

Preschool Emotional Expression: Associations with Parental Emotion Regulation and Child Mental Health



Background

- Emotional expression: The ability recognize, understand, and respond appropriately to one's own inner emotional experience and/or that of others following an emotion eliciting event.¹
- Emotional expression in early childhood is a crucial component of healthy development, promoting resilience, and decreasing problem behaviours.²
- Previous research has explored factors associated with children's understanding of other peoples emotions.³
- Little has been done to explore how these factors are associated with children's understanding of their own emotions.⁴

Aim #1

Examine associations between parental emotion regulation strategies, child mental health and children's emotional responses following an acute stressor

Aim #2

Explore gender differences within children's emotion responses following an acute stressor

Method

Participant Characteristics

- A140 mother-child dyads from the city of Winnipeg.
- Reflects the sociodemographic characteristics of Winnipeg
- Medium to high socioeconomic status sample

Measures



- Parental Assistance with Child Emotion Regulation Questionnaire (PACER):** A measure of adaptive and maladaptive emotion regulation strategies parents use with their children.⁵



- Child Behaviour Checklist (CBCL):** A measure of children's internalizing and externalizing behaviour.⁶



Online Mother-Child Assessment:

- Child **Self-Reported** Emotional State
- Global Rating of **Observed** Emotionality

Analytic Strategy

- Bivariate correlations were conducted prior to regressions to determine significant associations between variables. Only significant correlations were included in regression models
- T-tests were conducted to examine gender differences within dependent variables

Table 1. Descriptions of Independent Variables

Independent Variable	Description
PACER Subscales	
Adaptive Emotion regulation Strategies Situation modification strategies	Problem solving emotion regulation strategies and social support search regulation strategies.
Cognitive change strategies	Reappraisal emotion regulation strategies and acceptance emotion regulation strategies.
Situation selection strategies*	Avoidance emotion regulation strategies and behavioral disengagement emotion regulation strategies.
Attentional deployment strategies*	Distraction emotion regulation strategies and rumination emotion regulation strategies.
Response deployment strategies*	Expressive suppression emotion regulation strategies and venting emotion regulation strategies.
CBCL Subscales	
Externalizing score	Attentional problems and aggressive behaviour
Internalizing score	Emotional reactivity, anxious and depressive symptoms, somatic complaints, and withdrawal

*Attentional deployment, situation selection, and response deployment emotion regulation strategies are shown to be maladaptive in children's emotional development⁹

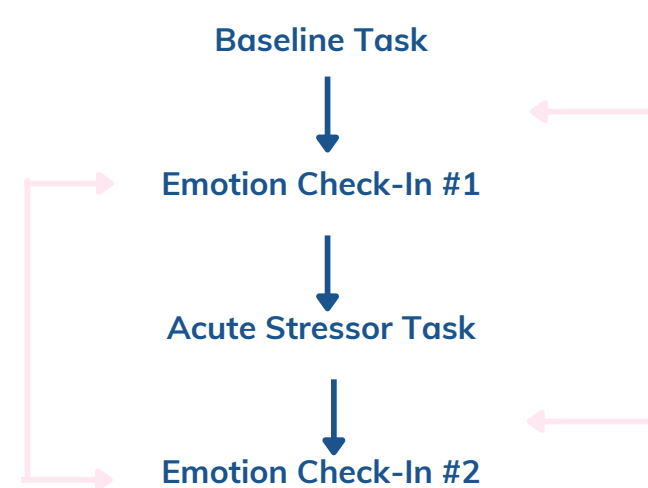
Table 2. Descriptions of Dependent Variables

Dependent Variable	Description
Child Self-Reported Emotion	
Baseline Score	Child self-rated emotion following a baseline video that occurs before the acute stressor. Higher scores indicate positive affect, and lower scores indicate negative affect.
Change Score	Baseline child self-report scores are subtracted from child self-report scores after the acute stressor. Higher values in the positive direction indicate that children self-reported being happier after the stressor versus at baseline. Higher values in the negative direction indicate that children self-report being more upset after the stressor versus at baseline.
Observer Coded Emotion	
Baseline Score	Children's emotional responses were observed and scored following a baseline video that occurs before the stressor. Higher scores indicate positive affect, and lower scores indicate negative affect.
Change Score	Baseline observed emotion score were subtracted from observed emotion codes after the acute stressor. Higher values in the positive direction indicate children are observed as happier after the stressor versus at baseline. Higher values in the negative direction indicate that children are observed as more upset after the stressor versus at baseline.
Discrepancy Score	
Baseline Score	The discrepancy between child self-reported emotion score and observed emotion score at baseline. Higher values in the positive direction indicate that children are self-reporting more negative emotions, but outwardly expressing more positive emotions. Higher values in the negative direction indicate that children are self-reporting more positive emotions, but outwardly expressing more negative emotions.
Change Score	The discrepancy between change in child self-reported emotion and change in observed emotion. Higher scores indicate a larger difference between what coders observed versus what children self-report reported from baseline to post-stressor.



Child Self-Reported Emotional State:
Following each task during the assessment, the research assistant would ask the child to say or point to the number that matches with how they feel after the task.

Online Mother-Child Assessment Procedure



	Physical gestures/facial expressions	Verbal gestures
1. Very sad/negative affect	Frowns more than half the time, tense body, crying, shows "hangover tantrum", hitting, throwing	Intense crying, screaming, flailing, negative language: Ex. "Go away!", "I hate this game!" "I hate you!"
2. Sad/negative affect	Frowns less than half the time, lip quiver, looking down, watery eyes, face in hands	Whimpering, Negative language: Ex. "I didn't like that", "I didn't have enough time", "I am sad I didn't win my prize"
3. Neutral/no expression	Straight face	Neutral responses, no laughing, pointing, or crying. Ex. "What are we doing next?", "That was okay"
4.Content/positive affect	1-2 brief smiles, looking around, sitting upright	Positive language (calm tone) Ex. "That was good", "I tried my best", responds appropriately to questions
5.Happy/positive affect	Smiling less than half the time, brief instances of laughing	Positive language (higher pitched) Ex. "I liked that game", "That was fun"
6.Very happy/positive affect	Smiling more than half the time, lots of laughing/squealing, dancing	Squealing, very positive language (speaking fast and loud with enthusiasm) Ex. "That was the best game ever!", "That was amazing!", "I am SOOOO happy!"

Global-Rating of Observed Emotionality:
The Coding scheme developed for this study where each option matches with a face and number from the child self-report scale so that they could be directly compared to one another

Results

Table 3. Linear Regression Models for Preschool Emotional Expression

	β	SE	t	p
Child Self-Reported Emotion: Baseline				
PACER Attentional Deployment	.233	.013	2.078	.041
PACER Situation Selection	.086	.012	.709	.480
CBCL Internalizing Score	-.104	.020	-.986	.327
Child Age	.109	.136	1.074	.286
Household Income	-.176	.032	-1.595	.115
Discrepancy Score: Baseline				
PACER Attentional Deployment	-.298	.017	-2.622	.010
PACER Situation Selection	.013	.015	.106	.916
CBCL Internalizing Score	.114	.025	1.066	.289
Child Age	-.207	.171	-1.210	.230
Household Income	.083	.040	.745	.485
Child Self-Reported Emotion: Change Score				
PACER Attentional Deployment	-.263	.025	-2.396	.019
PACER Situation Selection	.012	.023	.104	.917
CBCL Internalizing Score	.013	.037	.128	.898
Child Age	-.223	.254	-2.223	.029
Household Income	.200	.060	1.841	.069
Observer Coded Emotion: Change Score				
PACER Attentional Deployment	.198	.014	1.691	0.095
PACER Situation Selection	-.038	.013	-.301	.764
CBCL Internalizing Score	-.085	.020	-.772	.442
Child Age	-.037	.139	-.348	.729
Household Income	.133	.033	1.152	.253

Conclusions

Findings:

- Regression results show that children whose parent reported using more attentional deployment emotion regulation strategies self-reported being more upset after the stressor versus at baseline. Child-age was found to be a covariate in this relationship such that a larger discrepancy was found for younger children.
- Correlation analyses show that children displaying more internalizing behaviours were observed as more upset following the stressor compared to before.

T-tests found no gender differences within children's emotional expressiveness both before and after the acute stressor.

Implications:

- Support parenting using adaptive emotion regulation strategies.
- Promote healthy emotional development for preschool aged children displaying internalizing behaviours through appropriate mental health services.