Anxiety in speakers who persist and recover from stuttering

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Abstract

Purpose: The study was designed to see whether young children and adolescents who persist in their stutter ($N = 18$) show differences in trait and/or state anxiety compared with people who recover from their stutter ($N = 17$) and fluent control speakers ($N = 19$).

Method: A fluent control group, a group of speakers who have been documented as stuttering in the past but do not stutter now and a group of speakers (also with a documented history of stuttering) who persist in their stuttering participated, all aged 10–17 years. The State–Trait Anxiety Inventory for Children was administered.

Results: There were no differences between persistent, recovered and control groups with regard to trait anxiety. The persistent group had higher state anxiety than controls and the recovered group for three out of four speaking situations.

Conclusion: The findings are interpreted as showing that anxiety levels in certain affective states appear to be associated with the speaking problem.

Learning outcomes: A reader should be able to appreciate the difference between state and trait anxiety understand views about how the role anxiety has on stuttering has changed over time appreciate different views about how anxiety affects speakers who persist and recover from stuttering see why longitudinal work is needed to study these issues.

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Several theories maintain that anxiety precipitates stuttering (Bloodstein, 1987; Miller & Watson, 1992). There are two basic forms of anxiety that could be involved in this process, trait and state (Cattell & Scheier, 1961) which feature in a number of the studies

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reviewed below. Trait anxiety refers to stable individual differences in the tendency to respond in anticipation of threatening situations. State anxiety is an unpleasant emotional arousal in the face of demanding or dangerous situations (Lazarus, 1991). Endler and Parker (1990) emphasized that there is a fundamental difference between trait anxiety, which is a permanent personality characteristic and state anxiety, which is a transitory and emotional condition. Consistent with this view, reduction in state, but not trait, anxiety after treatment has been reported to occur for patients with borderline personality disorder (Bateman & Fonagy, 2001). Trait and state anxiety have been divided further using multidimensional scaling techniques (Endler, Edwards, Vitelli & Parker, 1989; Spielberger, 1980). They found that trait anxiety had four components: (a) social evaluation, (b) physical danger, (c) ambiguous situations and (d) daily routines, and state anxiety had two components: (a) worry (cognitive) and (b) emotionality (autonomic). Endler and Parker's (1990) multidimensional model suggests that state anxiety is a result of an interaction between a specific component of trait anxiety and a congruent threatening situation. For example a person who stutters may evaluate speaking on the telephone as a threatening situation (the social evaluation component of trait anxiety) leading to high levels of state anxiety (both cognitive and autonomic).

While there are few who would doubt that anxiety increases when speakers who stutter are faced with demanding situations, the role that anxiety plays in the etiology of the disorder remains unclear. There are some who consider anxiety as the main *cause* of the disorder (Johnson, 1942; Sheehan, 1970; Wischner, 1952), while others see anxiety as a *result* of the disorder (Perkins, 1979; Ryan, 1974). A third view is that anxiety has a mediating role in the onset, development and severity of the problem (Brutten & Shoemaker, 1967). Though the relationship between anxiety and stuttering has been discussed at length, there is only a small amount of evidence that it plays a role in the maintenance of the disorder into adulthood and less evidence that implicates anxiety as a factor leading to stuttering in childhood (Andrews, Craig, Feyer, Howie, & Nielson, 1983; Bloodstein, 1987; Ingham, 1984).

Several studies using adults who stutter failed to find any relationship between anxiety and stuttering. Cox, Seider, and Kidd (1984) and Molt and Guildford (1979) found no significant differences between adults who stutter and controls in anxiety scores. Janssen and Kraaimaat (1980) also failed to find differences between adolescents who stutter and controls. Miller and Watson (1992) used the State–Trait Anxiety Inventory (STAI) (Spielberger, 1983; Spielberger, Gorsuch, & Lushene, 1970) to measure anxiety levels in adolescents and adults (aged between 16 and 42 years). They found no difference between people who stutter and a control group in either state or trait anxiety scores.

Studies have failed to find different physiological reactions in anxiety-provoking situations. For instance, Blood, Blood, Bennett, Simpson, and Sussman (1994) found no difference in levels of salivary cortisol between adults who stutter and controls, although the self-reports of anxiety of adults who stutter were higher than controls. Dietrich and Roaman (2001) failed to find a relationship between speech-related anxiety and skin conduction responses in adults who stutter.

Research using self-report measures of anxiety with adolescents and adults has found differences in anxiety levels between those who stutter and controls. Kraaimaat, Vanrycheghem, and van Dam-Baggen (2002) measured social anxiety using the Inventory