Assessing Reflective Parenting in Interaction with

School-Aged Children

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Abstract

The aim of this study was to examine whether it was possible to develop a reliable and valid assessment of reflective parenting implicit in interaction with school-aged children using an adaptation of the Squiggle paradigm developed by Winnicott (1968) and a manualized coding system (Normandin, Leroux, Ensink, Terradas & Fonagy, 2015). A total of 158 mother-child dyads participated when children were aged 5-12. Of this group, 89 children had experienced sexual abuse. Inter-rater reliability using the manualized coding system was excellent. The factor analysis identified a Reflective Parenting Stance factor, in addition to an Affectionate Support factor and a Negative Parenting factor. Furthermore, there was a medium strength relationship between the mother's Reflective Parenting Stance evident in her interactions with her child and parental reflective functioning assessed using the Parent Development Interview (Slade, Aber, Bresgi, Berger & Kaplan, 2004), suggesting the Parental Reflective Stance is a good indicator of parental reflective functioning in interaction. With regard to parent reports of child internalizing and externalizing behaviors, the Reflective Parenting Stance, was the only predictor of internalizing difficulties and a significant predictor of externalizing difficulties in addition to sexual abuse.

Keywords: reflective parenting, squiggle, mother-infant interactions, parenting assessment, reflective functioning

Assessing Reflective Parenting in Interaction with School-Aged Children

There is renewed interest in parenting, with evidence showing that parenting influences epigenetic regulation well into adulthood (Naumova et al., 2016) and modulates environmental and genetic risk underlying inter-generational transmission of patterns of aggression (Fonagy, 2004). Since the late 1990's there has been an increasing interest in the mentalization or reflective functioning model of intervention with parents and children, based on Fonagy and Target's (1996, 1997) theory of child development, in which parental reflective functioning is considered central (Fonagy, Gergely, Jurist, & Target, 2002). In Fonagy and Target's (1997) model, the parent's benign interest in the child's subjectivity and mind is key in developing self and affect regulation, and the emergence of the reflective self. Parental reflective functioning has come to be viewed as mental activity, but Fonagy and Target (1997) emphasize that this is manifested in how the parent *treats* the child, i.e. whether the parent is able to consider the child's behaviour as internally motivated and is interested in the child's subjective world. In a now classic study, the mothers' reflective functioning (RF) about their own early attachment relationship, assessed using the Adult Attachment Interview, was shown to predict infant attachment (Fonagy, Steele, & Steele, 1991). With the subsequent development of the Parent Reflective Functioning coding (Slade, Bernbach, Grienenberger, Levy & Locker, 2004) of the Parent Development Interview (PDI: Aber, Slade, Berger, Bresgi, & Kaplan, 1985; Slade, Aber, Bresgi, Berger, & Kaplan, 2004), it became possible to assess the parent's mentalization about the child and assess the extend to which their understanding of the child goes beyond physical qualities and behaviors and conveys a sense of the child as an individual with affects and mental states. Over time these verbal, cognitive, and explicit dimensions of mentalization, as evident in the discourse of parents, have come to be regarded as synonymous with RF. In this vein, Shai and Belsky (2011) proposed that RF can also be seen as manifesting at an implicit and embodied

level, and Shai and Fonagy (2014) validated a measure of *embodied* mentalization to analyze mother-infant interaction. In sum, reflective parenting may best be seen as an orientation or *stance* that is both implicit in the parent's interactions with the child as well as explicit in the discourse about the child. Having implicit measures of the parent's mentalizing stance based on observed interactions with their children, in addition to the PDI, could be particularly useful so that difficulties in both implicit and explicit domains can be identified following a multi-method clinical assessment model (Hopwood & Bornstein, 2014). Explicit parental mentalizing about the child has been shown to be associated with maternal mind-mindedness ($r = .39$; Rosenblum, McDonough, Sameroff & Muzik, 2008) children's RF ($r = .33$; Ensink, Normandin, Target, Fonagy, Sabourin & Berthelot, 2015) and child externalizing difficulties ($r = - .30$; Ensink, Begin, Normandin & Fonagy, 2016). However, there is an absence of measurements that can help to more directly identify difficulties in parenting interactions for school aged children from a mentalizing perspective. Good mentalizing in the context of interviews may not always automatically translate into more effective relational responding in interactions in which the mother is solicited to respond to the child in an ongoing way in real time, especially in higher risk and clinical samples (Toth, Rogosch, & Cicchetti, 2008). Furthermore, an assessment that can help to identify potential areas for intervention in the parent-child relationship is likely to be useful for clinicians. For this reason we elaborated a measure of parenting informed by Fonagy and Target's (2006) developmental model of mentalizing using the Squiggle paradigm.

The Parental Mentalizing Stance and Parental Embodied Mentalizing

Mentalizing is traditionally considered to be central to the way we behave towards others and thus to influence the quality of close relationships, because when the reactions of others are interpreted from a mentalizing stance, this influencing the way behaviors are responded to and affective reactions are mentalized, in a fundamental way (Fonagy & Target, 1997). Both RF

assessed with the Adult Attachment Interview and the Parent Development Interview have been shown to be positively related to sensitivity ($r = .24$, Ensink, Normandin, Plamondon, Berthelot & Fonagy, 2016; and $r = .41$, Rosenblum et al., 2008), as well as inversely related to negative behaviors ($r = -.26$, Ensink et al., 2016; $r = -.48$, Grienenberger, Kelly & Slade, 2005; and $r = -.43$, Rosenblum et al., 2008) in interaction with infants. Mentalizing is postulated to underlie sensitive responding, and in turn to develop in the context of attachment relationships in which the mother sensitively adjusts to the changing psychological states of the infant. Through treating the infant as someone with a mind and interpreting their behaviors *as if* they were attempting to communicate their feelings and mental states, the infant is thought to slowly learn to think of himself in this way, discovering his mind.

Furthermore, Fonagy and Target (2007) have outlined a developmental model in which the early sense of the self emerges in the context of dyadic processes in which the parent recognizes the child's agency, expresses a benign interest in the child's mind and intentions and helps him or her elaborate their thoughts and preoccupations, co-constructing an understanding of this, and engaging with the child in pretend and playing with reality. At the same time the parent does this in relationships in which affection is expressed and aggression is modulated so that the child feels secure and is motivated to engage in this way. As can be seen from these descriptions, Fonagy and Target (1997) see as inseparable the way the mother *thinks* and *treats* the infant, as an orientation or as a stance reflecting interest in the subjectivity of the child that manifests at cognitive, emotional and behavioral levels.

Despite epistemologically entrenched traditions of thinking about and treating cognitive and physical processes as if they were independent, there is an increasing emphasis on the continuity between mind and body (Fonagy & Target, 2007), the extent to which consciousness and cognition is embodied (Hohwy & Frith, 2004) as well as the inseparable nature of social

cognition and interpersonal interactions (Gallese, 2014). In the context of parenting, embodied mentalization is most evident when interacting with infants and young children (Shai & Fonagy, 2014), which requires attunement with moment-to-moment adjustment of intensity to coordinate with infants (Beebe et al., 2010). This can be seen as embodied mentalization in interaction, given that parents are not engaging in explicit mentalizing, but are actively engaging in implicit mentalizing while reading infant reactions and mental states and adjusting physically to them in real time (Shai & Fonagy, 2014). Thus, essentially, embodied mentalization is conceptualized and coded as evident in the parent's physical coordination with the infant, expressing in interaction their consideration of the infant's mental states and reactions, without this being made explicit. Parental Embodied Mentalization is related to emotional availability ($r = .49$) and sensitivity during everyday interactions at home ($r = .39$) as well as during play ($r = .33$).

Closely related constructs like maternal mind-mindedness (Meins, Fernyhough, Fradley & Tuckey, 2001) are also routinely measured by looking at the parents' interactions with infants, through verbal interaction. Meins (1997) considers mind-mindedness to be at the interface between behavioral and representational of the caregiver–child relationship, arguing that the parent has to have a representation of the infant's internal state that informs their engagement with the child. In sum, mentalization explicit in discourse and embodied mentalization implicit in interaction can be seen as two sides of the same coin.

Existing Assessment Measures of Parenting

In reviewing existing parenting measures (see Alderfer et al., 2008; Hurley et al., 2014; and Locke & Prinz, 2002) there are surprisingly few observational measures of parenting with school-aged children. More recently, there appears to be a move towards going beyond the focus on negative and positive behaviors per se to assessing parenting as an *orientation* or as *mindful facilitation*, but mainly for assessing parental interactions with younger children. For example,

Kochanska, Aksan, Prisco, and Adams (2008) have developed a promising assessment of mutually responsive orientation. Along similar lines, Ereky-Stevens (2008) developed an assessment of the sensitivity of the mother to the toddler's interior world as manifested in mindful facilitation, joint attention, and the extent to which the mother is aware of the child's affect. In sum, some of the existing measures assess parenting orientation in the context of parenting of younger children. However, none assess the range of interactions identified by Fonagy and Target (1997) as prototypical of the parent's mentalizing stance, considered to promote the development of mentalization, self and affect regulation in children and likely to be of specific interest to clinicians and researchers using a mentalizing framework.

Assessing Reflective Parenting in the context of the Squiggle Paradigm

Developing the reflective parenting assessment using the Squiggle paradigm involved a number of steps: 1) operationalizing the concept of reflective parenting implicit in interaction by systematically identifying the types of interactions described by Fonagy and Target in their developmental model (1996; 1997); 2) analyzing parent-child interactions in the context of the squiggles to examine how and whether these concepts manifested in this context; 3) describing and elaborating each dimension sufficiently clearly so that readers like undergraduate psychology students would be able to identify each type of interaction; and 4) describing and finding examples of different levels of each dimension and different levels.

Fonagy and Target (1996, 1997) specifically identify the parent's benign interest in the child's mind and subjective experience as central in the emergence of the reflective self. Furthermore, parents who elaborate and draw attention to mental states, desires, intentions and emotional reactions and their causes in the context of everyday activities (e.g. picture book reading, discussion about challenging or emotionally upsetting experiences), provide children with opportunities to learn about mental states and emotions and communicate a sense that this is

important. In addition, Fonagy and Target (1997) stressed the importance of the parent's capacity to play and pretend in the process through which the child discovers the properties of the mind and mental reality, and can thus be considered as further indicators of reflective parenting. These types of interactions are considered as representing the reflective parenting stance, and two additional dimensions are assessed, including a positive dimension closely linked to a reflective stance, and one negative parenting dimension considered incompatible with a mentalizing stance. Affection, apparent in the way the parent interacts with the child, support the child's efforts and expression of agency, are considered to facilitate mentalizing. It is difficult to imagine that children will be motivated to share and explore what comes to mind unless there is a general emotional climate of affection and trust. The modulation of aggression is considered essential precondition for developing relationships and aggression towards the child is incompatible with a mentalizing stance.

At the same time, we were using the Squiggle paradigm developed by Winnicott (1968) in the context of clinical assessments to identify difficulties in parent-child interactions that potentially undermine the development of mentalizing, to inform mentalization based interventions for parents. Interactions such as sharing a snack, play, or cleaning-up after play, are considered to provide ample material for assessing parenting with younger children who actively solicit the parent's understanding and involvement through their dependency on the parent to help them regulate affect and behavior. However, once children have developed abilities to self-regulate and dissimulate emotion, expressing their feelings in words rather than behaviorally, then a more challenging paradigm is required to assess parenting. A paradigm in which the parent is called on to engage with the child at a subjective level is therefore important, as only a superficial range of interactions are observable in the course of non-stressful interactions, such as sharing a snack, in which an atmosphere of relaxed complicity and apparently superficial

exchanges may be more appropriate than trying to engage the child in other talk unless this is invited by the child. We considered that the Squiggle paradigm might be useful in identifying difficulties in parent-child interactions that potentially undermine the development of mentalizing. The Squiggle paradigm was initially developed as a unsophisticated and naïve game to facilitate interactive communication and to explore themes that have psychological salience for children in a clinical context, and presents a number of advantages for assessing reflective parenting. The parent has to explain the procedure, solicit the child's engagement and maintain his or her interest, and is also challenged to engage with the child to elaborate and co-construct a subjectively meaningful story emerging from the squiggles. The Squiggle paradigm is particularly suited for assessing the parent's reflective stance and the ways in which they use the activity as an opportunity to engage the child, find what is subjectively meaningful to him or her, and elaborate the themes implicit in the squiggles, translating them into semantically meamingingful narratives. Furthermore, it is possible to observe whether the parent relates with warmth and encouragement, creating an emotional climate where the child might feel at ease to share their thoughts, and whether the parent modulates their own frustration and refrains from controlling or power assertive behaviors.

The aim of this study was to examine in the first instance whether it was possible to assess the parental reflective stance in interaction with children in the context of the Squiggle paradigm in a reliable and valid way. The objectives were to conduct a preliminary investigation of the psychometric properties of the Squiggle paradigm in: 1) examining inter-rater reliability, the factor structure of the instrument, and the association among the factors; 2) assessing the concurrent validity of the PRF stance with parental reflective functioning as measured with the PDI; and finally 3) explore the respective contribution of the PRF stance and child sexual abuse onto child internalizing and externalizing symptoms reported by parents and teachers.

We hypothesized that mother-child interactions during the Squiggle paradigm can be rated reliably using the Reflective Parenting Assessment (RPA) coding system (Normandin, Leroux, Ensink, Terradas & Fonagy, 2015). We anticipated a three factor solution distinguishing a specific reflective parenting factor, in addition to a positive parenting factor and a negative parenting factor. Based on previous studies reporting relationships between RF measured using the Adult Attachment Interview and the PDI ($r = .53$; Crumbley, 2009), we expected that there would be a medium strength correlation (between $r = .3$ and $-.5$) between reflective parenting assessed with the Squiggle paradigm and parental RF rated of the PDI as a reference measure. Furthermore, we anticipated that the reflective parenting and negative parenting factors would be inversely correlated, and that the negative parenting factor would be positively correlated with child internalizing and externalizing difficulties reported by parents and teachers. Based on previous work where we found that parents of sexually abused children generally have lower RF (Ensink, et al.,, 2015), we anticipated that they may generally manifest less reflective parenting in interaction. Finally, we anticipated that in addition to sexual abuse, the parent's reflective stance would explain variance in children's internalizing and externalizing problems as reported by teachers.

Method

Participants and Procedure

The present study forms part of a larger longitudinal study regarding the impact of childhood sexual abuse. A total of 158 mother-child dyads completed the Squiggle paradigm, when children were aged 5-12 years-old ($M = 91$ months; SD $=23.55$ months), including 88 girls and 70 boys. Of this group, 89 children (54 girls and 35 boys) had experienced sexual abuse. Sexually abused children were referred to the Child and Adolescent Consultation Service by

Youth Protection Services, Community Health Services, and family medicine practices in a French-Canadian city, as it was at the time the only specialized service for the evaluation and intervention of sexually abused children. All assessments took place at the Child and Adolescent Consultation service, and information regarding sexual abuse was based on medical and social work reports and information from police inquiries, including statements of admission by the abuser. Children from the community comparison groups were recruited from schools as well as health and community services. The majority of participants were French-Canadian (98%). The families had two children on average, the median family income was 25 000 to 35 000 Canadian dollars , mothers had completed an average of 14 years of education ($SD = 4.15$), and 42 % of the mothers in the sample were single.

The Parent Development Interview was introduced during a second phase of the research. Given that the university clinic was known for working with sexually abused children, we did not want to contact teachers directly, and asked mother to give the teacher rating forms to the teacher. However this resulted in a lower completion rate of teacher rating forms as not all mothers gave the forms to teachers and not all teachers completed the forms. Parental RF (rated from the PDI) and teacher rating forms are thus only available for a subsample (n= 85 and n= 83).

The study was conducted in accordance with the standards of the ethics committee of the university and all participants had access to psychological services. Parents received a small stipend of 15 Canadian dollars to cover transport costs, and children selected a small gift.

Measures

Parent Development Interview. Maternal RF was measured using the Parent Development Interview (PDI) Addendum to the Adult Reflective Functioning Scale (Fonagy, Target, Steele, & Steele, 1998). The PDI is a 45-item interview developed to assess parental

representations of the child and of the parent–child relationship, and was revised (PDI-R; Slade et al., 2004) for the assessment of RF across a range of domains: in relation to the child, the parent's own parents, and the self. In order to do this, four of the questions from the Adult Attachment Interview (George, Kaplan, & Main, 1996) designated by Fonagy et al. (1998) as demand questions and directly tied to the assessment of RF, were included. The revised version was also developed to be applicable to a larger age range, and can be used with parents of children from infancy to adolescence. Initial reliability estimates produced using intra-class correlation (ICC) coefficients ranged from .78 to .95 (Slade, Grienenberger, Bernbach, Levy, & Locker, 2005).

This 1-hour interview was videotaped and transcribed for coding purposes. Twelve demand questions were coded with reference to the manual, which provides illustrations of different types and levels of RF responses. An overall RF score (ranging from −1 to 9) is assigned following the guidelines in the manual. All protocols were coded by the first author (KE) and fourth author (LN) of the study. Protocols were allocated so that the authors never coded both parent and child measures for any dyad. Inter-rater reliability was calculated on 20% of the protocols and was satisfactory (ICCs ranged from .67 to .98 for the 12 demand questions and reached .73 for the global PDI score). To prevent coder drift, there were regular meetings where coding difficulties were discussed and challenging transcripts were identified and double coded.

Child Internalizing and Externalizing Behavior Difficulties. The Child Behavior Checklist (CBCL) is a 118-item questionnaire that assesses a broad range of internalizing and externalizing difficulties. The original form was developed for children aged 4 to 18 (Achenbach, 1991). In the present study, we used a revised version for children aged 6 to 18 (Achenbach & Rescorla, 2001). Both parent and teacher report forms (TRF) were used. Respondents rate each item on a three-point Likert scale ranging from 0 (not true) to 2 (very true or often true). The CBCL has been demonstrated to have good psychometric properties (Achenbach & Rescorla,

2001). Achenbach and Rescorla (2001) report alphas of .90 to .97 for the broad-band scales (Internalizing and Externalizing) for both the CBCL and TRF. Internal consistency was evaluated with Cronbach alphas (α) and was satisfactory in the present study (87 - .92).

The Squiggle Reflective Parenting Paradigm. The Squiggle paradigm used in the present study is an adaptation of the paradigm that Winnicott (1968) developed to have access to the inner world of a child in a therapeutic context and to elaborate therapeutically salient themes (Ensink & Normandin, 2000). The Squiggle is an activity that is potentially creative, playful, and challenging for the mother, as she has to direct the creation of a drawing and a story. To complete the Squiggle paradigm and solicit the child's participation, the parent has to provide structure, while considering the reactions of the child. At the same time there is an opportunity to have a playful interaction, and to observe their reflective stance as expressed in their interest in the child's internal world and emotional reactions as expressed during the interactions. Concretely, the mother is given six large (11" x 17'') white sheets of paper and a lead pencil. The mother is instructed to make a squiggle and invite the child to complete her squiggle and make it into anything the child wants. The process is then inversed so that the child starts the squiggle and the mother completes it and so forth until they have produced six drawings. The mother is told that she is free to comment and ask questions to the child at any time during the activity. Furthermore, she is instructed to ask the child to place the squiggles in an ordered sequence to make a story, followed by her making a story. The assessment starts when she presents the task to the child and has to obtain his cooperation and interest. The task is video recorded so that verbal and non-verbal interactions and facial expressions can be taken into account in the assessment.

The Squiggle Assessment of Reflective Parenting Manualized Coding System.

To evaluate reflective parenting implicit in an interactional context, the Reflective Parenting Assessment (RPA) coding system (Ensink, Normandin & Terradas, 2003) was revised and a manualized scoring system elaborated (Normandin et al., 2015). The coding system was developed for use with the Squiggle Paradigm in which the parent is challenged to gain the child's interest, engagement, and cooperation in creating a series of drawings and formulating a story in which meaning is attributed to the squiggles.

Three dimensions of reflective parenting, namely interest in the subjectivity of the child, affective communication, and capacity to play are coded on a 9-point scale anchored at five points; 0 (*absent*); 2 (*minimal, limited*); 4 (*moderate*); 6 (*definite*) and 8 (*marked*). Clear descriptions of all the dimensions are provided, as well as descriptions of each point, in order to facilitate identification and coding. The dimensions are as follows:

1) Interest in the subjective experience of the child refers to the extent that the mother shows interest and awareness of the internal and psychological world of the child, and displays an interest in the drawings of the child and their reactions and especially the extent to which their responses reflect an awareness and understanding of the child's mental states and reactions. This is rated from no evidence of interest in the subjective experience of the child (e.g., some parents mechanically pose the questions, and when the child does not respond immediately, rush in with a story (score of 0)); evidence of some basic interest (e.g., some parents simply ask, "What did you draw?" without showing further interest or asking for elaboration, or make comments to correct what they perceive as errors in the child's story, for example, saying "Dogs should not walk in the road!" (score of 2); evidence of sensitive responding (e.g. in response to a child hiding his drawing, the mother says "Would you prefer me not to see your drawing for the moment until you have finished?" (score of 6)); evident capacity to sensitively pick up on and seem to know what the child is trying to communicate and help them elaborate this (e.g., in

responding to a child who is dyslexic who draws a boy reading a book, but asks his mother's help to write something "It seems like you can't wait to learn to read?" (score of 8)).

2) Affective communication refers to the extent to which the mother identifies, reflects, and gives meaning to the affective communication of the interaction. This is rated from no evidence of affective communication (score of 0); limited evidence of affective communication (e.g., situations in which the mother comments that the child is agitated, but does not propose a reason or solution, (score of 2)); some evidence of affective communication (e.g., in explaining her drawing, the mother says, "That is you at the Aquarium. You were afraid of the shark. Do you remember?", (score of 4)); evident affective communication (e.g. "You are finding it quite difficult to make a drawing with my squiggle. Perhaps this is why you are getting angry so quickly? I know it can be difficult, but you are doing well,"(score of 6)); and marked affective communication (e.g., "I have the impression that it is because I did not say that your drawing was excellent that you do not want to continue. I understand that you made quite an effort and are disappointed and I thought it in my head, but did not say it", (score of 8)).

3) Capacity to play refers to the capacity of the mother to enter into the world of play and pretend and to engage the child in imagining and use of this transitional space, while she is able to engage both in the fantasy and pretend dimension of the play and elaborate the symbolic content of the play. This implies that the mother has to understand that her role is to facilitate the child's play, rather than use the Squiggle as an opportunity to express her own fantasies. She also has to have a sense that what the child draws is not equivalent to reality, so that when the child draws a witch, for example, they are not saying that *she* is the witch. The capacity to play is rated from no evidence of the capacity to play, (e.g,, where the mother simply sticks to what the child draws and makes no effort to play (score of 0)); minimal capacity to play, (e.g., where the mother appears to rush mechanically through the task, concerned about what she has to do rather than

engaging the child in the play (score of 2)); some capacity to play, (e.g. a mother who frowns and says, "I told you I would do my best, but that is too complicated"(score of 4)); evident capacity to play (e.g., the mother makes spontaneous remarks during the Squiggle in which she makes reference to the intentions of the characters, and where there is evidence that her squiggles "reply" to that of the child, so that there is a clear link and elaboration of the themes introduced by the child (score of 6)); marked capacity to play (e.g., the mother is able to stimulate the imagination of the child and elaborate fantasy and its symbolic significance, and remains focused on the relationship rather than focused on succeeding with the activity (score of 8)).

Relationships in which there is an emotional climate of affection and support stance are considered to facilitate mentalizing as children are unlikely to engage in imagining and be open about what comes to mind unless they feel secure and there is a benign atmosphere of trust and support. For this reason two positive parenting dimensions are also assessed, namely: 1) Support of investment/agency of the child, which is the extent the mother is able to elicit and support the motivation of the child to invest in the task and support his sense of competence, and; 2) Expression of affection; extent to which the mother communicates affection for the child whether verbally or through her physical gestures, facial expressions, or tone of voice.

In addition, three negative dimensions of parental mentalizing, considered incompatible with reflective parenting, so that it would block imagination and mentalizing are also assessed, including: 1) Withdrawal/disengagement, in which the mother withdraws, or shows behaviors that minimize contact with the child, or does not engage with her role as facilitator to lead the task; 2) Aggressive control, which is the extent to which the mother invalidates the child's experience and individuality or where there is little place for this to emerge, and; 3) Hostility, evident in the mother's attitude to the child in which she criticizes and denigrates the child and his efforts, sneers or shows contempt in her facial expressions.

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To evaluate whether it was possible to achieve satisfactory inter-rater reliability using the RPA manualized coding system, five students, including two doctoral students and three undergraduate students in psychology, were trained by the second author. The training included an introduction to the theory behind the measure and a demonstration/interactive coding of five squiggles, followed by the correction of 10 additional squiggles coded individually by the coders, before they completed the coding for inter-rater reliability. All raters were blind with respect to group membership.

Statistical Analyses

Inter-rater reliability was examined using Intra-Class-Correlations (ICC), and factor structure was assessed using Exploratory Structural Equation Modeling (ESEM) carried out using Mplus (Version 5.2; Muthén & Muthén, 2010). In ESEM, both exploratory and confirmatory factors can be created simultaneously and can be related in a structural equation model framework, without the limitations of the overly restrictive confirmatory factor analysis/structural equation modelling measurement structure (Asparouhov & Muthén, 2009; Marsh, Morin, Parker, & Kaur, 2014). In the current study, considering that the eight dimension measured by the RPA were ordinal variables and that analyses of univariate and multivariate skewness and kurtosis indicated departures from normality (i.e., marked floor effects), robust weighted least squares (mean and variance adjusted) estimation was used, as recommended in these situations (Brown, 2006; Lubke & Muthén, 2004). Oblique geomin rotation was preferred to other alternative types of rotation, following the recommendations of Asparouhov and Muthén (2009). Finally, Hu and Bentler's (1999) guidelines for various fit indices and an inspection of the factor solutions were used for decisions regarding factor retention. To explore convergent validity, correlations between the Squiggle factors and the PDI were examined. The contrasted groups approach was used to examine differences in the mean scores on the scales identified in mothers of sexually

abused children and mothers of non-abused children. Next, the relationships between the

Squiggle factor scales and the child psychosocial difficulties reported by teachers and parents

were examined, and finally, two multiple regression analyses were used to examine the

association ability of the PR stance to explain variance in child internalizing and externalizing

difficulties.

Results

Inter-Rater Reliability

The ICCs for the six coders who coded 20 mothers interacting with their children in the

context of squiggle assessment paradigm were computed using a two-way random model with an

absolute agreement criterion between the coders and the second author of the study, so that the

model is ICC(2,6). Average ICC's ranged from 0.90 and 0.96, and were indicative of excellent

inter-rater reliability for all the RPA items according to Landis and Koch's criteria (Landis &

Koch, 1977).

Factor Analysis

Descriptive statistics, including means and standard deviations for the eight items are

presented in Table 1. ESEM was used to evaluate factor solutions with up to three factors,

considering the limited number of items. Since the chi-square summary statistic for examining

the adequacy of model fit is sensitive to sample size and is likely to overestimate lack of fit

(Hooper, Caughlan, & Mullen, 2008), complementary fit indices were used to evaluate the

models, namely the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root-mean-

square error of approximation (RMSEA), the standardized root-mean-square residual (SRMR),

and the Akaike Information Criterion (AIC). Although we anticipated a two-factor solution

(essentially regrouping positive and negative dimensions), a three-factor model produced a better

fit on all fit indices (see Table 2). The first factor, Reflective Parenting Stance (RPS), included

items related to the interest in the child's subjectivity, affective communication, and capacity to play. The second factor, Affectionate Support of Agency, regrouped the items related to support of agency and affection. The third factor, Aggression, regrouped the aggressive control and hostility items.

The pattern of factor loadings from the three-factor model for the RPA's eight items is given in Table 3. The item withdrawal/disengagement did not show significant loadings and was therefore not included in future analyses. Inter-factor correlations are also shown in Table 3. The correlation coefficients suggest significant positive correlations between RPS and Affectionate Support of Agency and significant negative correlations between Aggression and RPS, as well as between Aggression and Affectionate Support of Agency

Internal Consistency

The items constituting the three factors showed a satisfactory degree of internal consistency with alpha coefficients of 0.87 for the RPS factor, 0.85 for the Affectionate Support of Agency factor and 0.74 for the Aggression factor.

Construct Validity

Results show that there were significant correlations between the three scales of the RPA and the PDI total score as shown in Table 4 demonstrating a good convergent validity between the RPA factors and maternal RF as measured with the PDI. Furthermore, the results of group comparisons using t-tests indicated that mothers of sexually abused children were considered to show less evidence of a reflective stance in interaction with their children than mothers of non-abused children ($t(156) = 2.82$, $p = 0.005$, $d = 0.45$) and less affectionate support ($t(156) = 2.67$, $p = 0.009$, $d = 0.43$). There were no significant differences on the negative parenting factor ($t(156) = -0.62$, $p = 0.535$, $d = 0.10$). On the whole, the RPA can distinguish mothers of sexually abused children and mothers of non-abused children interacting with their children.

Associations between RPA scales and child internalizing and externalizing difficulties

Associations between the RPA factor scores and other variables of interest such as child externalizing behavior difficulties, as reported by the mother and teacher, are shown in Table 4. There were significant correlations between the Reflective Parenting Stance and teacher reports of child internalizing and externalizing difficulties, as well as parent reports of child externalizing difficulties. Furthermore, there was a small significant correlation between negative parenting and teacher reports of child externalizing difficulties. Affectionate Support was inversely correlated with parent reported externalizing difficulties.

To examine the relative contribution of the parent's reflective stance and trauma in the prediction of child psychopathology, two standard multiple regression analyses were performed. In the first model, sexual abuse and RPS factor score were entered as predictors of child internalizing behaviours (per the Teacher-Report Form). In the second model, the same predictors were used in the prediction of child externalizing behaviours (per the Teacher-Report Form). The assumptions of normality, homoscedasticity, linearity of the relationships and absence of multi-collinearity have been tested and met for both models. These asumptions of normality was tested using descriptive analyses (range, mean, skewness, kurtosis). Homoscedasticity and linearity were tested with the same descriptive data using the the error of prediction (residuals). Multicolinearity was tested using the VIF and Tolerance indices.

Regarding externalizing behaviours, the regression model was significant ($F(2, 82) = 11.11$, $p = .001$) and explained 21.2% of the variance of the outcome (see Table 5). Furthermore, both sexual abuse and the RPS factor score made significant contributions to the model, with sexual abuse explaining 9.2% of the variance of externalizing behaviours and parent's reflective stance explaining 6.5%

Regarding internalizing behaviour difficulties, the two-predictor regression analysis was significant ($F(2, 82) = 3.82$, $p = .026$) and explained 8.5% of the variance of the outcome variable ($R = .29$; see Table 5 for full results). The results also showed that only RPS made a significant contribution to the model explaining 4.8% of the variance in internalizing difficulties

Discussion

The aim of this study was to examine whether reflective parenting as assessed with school-aged children and their parents could be operationalized for research purposes and reliably assessed using the RPA and a manualized coding system, and whether the reflective parenting stance explained variance in child psychological difficulties.

The study findings indicate that reflective parenting can be assessed reliably using the RPA. Inter-rater reliability was excellent using Landis & Koch's (1977) criteria. Moreover, the findings of the factor analysis suggest that the measure assesses three dimensions of reflective parenting. The first factor regrouped items indicative of a *reflective parenting stance*, while the second factor contained items relating to the *affectionate support of agency*, and the third factor contained all the *negative parenting* items. The items relating to interest in the child's subjectivity, communication of affects, and capacity to play, constituted the reflective parenting stance factor, and the display of affection and support of agency constituted the affectionate support of agency factor. The third factor, named negativity, regrouped the items assessing aggression and hostility. Contrary to expectation, withdrawal did not load on this factor or any other factors, possibly because few parents displayed withdrawn behaviours in the context of the Squiggle task, probably because it actively solicits parental structuring and engagement, and thus precludes the observation of withdrawn behaviours that may be more likely to manifest in contexts in which parental involvement is not this directly solicited.

In terms of construct validity, there were significant correlations between the three scales of the RPA and the PDI total score, with the strongest correlation being, as expected, between the RPS and the PDI total score. This is consistent with our model wherein this dimension, which includes interest in the child's subjectivity, communication regarding affect, and capacity for playfulness, best "captures" reflective parenting. The findings broadly confirm the convergent validity of the RF construct. At the same time, the medium strength of the correlation between RPS and PDI suggests that although the constructs are clearly related, they also remain distinct. Strong correlations are usually expected when the same construct is measured using similar methods such as questionnaires. In the present study we used very different methods to assess implicit and explicit parental mentalizing (in behavioral interaction and semantic representation respectively), yet the correlation is nearly as strong as that reported between RF assessed using the AAI and the PDI (r = .53; Crumbley, 2009).

There were also small significant correlations between Affectionate Support of Agency and parental RF assessed with the PDI, as well as Negative Parenting and parental RF assessed with the PDI, confirming that these dimensions are comparatively less central in the construct, than the RPS. Affection and the inhibition of hostility could be seen as expected preconditions to create an optimal context for the RPS. Affectionate support of agency likely contributes to an atmosphere of trust and security in which attachment and motivational systems are solicited, facilitating the expression, sharing, exploration and elaboration of subjectively salient themes with someone else. In addition, hostility is considered incompatible with a mentalizing stance (Fonagy, 2003), and more reflective parents generally are more able to inhibit aggression when interacting with children (Ensink et al., 2016) as there is an implicit understanding that it undermines trust and motivation to express, elaborate, and share subjective concerns. Some parents may not be particularly reflective regarding themselves and may not be aware when they are aggressive,

especially when it is a reaction to anxiety or fear, or when it is linked to personality or trauma, and it may be especially important to address difficulties at the affective level in parent-child dyads who seem to have difficulties just being together.

Also, the findings indicate that, using the Squiggle assessment of reflective parenting, it was possible to detect significant differences in parent-child interactions between parents with children reporting histories of sexual abuse, as compared with parents of non-abused children on both the RPS factor score and the Affectionate support of agency scales with strong effect sizes. This suggests that the Squiggle assessment can be used to identify difficulties manifesting in the way that the parents of sexually abused children interact with their children and attend to their subjective states, express affection and support of agency. Being able to clearly identify these types of difficulties could potentially help to focus interventions on regaining or developing this parental stance to contribute to psychological adjustments and recovery of children subsequent to experiences of abuse.

In terms of the associations between the RPA scales and child psychopathology, there were significant correlations between the RPS factor score and child internalizing and externalizing symptoms as assessed by the teacher, as well as externalizing difficulties reported by the parent. However, the associations between the RPS factor score and parent reports of child externalizing and internalizing difficulties were small and not significant, in contrast to the significant and moderate strength associations between the RPS factor score and teacher reports of child difficulties. Possible explanations for this finding are that, compared with teachers, parents are less objective observers of child difficulties, especially in parents with lower RF, and in addition, the emotional reactions to the trauma in parents of sexually abused children may color their perceptions of the child's difficulties. These parents may to some extent project their own feelings onto the child, and it may be difficult to maintain the capacity to be an objective observer

of the affective reactions of others under circumstances in which strong affects are activated and that are likely to be very distressing. In line with this argument, we have previously found no relationship between parental RF assessed using the PDI and child reported depression in this sample (Ensink, Bégin, Normandin & Fonagy, 2016), suggesting that the relationship between parental RF and parent reports of child internalizing difficulties may be more complex. There were small significant relationships between the Affective Support of Agency dimensions of the RPA and parent reports of child externalizing difficulties. In addition, parents of sexually abused children also appeared to show less affectionate support. These findings suggest that it may be important to help parents of sexually abused children, as well as parents of children with externalizing difficulties, to regain or develop their capacity to express more affectionate support of the child's agency.

There were small significant correlations between hostile parental control and aggression rated in the context of the Squiggle paradigm and teacher reports of child externalizing difficulties. While the cross-sectional design of the study means that caution should be exercised in making assumptions regarding the direction of effects, these findings are consistent with the large body of evidence showing that parental aggression has a negative impact on children's regulation of their own behavior and aggression. We have concluded elsewhere that parents' modulation of aggression in the presence of their children is key to the development of trusting and secure attachment relationships and to developing organized patterns of affect regulation in early childhood (Ensink et al., 2016). Parent's capacity to modulate their hostility may also be particularly important when responding to child behaviors that are considered aggressive or provoking, and where responding with aggression is likely to escalate the child's aggression and dysregulation (Ensink, Bégin, Normandin & Fonagy, 2016).

Finally, an important finding of the study is that in a regression model in which both sexual abuse and RPS factor score were considered, both made significant contributions to explaining variance in child externalizing difficulties reported by teachers, and only the RPS factor score explained variance in child internalizing difficulties reported by teachers with moderate effect sizes (d = .65 and .48 respectively). The finding that only reflective parenting explained child internalizing difficulties and that reflective parenting also explained unique variance in child externalizing difficulties is particularly important .considering the widely recognized negative impact of child sexual abuse in terms of emotional and behavioral dysregulation, neurophysiological impact on the cortisol and stress regulation system, as well as psychosocial impacts This suggests that the ability of the parent to maintain a reflective stance and engage with the child in a way that considers their mind and experience, has a regulatory function associated with reduced internalizing difficulties that appears to be even stronger than the dysregulatory effect of sexual abuse.

From a clinical perspective, the RPA provides a relatively simple framework that enables clinicians and parents to think about parenting interactions from a mentalizing perspective and allows the identification of potential areas of change. In previous clinical work, we have successfully used the Squiggle paradigm assessment in addition to the PDI to guide intervention priorities with parents in the context of child sexual abuse. Furthermore, the RPA could potentially help to inform parent-child relational therapy, frequently considered a treatment of choice with at risk populations (Toth, Gravener-Davis, Guild & Cicchetti, 2013). Whereas the PDI provides access to information regarding underdeveloped mentalizing capacities and distorted representations of the child and their behaviors, assessing interactions directly enables the clinician to immediately identify specific areas and opportunities in which parents can be encouraged to engage in ways that express their interest in the child's internal world and help

children elaborate this. While these types of behaviors may come naturally to parents with secure attachment styles (Hsiao, Koren-Karie, Bailey & Moran, 2015), other parents may be able to develop these types of interactions when guided and encouraged to do so. At the same time, it provides information, for example, about parental hostile and controlling behaviour that blocks child elaboration so that the clinician may be able to encourage the parent, for example, to let go of control when this is intrusive or overshadowing of the child, and practice following the child's lead more. From a psycho-education perspective, access to information about reflective parenting whether in a group, through talks and discussion, or through videos and booklets could increase awareness about reflective parenting.

Working with parents appears to be particularly important in the context of child sexual abuse. For example, Cohen and Mannarino (1998) found that parental support is the strongest family predictor of good outcomes for children and recommend involving parents in the treatment to improve parenting skills and increase support for children (Celano, Hazzard, Webb, & McCall, 1996; Deblinger, Lippmann, & Steer, 1996). In addition, from a mentalization perspective, focusing on parenting that supports the development of children's mentalizing capacities appears to be particularly important considering that children's mentalizing appears to be associated with lower depressive symptoms (Ensink, Bégin, Normandin & Fonagy, 2016).

While the study has a number of strengths, the findings need to be interpreted in light of certain limitations. Although the sample size was relatively large for studies using observational data, it was at the lower limit for factor analysis using Exploratory Structural Equation Modeling. The Affectionate Support of Agency scale and the Negative Parenting scale have few items and this may have contributed to inadequate sampling of the construct. While excluding these scales would make the assessment less comprehensive, but it can be argued that an assessment focusing exclusively on the reflective parenting stance is warranted. Future research is needed wherein the

RPA is used with other parenting scales to better understand the extent to which this assessment of reflective parenting makes a unique contribution to explaining outcomes, and to what extent it overlaps with assessments of parenting from other perspectives. Another limitation of the present study concerns the fact that only mothers participated in the RPA; further research with fathers is needed to examine how fathers engage with the Squiggle paradigm and whether reflective parenting of the father assessed in this way is related to child adaptive problems.

Having an assessment of reflective parenting in action, in addition to an assessment of parental RF based on parental discourse, has a number of advantages this study shows that the reflective parenting stance can be assessed reliably using the Squiggle paradigm. It complements assessment of parental RF using the PDI. While the PDI enables the identification of difficulties in the parent's representation of the child and thinking of the child as internally motivated, the assessment of reflective parenting in interaction enables clinicians to identify difficulties the parents have in considering and supporting the child's subjectivity in interaction with the child. This has direct clinical implications as clinicians can formulate interventions to address the parent's most salient difficulties.

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Table 1

Descriptive statistics for the RPA's eight items

Items	Mean	SD	Skewness	Kurtosis
Interest in the subjective experience of the child	3.56	1.60	-0.03	-0.38
Affective communication	2.66	1.41	0.46	0.13
Capacity to play	4.18	1.61	0.08	-0.52
Support of investment/agency of the child	3.56	1.83	0.03	-0.25
Expression of affection	4.71	1.71	-0.19	-0.03
Withdrawal/disengagement	1.77	1.96	1.10	0.76
Aggressive control	1.45	1.96	1.50	1.60
Hostility	1.30	1.91	1.74	2.45

Note. RPA = Reflective Parenting Assessment *N* = 158

Table 2

Goodness-of-Fit Indices for Exploratory Structural Equation Models of the RPA

Model	χ^2	*df*	*p*	χ^2/df	CFI	TLI	RMSEA	90% CI	SRMR	AIC
One-Factor	89.54	20	<.001	4.47	.91	.87	.15	[.12, .18]	.06	4573.12
Two-Factor	34.30	13	.001	2.64	.97	.94	.10	[.05, .08]	.03	4531.89
Three-Factor	**7.84**	**7**	**.348**	**1.12**	**.99**	**.99**	**.03**	**[.04, .07]**	**.01**	**4517.42**

Note. RPA = Reflective Parenting Assessment; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root-Mean-Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; AIC = Akaike Information Criterion; Model in bold is the best fitting model according to these comparisons.

Table 3

Factor Loadings from Exploratory Structural Equation Model of the RPA's Items and Inter-Factor Correlations

	RO	R	N
Reflective Parenting Stance (RPS)			
Interest in subjectivity	**0.64**	0.33	-0.03
Affective communication	**0.62**	0.14	-0.05
Capacity to play	**0.75**	0.13	-0.21
Affectionate support of agency (ASA)			
Support of agency	0.08	**0.80**	-0.05
Affection	0.17	**0.65**	-0.02
Negative Parenting (N)			
Withdrawal/disengagement	-0.32	-0.03	0.26
Aggressive control	-0.11	-0.01	**0.68**
Hostility	-0.01	-0.01	**0.86**

Inter-factor correlations			
	RO	R	N
Reflective Parenting Stance (RPS)	1.0		
Affectionate support of agency (ASA)	0.63*	1.0	
Negative Parenting (N)	-0.42*	-0.44*	1.0

Note. RPA = Reflective Parenting Assessment. Loadings in bold exceed the threshold of .45 (Tabachnick & Fidell, 2007) for a substantial factor loading.

* $p < .05$

Table 4

Inter-correlations matrix between the RPA factors, PDI reflective functioning and child internalized and externalized behaviour difficulties as reported by the mother and the teacher on the CBCL

Scales	1	2	3	4	5	6	7	8
1. PRF stance	-	-	-	-	-	-	-	-
2. Affection/Support	.75**	-	-	-	-	-	-	-
3. Negative Parenting	-.61**	-.62**	-	-	-	-	-	-
4. PDI	.45**	.30**	-.35**	-	-	-	-	-
5. Int (teacher)	-.29*	-.15	.07	-.19*	-	-	-	-
6. Ext (teacher)	-.37**	-.15	.21*	-.38**	.57**	-	-	-
7. Int (parent)	-.09	-.15	.11	-.24*	.32**	.31**	-	-
8. Ext (parent)	-.18*	-.19*	.15	-.25*	.36**	.51**	.66**	-
9. Sexual abuse	-.22**	-.21**	.10	-.33**	.19	.38**	.38**	.48**

Note. RPA = Reflective Parenting Assessment, RP stance = Reflective Parenting stance, PDI = Parental Development Interview, CBCL = Child Behavior Checklist.
N = 158 for RPA and CBCL ; N = 85 for PDI and Teacher Reported internalizing and externalizing difficulties
[†] * $p < 0.05$ ** $p < 0.01$

Table 5 *Sexual Abuse and Parental Reflective Stance as predictors of Teacher Reported Child Internalizing and Externalizing Difficulties*

Internalizing	B	SE	β	*t*	*sr²*
Sexual abuse	2.44	1.99	.13	1.22 (p = .226)	.02
PRF stance	-.46	.22	-.23	-2.06 (p = .042)	.05
(Intercept)	58.84	3.03	$R = .29$	$R^2 = .09$	R^2 (adjusted) = .06
Externalizing					
Sexual abuse	6.29	2.03	.32	3.10 (p = .003)	.09
PRF stance	-.59	.23	-.26	-2.59 (p = .011)	.07
(Intercept)	60.32	3.08	$R = .46$	$R^2 = .21$	R^2 (adjusted) = .19