers of older children with DS would use fewer facilitative strategies relative to child communication acts, compared to mothers of typically developing children; however, it was predicted that there would be no difference in the younger children regardless of diagnosis. (B) It was predicted that mothers of children with DS would use more directive behaviors, particularly mothers of older children. Results revealed a number of differences between the two groups of mothers, and a clear pattern of behavior for each maternal behavior.

Hypothesis A

Four of the five language facilitating maternal variables yielded significant interactions, while the fifth dependent variable, maternal comments, generated a marginally significant interaction. The follow-up analyses showed a clear pattern extending from the younger children to the older children. With the exception of gestures, there were significant correlations with all of the language facilitating behaviors and the age of the child. In other words, the mothers of the children with DS were using these facilitative behaviors more frequently with older children compared to young children. We had originally predicted that the mothers of children with DS would have difficulty employing a highly responsive style of parenting with older children. However, it appears that the mothers of children with DS used more of these language facilitating behaviors with older children, perhaps because the children had more complex language abilities. These changes in the child's development may be enabling the more facilitative style observed in the parents of the older children.

The mothers of children with TD showed the opposite pattern. Although only two of the follow-up correlations were significant (gestures and recodes correlated with age of child), all of the correlations were negative. It seems that as children with TD age parents may see less need for these facilitating strategies, thus they begin to drop off with time; conversely the mothers of children with DS have more and more opportunities for increased facilitating behaviors, as their children become more communicative and verbal. That is the older children with DS were simply more interactive compared to the younger children, making a responsive style of parenting easier.

One possible explanation for these results may be a relationship between maternal responsivity and language level. The children with DS in this study had significantly delayed language; however, the mothers of the older children with DS were using several of the facilitating strategies at the same rate as the mothers of the children with typical development. There is evidence that mothers adapt their style of parenting to their children's

developmental level [31]. In this study, it appears that the mothers did adapt their parenting style to be facilitative of their children's linguistic development.

Hypothesis B

The only variable within the directive maternal behaviors yielding a significant interaction was the requests for behavioral complies. However the redirects did produce a significant main effect for age (fewer redirects with the older children). The lack of significant findings for the use of zaps and the single main effect for redirects were unanticipated, given the extensive literature indicating a highly directive style of parenting for women with a child with DS [11, 32–33]. Several of these studies looked at behaviors such as topic control, which is similar to the redirect behavior examined in this study. This behavior was observed very infrequently during this study, and the mean rates were well below 1 occurrence per minute.

Finally, the interaction within the request for a behavioral comply yielded an interesting finding. This variable was marginally significantly correlated with age for the children with DS, and marginally negatively correlated with age for the children with typical development. An interesting pattern emerged: mothers of children with DS used behavioral complies with greater frequency, whereas the opposite held true for the mothers of children with typical development. This finding is in line with our predictions, although the lack of significant findings for the other two behavior management variables was unexpected. This could be due to the small sample size, or to the fact that these are infrequently occurring behaviors. Additionally, the mothers in this study were matched on maternal education, which might have eliminated any differences on these behavioral variables.

These findings serve to both to complement and contradict the past literature. The main purpose of this study was to measure facilitative and directive behaviors. The mothers of children with DS did increase certain types of directive behaviors (requests for behavioral complies), but not the behaviors that are thought to potentially hinder language development [34]. Roach et al. [10] also reported that the mothers of children with DS were using more vocal directives compared to both mothers of chronological and developmental age matched groups. The vocal directives in the Roach et al. study were the same as the request for behavioral complies in this study. We also found higher use of requests for behavioral complies in our sample, but only in the older children with DS.

Past literature, particularly when using a chronological age match, has indicated that mothers of children with DS have a highly directive style of parenting, and are not utilizing as many facilitative strategies as a result. The findings from this study show a different picture. Although the mothers of older children with DS used certain directive behaviors more frequently than mothers of younger children with DS (i.e., request for behavioral complies), they rarely used the “negative” types of directive behaviors, such as redirecting the child's attention and zaps. In addition, the mothers of older children with DS used the facilitating strategies at the same or higher rates compared to the mothers of older children with TD. It may be the case that the mothers of children with DS in this study are employing a more responsive style of parenting, based on their child's language development.

There are several limitations to this study. First, the study is based a single point measurement for each dyad. A longitudinal study would allow for an examination of changes over time. The cross-sectional design allows for a first look at this question; a logical next step would be to follow children longitudinally. Secondly, the sample size is relatively small, and as a result, the analyses were somewhat constrained.

Despite the limitations, this study provides a window into how responsivity is impacted by a developmental disability like DS. In preschool age children with DS, it seems that mothers are able to employ facilitative strategies to the same degree as mothers of typically developing children. However, age does have its consequences. Mothers of older children with DS display some directive behaviours. Their use of requests for behavioural complies increased significantly, although they were not different in terms of redirecting their child's attention or in their use of zaps as a restrictive strategy. As discussed earlier, directives like requests for behavioural complies are not necessarily a negative behavior [34]. Overall, the mothers of children with DS are employing a responsive style of parenting, rich with linguistic input, and are adjusting their style to the development of their child.

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Figure 1.
Facilitating Behaviour: Maintains

Figure 2.
Facilitating Behaviour: Gestures

Figure 3.
Facilitating Behaviour: Recodes

Figure 4.
Facilitating Behaviour: Request for a Verbal Comply

Figure 5.
Facilitating Behaviour: Comments

Figure 6.
Directive Behaviour: Request for Behavioural Complies

Figure 7.
Directive Behaviour: Redirecting

Table 1

Demographic and Standardized Test Information for Study Participants

Variable	Down syndrome (<i>n</i> =22)	Typical(<i>n</i> =22)
Child CA <i>t</i> = .37, <i>p</i> = .72	<i>M</i> = 42.8 <i>SD</i> = 12	<i>M</i> = 44 <i>SD</i> = 10.4
Child Gender <i>t</i> = .30, <i>p</i> = .77	Females = 11 Males = 11	Females = 10 Males = 12
Mullen Scales of Early Learning Composite Score* <i>t</i> = -13.28, <i>p</i> = .00	<i>M</i> = 56.4 <i>SD</i> = 8.9	<i>M</i> = 115 <i>SD</i> = 18.4
Receptive language raw score* <i>t</i> = -5.89, <i>p</i> = .00	<i>M</i> = 26.5 <i>SD</i> = 8	<i>M</i> = 39.8 <i>SD</i> = 6.4
Expressive language raw score* <i>t</i> = -8.78, <i>p</i> = .00	<i>M</i> = 21.3 <i>SD</i> = 7.4	<i>M</i> = 41.4 <i>SD</i> = 7.6
Child Ethnicity		
Caucasian	19	22
Latino	1	0
African American	2	0
Maternal Education (years completed) <i>t</i> = -.88, <i>p</i> = .38	<i>M</i> = 15.6 <i>SD</i> = 1.6	<i>M</i> = 16 <i>SD</i> = 2

Note.

* Mullen Scales of Early Learning Composite and Receptive and Expressive language raw scores [25]

Table 2

Definition of Codes

Behaviour:	Definition:	Example:
<i>Language Facilitating Behaviours</i>		
Maintains	Mom references toy, behaviour, or emotional state of child	Mom says: "This shape goes in here" as child is playing with shape sorter.
Gestures	Sign language, gestures ("come here", "stop", "no"), tapping, clapping, or knocking, etc.	Mom points to the book and says "Do you want to read this?"
Request for Verbal Comply	Question/statement aimed at getting a verbal response	Mom says, "say ___", or "huh" at the end of a comment.
Comment	All comments	Praise or phrases in reaction to something the child has done.
Recode	Verbal interpretation of child's communication act	Child says "ba" and mom says "do you want your ball?"
<i>Directive Behaviours</i>		
Request for Behavioural Comply	Directives to which the child can comply behaviourally	Mom says, "push this one", or "I want you to do it".
Redirect	Mom references new object when child is actively attending to another object	Child is playing with a toy and mom says, "what else do you want to play with?"
Zap	Restricting child's behavior in some way.	Mom says, "no stop that", "don't touch that".

Table 3

Reliability Values for Maternal Codes

Facilitative Behaviours	ICCs
Maintains	.977
Gestures	.957
Recodes	.911
Request for Verbal Comply	.964
Comments	.970
Average	.956
Directive Behaviours	
Redirects	.678
Request for Behavioural Comply	.940
Zaps	.901
Average	.840

Table 4

Follow-up Correlations for Facilitative Codes

	DS Group Age	TD Group Age
Rate of Maternal Maintains	.73** .00	-.29 .19
Rate of Gestures	.30 .17	-.59** .00
Rate of Recodes	.62** .00	-.73** .00
Rate of Request for Verbal Complies	.69** .00	-.21 .35
Rate of Comments	.52* .01	-.02 .94

Note.

*
p < .05.

**
p < .01.