



Emotional reactivity and regulation in preschool-age children who stutter



Katerina Ntourou^{a,*}, Edward G. Conture^a, Tedra A. Walden^b

^a Department of Speech and Hearing Sciences, Vanderbilt University, 1215 21st Avenue South, Nashville, TN 37232-0014, USA

^b Department of Psychology and Human Development, Vanderbilt University, 230 Appleton Place, Nashville, TN 37203-5721, USA

ARTICLE INFO

Article history:

Received 6 June 2012

Received in revised form 10 June 2013

Accepted 13 June 2013

Available online 28 June 2013

Keywords:

Stuttering

Emotional reactivity

Emotion regulation

Preschool children

ABSTRACT

Purpose. This study experimentally investigated behavioral correlates of emotional reactivity and emotion regulation and their relation to speech (dis)fluency in preschool-age children who do (CWS) and do not (CWNS) stutter during emotion-eliciting conditions.

Method. Participants (18 CWS, 14 boys; 18 CWNS, 14 boys) completed two experimental tasks (1) a neutral (“apples and leaves in a transparent box,” ALTB) and (2) a frustrating (“attractive toy in a transparent box,” ATTB) task, both of which were followed by a narrative task. Dependent measures were emotional reactivity (positive affect, negative affect), emotion regulation (self-speech, distraction) exhibited during the ALTB and the ATTB tasks, percentage of stuttered disfluencies (SDs) and percentage of non-stuttered disfluencies (NSDs) produced during the narratives.

Results. Results indicated that preschool-age CWS exhibited significantly more negative emotion and more self-speech than preschool-age CWNS. For CWS only, emotion regulation behaviors (i.e., distraction, self-speech) during the experimental tasks were predictive of stuttered disfluencies during the subsequent narrative tasks. Furthermore, for CWS there was no relation between emotional processes and non-stuttered disfluencies, but CWNS’s negative affect was significantly related to nonstuttered disfluencies.

Conclusions. In general, present findings support the notion that emotional processes are associated with childhood stuttering. Specifically, findings are consistent with the notion that preschool-age CWS are more emotionally reactive than CWNS and that their self-speech regulatory attempts may be less than effective in modulating their emotions.

Educational objectives. The reader will be able to: (a) communicate the relevance of studying the role of emotion in developmental stuttering close to the onset of stuttering and (b) describe the main findings of the present study in relation to previous studies that have used different methodologies to investigate the role of emotion in developmental stuttering of young children who stutter.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

The contribution of emotion to the onset, maintenance and exacerbation of developmental stuttering has long been discussed (e.g., Glauber, 1958; Johnson and Associates, 1959; Sheehan, 1953). Alongside such discussion, numerous empirical studies of the relation of emotional processes to stuttering have been reported with most of these studies involving adults

* Corresponding author at: Department of Hearing and Speech Sciences, The Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences, 1215 21st Ave. South, MCE South Tower, Rm 6209, Nashville, TN 37232, USA. Tel.: +1 615 936 5253; fax: +1 615 936 6914.

E-mail address: katerina.ntourou@vanderbilt.edu (K. Ntourou).

who stutter (e.g., Baumgartner & Brutton, 1983; Caruso, Chodzko-Zajko, Bidinger, & Sommers, 1994; Dietrich & Roaman, 2001; Weber & Smith, 1990). Given adults' relatively lengthy experience with and potential learned reactions to stuttering, it is challenging to determine the nature of the association between adults' emotion and stuttering (e.g., does experience with stuttering increase emotional response?) (e.g., Kefalianos, Onslow, Block, Menzies, & Reilly, 2012). Recently, however, more attention has been paid to the relation between emotion and stuttering in young children who stutter (e.g., Anderson, Pellowski, Conture, & Kelly, 2003; Arnold, Conture, Key & Walden, 2011; Choi, Conture, Walden, Lambert, & Tumanova, 2013; Conture & Walden, 2012; Eggers, De Nil, & Van den Bergh, 2010, 2013; Johnson, Walden, Conture, & Karrass, 2010; Walden et al., 2012). Increased attention to children, particularly those of preschool-age, is important because stuttering typically begins in early childhood, prior to extensive experience with stuttering and possible development of learned, perhaps well-established, reactions to the disorder.

Some empirical studies of emotions and stuttering (e.g., Anderson et al., 2003; Lewis & Goldberg, 1997) have focused on relatively stable/trait-like/dispositional (temperament) variables of emotional development. In contrast, others (e.g., Karrass et al., 2006; Walden et al., 2012) have accessed more variable/state-like/situational (emotional reactivity, emotion regulation) components of emotional functioning. One such trait-like construct – *temperament* – encompasses a group of related traits (e.g., Zentner & Bates, 2008). Temperament, according to Rothbart and Bates (1998), can be described as constitutionally, biologically-based individual differences in reactivity and regulation that demonstrate consistency across various situations and relative stability over time (for general review of temperament see Rothbart, 2011; Zentner & Shiner, 2012; for review of temperament specific to speech-language/stuttering see Conture, Kelly & Walden, 2013; Kefalianos et al., 2012). Thus, temperament is one attribute of the child that moderates/mediates the influence of their experiences with their environment (Goldsmith et al., 1987). Several researchers have proposed that temperament consists of different dimensions such as adaptability to new situations or people, activity level, attention span/persistence, inhibitory control, rhythmicity, quality of mood and so forth (e.g., Rothbart, Ahahdi, Hershey, & Fisher, 2001; Thomas & Chess, 1977). Another more state-like or situational construct – *emotional reactivity* – refers to the arousability of behavioral, endocrine, autonomic, and central nervous system responses to changes in the environment that have significance for one's goals and well being. Related to emotional reactivity, is the construct of *emotion regulation*, that has been described as consisting of “extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals” (Thompson, 1994; p. 27).

A regulatory strategy examined in the present study and used by children as young as 3 years of age is *distraction*. “Distraction” or “attention deployment” (e.g., Gross, 2002) refers to the direction/engagement of attention to other aspects of the environment (e.g., object, person, event) instead of fixating on the emotionally taxing elements of the situation (e.g., Bridges & Grolnick, 1994). Attentional processes begin to play a central role in modulating arousal early on in life (e.g., Rothbart & Posner, 1985) and maintain their importance for older infants, toddlers, children and adults (e.g., Grolnick, Bridges, & Connell, 1996).

Another regulatory strategy, self-speech, or private speech (i.e., overt, audible speech that is not addressed to a listener), has been extensively studied as a tool for behavioral self-regulation in the preschool years (e.g., Winsler, de León, Carlton, Wallace, & Willson-Quayle, 2003; Winsler, Manfra, & Diaz, 2007) and only recently has its role in emotion regulation being empirically assessed (e.g., Day & Smith, 2013). Broderick (2001) reported that preschool-age children who were rated as well-regulated emotionally by their parents and teachers used more private speech during three different kinds of activities (i.e., free play, art activity, puzzle construction) than their peers who were characterized as poor emotion regulators.

In what follows we will provide a brief review of (a) empirical studies of CWS and CWNS relative to underlying emotional processes/vulnerabilities, (b) studies that have examined the association these emotional processes have to changes in children's stuttering, and finally (c) the purpose and main research questions of the present study.

1.1. Studies of emotional processes/vulnerabilities

Many of the existing studies that have examined possible differences in emotional processes between CWS and CWNS have used parent-report questionnaires (e.g., *Behavioral Style Questionnaire [BSQ]*; McDevitt & Carey, 1978; *Dutch version of Child Behavior Questionnaire [CBQ-D]*; Van den Bergh & Ackx, 2003). Results indicate that young CWS, when compared to CWNS, are rated (a) significantly higher on activity level (e.g., Anderson et al., 2003; Embrechts, Ebben, Franke, & van de Poel, 2000; Eggers et al., 2010), (b) more sensitive, anxious, fearful, introverted, withdrawn (e.g., Fowlie & Cooper, 1978; cf. Embrechts et al., 2000), (c) more emotionally reactive (e.g., Karrass et al., 2006), and (d) more negative in quality of mood (Eggers et al., 2010; Wakaba, 1998; cf. Lewis & Goldberg, 1997). Furthermore, several studies have reported differences in attentional processes between young CWS and CWNS. CWS when compared to CWNS are reported to be (a) less adaptable to change (Anderson et al., 2003; Howell et al., 2004; Wakaba, 1998; cf. Lewis & Goldberg, 1997; Williams, 2004), (b) more impulsive and less adept at attentional focusing, attentional shifting, inhibitory control, and perceptual sensitivity (e.g., Eggers et al., 2010; Embrechts et al., 2000; Felsenfeld, van Beijsterveldt, & Boomsma, 2010), and (c) less able to flexibly control their attention and shift attention when required to do so (e.g., Karrass et al., 2006). In general, results from these caregiver-rating studies suggest that CWS differ from CWNS in some emotion-related dimensions.

Other empirical studies of between-group differences in young children's emotional processes have employed psychophysiological methodologies. Arnold et al. (2011) used electroencephalographic (EEG) indices of emotional reactivity and regulation (i.e., frontal alpha asymmetry, for further review of this method, see Coan & Allen, 2004) in preschool-age

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات