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Parental Reflective Function and Preschool Children's Development: Preliminary Findings

Elena Ali RN PhD (c) & Nicole Letourneau RN PhD FCAHS

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Outline

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- Methods
  - Sample
  - Measures
  - Analysis
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- Discussion

Background

Reflective Function (RF) – the ability to imagine states in the self and others (Fonagy et al., 2002)

Parents with high RF have the ability to see their child as an autonomous individual (Fonagy, 1991; Fonagy et al., 1991)

Mothers and fathers play unique but important roles in supporting children's development (Grossman et al., 2002)

Mothers' and fathers' RF is theorized to:

- Directly predict children's development (Allen et al., 2008; Sharp & Fonagy, 2008)
- Indirectly predict children's development via improvements in qualities of parent-child relationships (Steele et al., 1996; Fonagy & Target, 1997)

Background

- For mothers and fathers, higher scores on measures of RF are linked to a greater likelihood of secure infant attachment (Steele et al, 1996; Lundy, 2003)
- In preschoolers, attachment security predicts:
  - Symbolic play and mentalizing abilities (Meins et al., 1998)
  - Positive behaviours, such as resiliency and curiosity (Arend et al., 1978)
  - Cognitive (IQ) development (Bergman et al., 2010)
  - Language development (van Ijzendoorn et al., 1995)

Background

- Mothers' and fathers' RF are empirically associated with qualities of the parent-child relationship, including:
  - Parental sensitivity (Rutherford et al., 2013)
  - Responsiveness to infants' basic needs for care (Camoirano, 2017)
  - Security of infant attachment (Sadler et al., 2013)

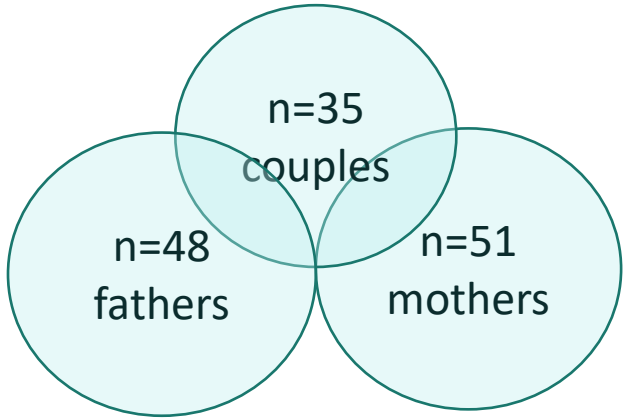
- The quality of mothers' and fathers' relationships with their children are demonstrated to predict children's:
  - Social-emotional development (Groh et al., 2012)
  - Cognitive development (Bergman et al., 2010)
  - Language development (Kelly et al., 2008)

Research Aims

- Understanding the association between mothers' and fathers' RF and preschool children's development would fill an empirical gap and inform the implementation of community parenting programs
- To identify the association between:
  - Mothers' RF and preschool children's development
  - Fathers' RF and preschool children's development
- To examine the combined contributions of mothers' and fathers' RF to preschool children's development

Methods – Sample

- APrON study ~2200 mothers, ~1200 fathers and ~2200 children followed since pregnancy until 12 years of age
- Fetal Programming Study (FPS) is a sub-study with more detailed information on parent-child relationships, including attachment security
  - The current study obtained a sample of 75 mother-father couples from the FPS
  - To date, data are available for this analysis on 51 mothers, 48 fathers, comprising 35 couples



Methods – Sample

Inclusion criteria:

- Mothers who enrolled during pregnancy, after 27 weeks gestation
- Mothers who were 16 years of age and English speakers
- Children whose mother and father were in a co-parenting relationship (father still completing APrON questionnaires suggesting ongoing engagement)
- Families who agreed to be followed until 72 months of child age

Exclusion criteria:

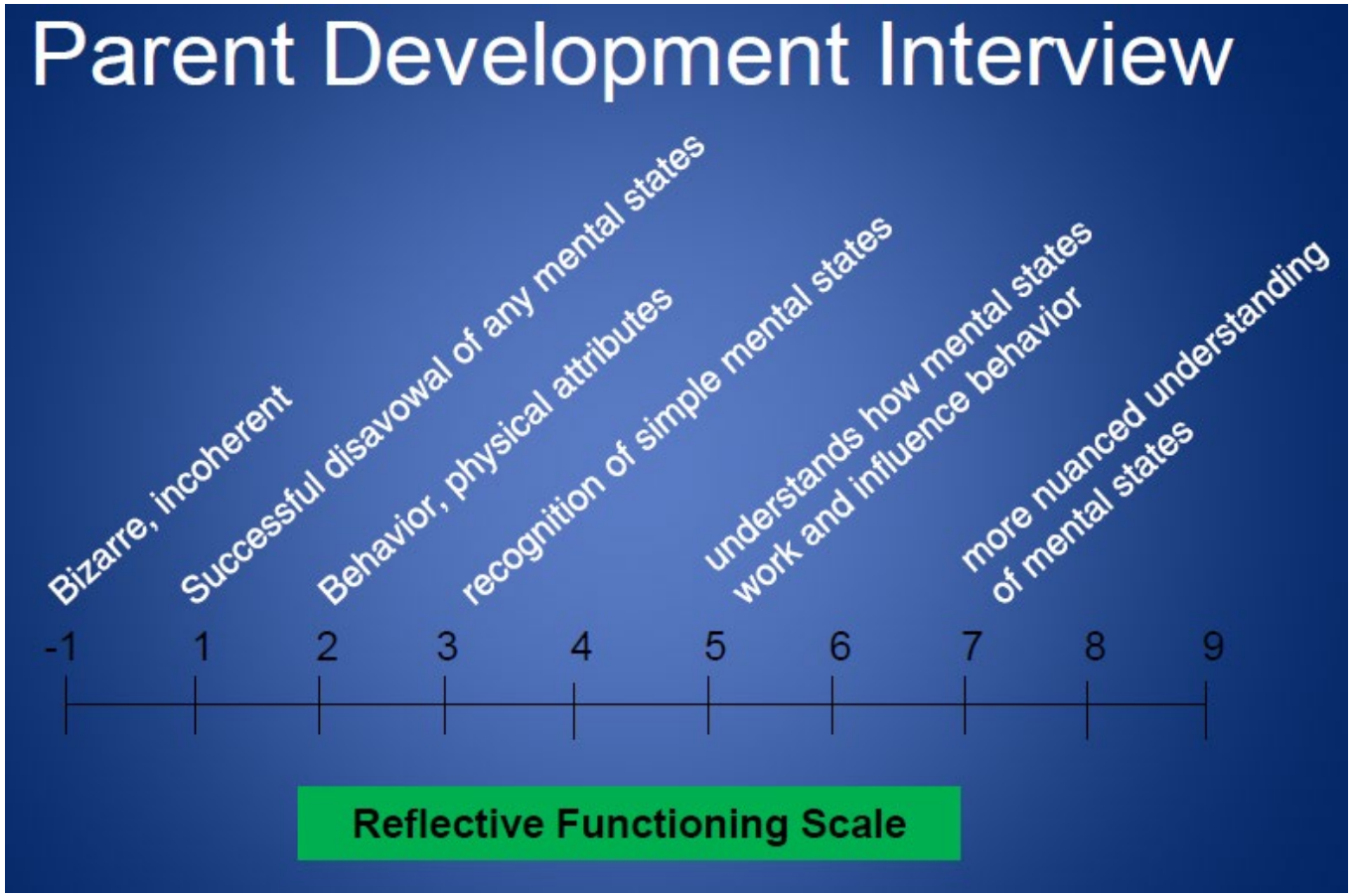
- Mothers who were addicted to illegal substances
- Children who had an intellectual or motor disability

Methods – Measures

Independent variable – ***Parental RF***

- RF scores were tabulated from the Parent Development Interview (Slade et al., 2014) for mothers and fathers, which was conducted when children were 48 – 59.9 months of age.
- The PDI is a 20-item semi-structured interview used to assess parents' representations of their child. Separate interviews were conducted with each parent.
- Using Fonagy, Target, Steele and Steele's (1998) Index, scores were derived for ***Self*** (parental), ***Child***, and ***Total RF***.
- 14 transcripts were double coded for inter-rater reliability, attaining modest coefficients
  - .71 for ***Self***, .65 for ***Child*** and .64 for ***Total RF***.

Reflective Function 9-point Scale



Low Reflective Function about the *Child*

So how do you think your angry feelings affected your child?

Uh, I don't think they made him feel bad. I almost guarantee that they almost give him a sense of accomplishment. You know that, (like)'my goal was to irritate him'.

Low Reflective Function about *Self*

Have you ever felt that you needed someone to take care of you or to be there for you? Sure, yeah, of course I've felt like I've needed to be taken care of, or feeling like I need some help.

What was that like for you?

I don't know.

High Reflective Function about the *Child*

Can you tell me about a time that (child's name) felt rejected or left out?

I knew she was feeling left out the day that she said she wanted more time with just me. I think she just felt alone. And I think it's a really hard feeling no matter what your age. But it's especially difficult when you're not, when you're not able to take care of yourself at all, and you're still dealing with all the, like there's so much more in childhood. All the feelings just, they're bigger, and so I think anything that's good or bad for adults, it's a lot worse for her. And so I think it breaks her anytime there's a little bit, just because they're so much sadder.

High Reflective Function about *Self*

Have you ever felt that you needed someone to take care of you or to be there for you? Yes... I was pretty upset that I was having to ask for support. Um, I was frustrated and upset.
How did you handle your feelings at that time?
I just, I expressed them, shared them, and made sure that I shared some ways that my, uh, that my expectations, or not really expectations but needs that could be filled. So I kind of studied the problem, and what I needed, and, um, then made sure that I just took some time to myself...

Methods – Measures

- Dependent variables

  - **Children's cognitive and language development** – the Wechsler Preschool & Primary Scale of Intelligence–4th Ed. (Canadian; WPPSI-4CDN) (Wechsler, 2012) was administered to each family nominated parent to produce Full Scale IQ scores

  - **Children's social-emotional development** – the Behaviour Assessment System for Children, 2nd ed. (BASC-2) (Reynolds & Kamphaus, 2004) was administered to each family nominate parents

  - Children were on average 53 months of age (SD=4.91 months) at assessment

  - Parent and child measures occurred within 6 months of each other

BASC-2 Subscales

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Primary Scale

Adaptability
Activities of Daily Living
Aggression
Anxiety
Attention Problems
Atypicality
Depression
Functional Communication
Hyperactivity
Social Skills
Somatization
Withdrawal

Content Scale

Anger Control
Bullying
Developmental Social Disorder
Emotional Self-Control
Executive Functioning
Negative Emotionality
Resiliency

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Methods-Analysis

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- Sample described with descriptive statistics
- Exploratory bivariate correlations were conducted to examine associations between BASC-2, WPPSI-4 and ***RF*** for ***Self***, ***Child*** and ***Total*** (one-tailed testing, alpha=.05) for mother and fathers in separate analyses
- Child behavioural variables significantly associated with ***RF*** were retained for multiple regression modelling
- For ***mothers'* RF** and ***fathers' RF,*** multiple regression models were selected with Mallow's Cp and tested (two-tailed, alpha=.05)
- For ***couples' RF***, exploratory hierarchical regression models were built and tested (two-tailed, alpha=.05)

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Results: Sample

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Variables	Mothers (n=51)	Fathers (n=48)	Children (n=64)
Age mean [sd] at enrollment	36.01 [3.79]	38.12 [5.29]	53.17 [4.91] *
GA at birth			
<37 weeks			2 (3.12)
37 or more weeks			62 (96.88)
Education			
Below university degree	14 (27.45)	14 (34.15)	
Degree or more	37 (72.55)	27 (65.85)	
Income			
Less than 70,000k	10 (19.61)		
70k or more	41 (80.39)		
Sex			
Male			28 (43.75)
Female			36 (56.25)

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Results: Mothers' RF and Child Development

Table 1: Association between Mothers' RF and Child Behaviour (BASC-2) (n=51)

Variables	SELF RF	CHILD RF	TOTAL RF
Somatization	-0.412 (p=0.001)*	-0.398 (p=0.002)*	-0.378 (p=0.003)*
Social Skills	0.250 (p=0.039)**	0.351 (p=0.006)*	0.303 (p=0.015)*
Activities of Daily living	0.254 (p=0.036)**	0.388 (p=0.002)*	0.341 (p=0.007)*
Functional Communication	0.266 (p=0.030)**	0.264 (p=0.031)**	0.287 (p=0.021)*
Developmental Social Disorder		-0.249 (p=0.039)**	

*Significant at p<.05, two-tailed; **Significant at p<.05, one-tailed.

Mothers' RF did not predict Full Scale IQ with the WPPSI-4

n=51 mothers

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Results: Fathers' RF and Child Development

Table 2: Association between Fathers' RF and Child Behaviour (BASC-2) (n=48)

Variables	SELF RF	CHILD RF	TOTAL RF
Somatization		-0.254 (p=0.041)	

Results achieve 1-tailed significance.

Fathers' RF did not predict Full Scale IQ with the WPPSI-4

n=48 fathers and children

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Results: Mothers & Fathers Summary

- The following were associated with higher maternal RF, as demonstrated by children:
  - Lower somatization
  - Higher social skills
  - Increased ability to complete activities of daily living
  - Higher functional communication
  - Lower developmental social disorder

n=51 mothers and children

- The following was associated with higher paternal RF, as demonstrated by children:
  - Lower somatization

n=48 fathers and children

Results: Regression Modelling

For Mothers, Models were Tested for:

- **Somatization**
- **Social Skills**
- **Activities of Daily Living**
- **Functional Communication**
- **Development Social Disorder**

n=51 mothers and children

For Fathers, Model was Tested for:

- **Somatization**

n=48 fathers and children

No model produced significant coefficients

Results: Regression Modelling

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n=35 couples and children

Table 3: Exploratory Regression for Child Somatization
(n=35 couples; 70 parents)

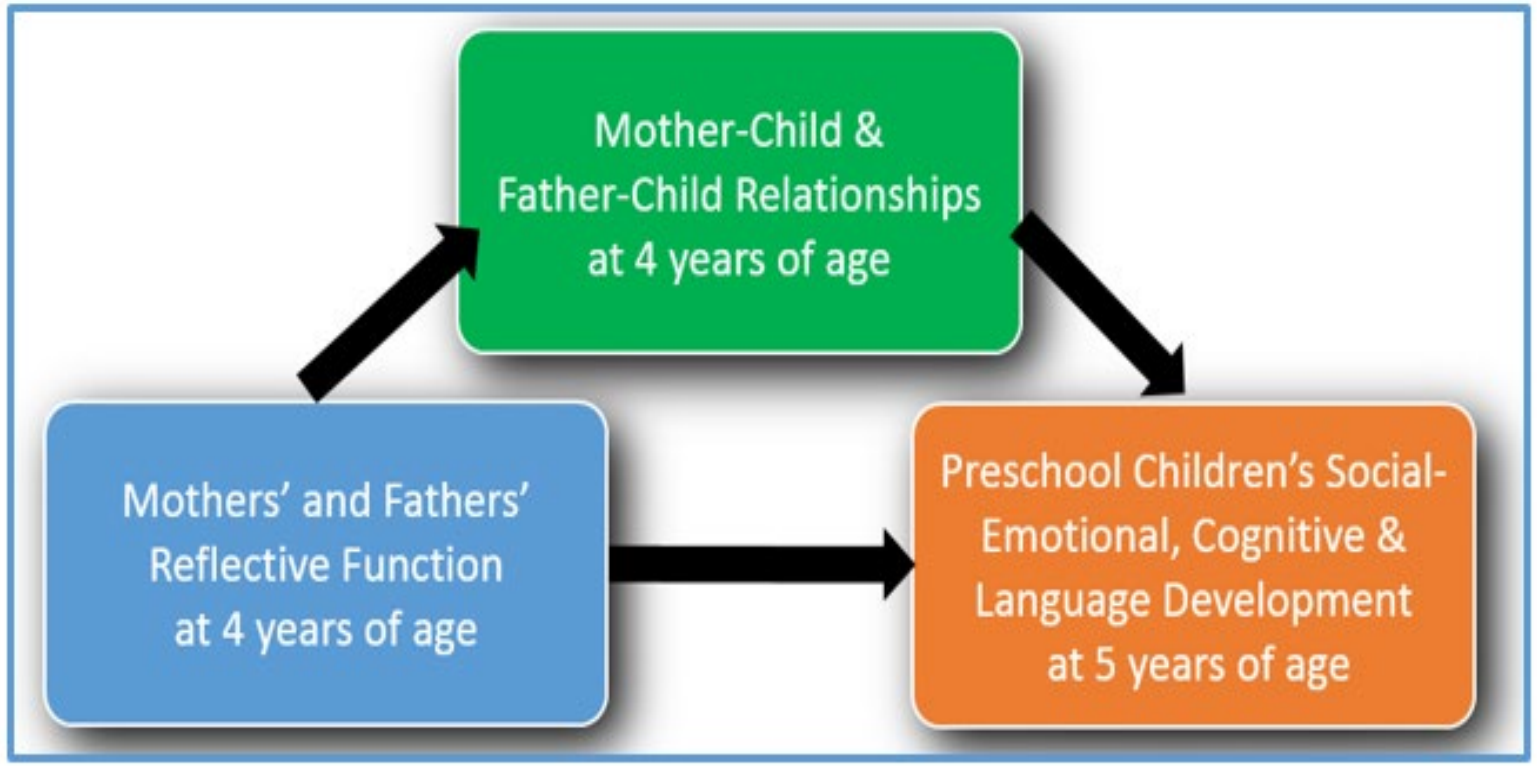
Variables	I	II	III	IV
Intercept	10.2(1.74) p=0.000	9.65(1.95) p=0.000	10.99(1.97) p=0.000	10.0(5.88) p=0.102
Mom Child RF	**-0.91(0.31) p=0.006**	**-0.92 (0.31) p=0.006**	**-0.10 (0.33) p=0.006**	**-1.03(0.36) p=0.010**
Dad Child RF	-0.13(0.28) p=0.644	-0.11(0.28) p=0.688	-0.05 (0.32) p=0.891	0.06(0.37) p=0.876
Mom Education		0.72 (1.03) p=0.491		0.29(1.23) p=0.814
Dad Education			-1.06(0.95) p=0.275	-0.86(1.05) p=0.424
Child Sex				1.08(1.07) p=0.323
Child Age				0.002(0.11) p=0.987
Family Income				-0.14(1.23) p=0.911
R-squared	**0.27**	**0.28**	**0.31**	**0.35**

Discussion

- Neither mothers' nor fathers' RF predicts children's IQ
- Mothers' ***RF*** predicts preschoolers' behaviour in multiple domains
- Fathers' ***RF*** predicts only *somatization*
- Couples' ***RF*** predicts *somatization*
- Implications for community programs designed to help parents with ***RF***
- Bivariate findings interpreted with caution due to generous alpha and multiple comparisons
- Strong measurement in use of BASC-2 and WPPSI-4
- Strong measurement in use of Fonagy's Index, although findings limited by modest inter-rater reliability amongst coders (.64-.71)
- Small sample size in this exploratory study, but more data to be coded!

Future Directions

- Examine qualities of parent-child relationships (attachment and interaction quality) which may interact with/mediate associations
- Additional covariates may enhance understanding, e.g. maternal and paternal mental health, adverse childhood experiences (ACES)
- Use of Adult Attachment Interview (AAI) and questionnaires for RF



Contact: Nicole.Letourneau@ucalgary.ca

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