

Regulation of Negative Emotions in Preschool Children Who Stutter: Maternal Self-Report vs. Behavioral Observations

KIA JOHNSON, MS, CCC-SLP ■ JAN KARRASS, MIB/MBA, PH.D. ■ TEDRA A. WALDEN, PH.D. ■ EDWARD CONTURE, PH.D., CCC-SLP

ABSTRACT

The purpose of this study was to assess the emotional regulation of preschool children who do (CWS) and do not stutter (CWNS) and their mothers' responses to displays of emotion through (1) behavioral observation using a disappointing gift (DG) procedure and (2) maternal self-report of how they cope with their child's negative emotions (*Coping With Children's Negative Emotions Scale- CCNES*). Participants were fourteen 3- to 5- year-old CWS and 14 CWNS and their respective parent(s). Prior to behavioral observation, each mother completed the CCNES. Following that, each child participated in a DG procedure where they received a desirable gift preceding a play-oriented parent-child conversational task with their mother and a disappointing gift preceding a second, similar conversational task. Results indicated that behavioral observations of negative emotion were more strongly correlated to maternal report for CWS than CWNS. Findings were taken to suggest that for CWS, maternal behaviors may be driving aspects of the child's emotional responses during negative situations or vice versa.

BACKGROUND

- Emotion Regulation and Stuttering**
 - Recent accounts of childhood stuttering suggest that emotional development is part of a causal chain of variables influencing stuttering in young children.
 - Parent-report based measures suggest that, CWS are less able to self-regulate emotional reactivity (e.g., Anderson et al., 2003; Karrass et al., 2006), thus impacting the fluency of their speech-language production.
 - CWS have also been observed to display more negative emotions than CWNS after receiving a disappointing gift (Hartfield & Conture, 2006).
- Emotion socialization** encompasses parents' habits, conventions, and actions that model for and instruct a child how to regulate emotions (Eisenberg et al., 2001). Parents socialize emotional expression and regulation through indirect instruction, coaching, and by managing children's exposure to emotionally challenging situations (Parke, 1994).
- One preliminary study indicated that the socialization of ER appears to differ between families of CWS and families of CWNS (Graham & Karrass, 2006). Specifically, mothers of CWS reported more emotion-related responses to their children's displays of negative affect. Furthermore, although mothers of CWS reported using adaptive emotional socialization strategies as often as mothers of CWNS, they were observed in a laboratory task to use fewer adaptive strategies.
- Emotions and the Disappointing Gift (DG) Procedure**
 - The *Disappointing Gift* procedure (Saarni, 1984) permits structured examination of ER in children and provides insight into an individual's ability to regulate his/her negative emotions and expressive behavior (McDowell, O'Neil & Parke, 2000).
- Emotions and the Coping with Children's Negative Emotions Scale (CCNES)**
 - The *CCNES* (Fabes, Eisenberg, & Miller, 1990) is a self-report questionnaire of how parents respond to or cope with their young child's negative emotions (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002).
 - The *CCNES* consists of six 12-item subscales with hypothetical situations that involve their child being upset or angry.

PURPOSE

- Whether measurements of emotion socialization, based on maternal self-report, correlated with behavioral observations of the child's positive and negative emotion during the *Disappointing Gift* (DG) task (Saarni, 1984).

PARTICIPANTS

- Fourteen CWS and 14 CWNS (3;0 – 5;9) with no between-group difference ($t [26] = -1.13, p = .27$) in chronological age.
- None of the 28 children had previously received formal/structured intervention for stuttering or any other communication disorder. Participants also had no known or reported hearing, neurological, developmental, academic, intellectual, or emotional problems.
- All twenty-eight participants scored at the 16th percentile or higher on a series of standardized, norm-referenced speech-language assessments (e.g., Peabody Picture Vocabulary Test-III A or B; Dunn & Dunn, 1997).

MEASURES

- Behavioral Observation: Disappointing Gift Task (DG)**
 - Each participant selected two desirable and one disappointing gift from six gifts (four desirable gifts and two less desirable gifts). The child then participated in three parent-child conversations (*Baseline Conversation*; *Desirable Conversation*; *Disappointing Conversation*).
 - The first desirable gift pre-selected by the child was presented prior to the *Desirable Conversation* and the disappointing gift was presented to the child prior to the *Disappointing Conversation*.
 - Expressive behaviors during the two experimental conditions were coded for two dimensions: (a) *positive* and (b) *negative* (Saarni, 1982, 1992).

Table 1 Positive and negative dimensions of expressive behavior used for coding of emotional coping or regulatory behaviors.

Positive Behaviors	
-Related broad smile (teeth showing) -Closed lip smile	-Giggling, laughing -Uses expressive hand gestures while talking
Negative Behaviors	
-Tense, square-looking smile (lips open, teeth may show) -Down-turned mouth (i.e., frown/grimace)	-Sharp breath exhalation, snorting, groaning -Sighing

- Maternal Self-Report: Coping With Children's Negative Emotions Scale (CCNES)**
 - Self-report measure includes one question (see Table 2) relating to parent's response to their child's negative emotion after receiving an undesirable gift (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002).
 - Parent responses are documented using a 7-point scale from 1 (very unlikely) to 7 (very likely).

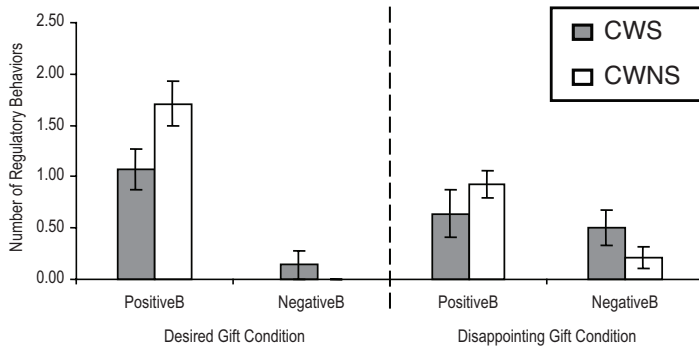
Table 2 CCNES Undesirable Gift Question

<p>If my child receives an <i>undesirable</i> birthday gift from a friend and looks obviously disappointed, even annoyed after opening it in the presence of the friend, I would:</p>
<p>a) NOT be annoyed with my child for being rude b) Scold my child for being insensitive to the friend's feelings c) Encourage my child to express his/her disappointed feelings d) Try to get my child to feel better by doing something fun e) Tell my child that the present can be exchanged for something the child wants f) Tell my child that he/she is over-reacting</p>

NOTES:

RESULTS

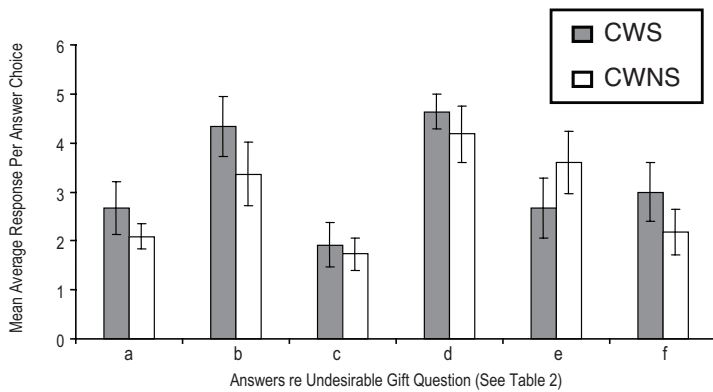
Figure 1. Positive and Negative Expressive Behaviors: DG Procedure



■ Expressive Behavioral Differences in CWS and CWNS

- **Finding 1a:** Marginally significant differences between preschool CWS and CWNS in positive behaviors exhibited ($U = 60.50, p = .06$) in response to receiving *desirable* gift.
- **Interpretation:** CWS exhibited marginally fewer *positive* expressive behaviors in response to receiving a desirable gift, when compared to CWNS.
- **Finding 1b:** Nonsignificant differences between preschool CWS and CWNS in negative behaviors exhibited ($U = 75.50, p = .21$) in response to receiving a disappointing gift.
- **Interpretation:** Although not statistically significant, visual interpretation suggests that CWS exhibited slightly more negative expressive behaviors in response to receiving a *disappointing* gift, when compared to CWNS.

Figure 2. Maternal Self Report: CCNES



■ Maternal Self Report Responses Correlated with Behavioral Observational Data

CWS

- **Finding 2a:** Preschool CWS's *positive expressive behaviors in response to receiving a desirable gift* was significantly negatively correlated ($r = -.716, p = .01$) to their mother's self-report that her child was over-reacting when in an undesirable gift situation.
- **Interpretation:** Findings suggest that, for preschool CWS, lowered display of expressive positive emotions in a desired gift situation lead the parents to over-react to their child's heightened negative behavior in a disappointing gift situation.
- **Finding 2b:** CWS's *fewer positive responses to receiving an undesirable gift* was significantly correlated ($r = .728, p = .01$) with lower maternal self-report that they would NOT be annoyed with their child for being rude in response to receiving an undesirable gift.
- **Interpretation:** Findings suggest that parents of CWS are more likely to be annoyed with their CWS as the child exhibits less positive reaction to the disappointing gift.

- **Finding 2c:** For CWS, *positive expressive behaviors in response to receiving an undesirable gift*, were marginally negatively correlated ($r = -.549, p = .07$) with a mothers' report they would scold their child for being insensitive to the gift giver's feelings.

- **Interpretation:** Findings suggest that parents of preschool CWS are more likely to react or scold their child's display of less than appropriate reactions to gift givers.

CWNS

- **Finding:** Maternal Self-Report of their reactions to their child's negative emotional response to an undesirable gift was not correlated with their children's behavioral observations during a desirable and undesirable gift situation.

- **Interpretation:** For preschool CWNS, emotion regulation is not appreciably influenced by their parents responses to their child's negative emotions in a disappointing gift situation.

DISCUSSION

■ This study resulted in two preliminary findings, summarized below:

- The **first main finding** was that, behaviorally, CWS, when compared to CWNS, are marginally less likely to exhibit positive expressive behaviors in response to a *desirable* gift. Although not statistically significant, visual inspection indicated that CWS, when compared to CWNS, exhibited more negative expressive behaviors in response to an *undesirable* gift. This suggests that CWS are less able to regulate negative emotions in negative social situations than they are able to regulate positive emotions in positive social situations.
- The **second main finding** was that maternal self-reported emotion socialization behaviors to a hypothetical disappointing gift situation were more consistently related to child behaviors for preschool CWS than CWNS. For preschool CWS, maternal reactions appear to directly relate to how well their child regulates emotions. In specific, parents of CWS tend to respond with less adaptive socialization strategies (e.g., "NOT be annoyed with my child for being rude", "Scold my child for being insensitive to the friend's feelings", and "Tell my child that he/she is over-reacting"), strategies which would not seem to foster adequate regulation of negative emotions in CWS, and may have an untoward influence on their child's socio-emotional development and responses.

CONCLUSIONS

Preliminary findings should not be taken to suggest that socialization strategies used by parents of preschool CWS to help influence their child's regulation of negative emotion has a causal effect on childhood stuttering. However, present results do suggest that the emotion of preschool CWS is highly correlated with parents' responses to their child's emotion. Whether the observed relation between CWS maternal strategies and CWS behavior pre- or post-date the onset of stuttering cannot be determined from these findings; however, findings do make clear that for CWS, maternal behaviors contribute to their emotionally-related behavior or vice versa.



VANDERBILT KENNEDY CENTER
FOR RESEARCH ON HUMAN DEVELOPMENT

This work was supported in part by NIH grants NIDCD-DC000523-12, 1R01EC006477-01A2 and NICHD-T32HD07226 and a Vanderbilt University Family Studies Consortium grant. References available upon request.

This flyer was constructed by the Vanderbilt Kennedy Center, Vanderbilt University, supported in part by NICHD Grant P30 HD15052. The Vanderbilt Kennedy Center is devoted to unlocking the mysteries of the brain and child development, and improving the lives of people with disabilities. kc.vanderbilt.edu

NOTES: