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General vulnerability to stuttering: The experience of stuttering and conditions bringing about invulnerability



P.M. Briley *, J.S. Kalinowski

Department of Communication Sciences and Disorders, College of Allied Health Sciences, Mail Stop 668, East Carolina University, Greenville, NC 27858-4353, United States

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ABSTRACT

General vulnerability to stuttering is the broad awareness of stuttering and the ever-present, experiential sense of a person who stutters (PWS). It is defined by stuttering in all its forms and the awareness of its presence, both in moments of stuttering and moments of perceivably fluent speech. Under the heading of general vulnerability to stuttering is specific vulnerability to stuttering, which includes the actual events of stuttering (i.e., overt symptoms, covert symptoms, subperceptual stuttering, and anticipation of stuttering). The differentiation between the two is that specific vulnerability requires a specific moment of stuttering where general vulnerability does not.

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The awareness of general vulnerability to stuttering occurs when the adolescent or adult stutterer spends each day monitoring, consciously and subconsciously, what will or will not be said that day. From mild stutterers to severe, it is the common denominator that all who stutter possess. They view themselves as stutterers even if stuttering is rare or absent. The absence of overt manifestations of stuttering is nothing more than an intermittent overt cease-fire. Self identify as a PWS continues, covert operations continue, and surveillance is heightened. Simply put, even when the overt manifestations subside, the disorder still controls communication and many other aspects of life. For centuries we have separated overt stuttering - from covert stuttering - from the awareness of stuttering. Stuttering is an experiential disorder that has wrongly been confused with its overt manifestations. We have treated the symptoms but fail to recognize that the disorder is a neural pathology that is hard-wired into the central nervous system for those whose default is set to stuttering. Those who stutter continually think about stuttering. When preparing to speak, there is an increase in motor preparation as compared to a person who does not stutter, which occurs at a conscious and subconscious level. PWS plan their day, words, education, vocation, and relationships around their reality of being a person who stutters. This general vulnerability to stuttering is experiential in nature and like depression, alcoholism, drug abuse, and post-traumatic stress disorder (PTSD), it is always present. In addition to this being an experiential phenomenon, there is evidence that brain activations associated with stuttering occur in the absence of overt stuttering events [1]. This implies that the experience of stuttering does not require actual stuttering events, and a sense of impending stuttering or a general vulnerability to stuttering are correlated to these activations. This tonic drive of general vulnerability to stuttering, present in people who stutter, is only suppressed during conditions that are able to generate speech that is invulnerable to stuttering. During these moments, the PWS no longer feels like a PWS - the experiential sense of stuttering is momentarily eradicated. This does not occur merely during fluent speech but when all forms of stuttering are eliminated and there is no susceptibility to stuttering. No susceptibility to stuttering means the elimination of overt symptoms, covert behaviors, subperceptual stuttering, and anticipation of stuttering. When each of these symptoms of stuttering are collectively eliminated, then general vulnerability to stuttering is also eliminated, albeit momentarily, and the PWS is able to experience speech that is momentarily invulnerable to stuttering. The importance and utility of identifying conditions that are able to bring about speech that is invulnerable to stuttering is the hypothesis that these are the conditions able to elicit the most carry-over fluency. Carry-over fluency is simply spontaneous, effortless speech absent of most, if not all symptoms of stuttering. Hypothesized as being the four conditions that are most capable of producing a sense of invulnerability in people who stutter are choral speech, extreme prolongations, singing, and pantomime speech.

The prevalence of general vulnerability

The presence of general vulnerability to stuttering [2] is not dependent on the PWS's emotional and/or physical state, setting, communication partners, or even in their ability to speak fluently,

^{*} Corresponding author. E-mail address: brileypa@ecu.edu (P.M. Briley).

which is manifested across assigned severity levels. We conjecture that, unlike the fluctuating specific vulnerability to stuttering, general vulnerability to stuttering is always present and always equal - even when the ability to overcome this vulnerability and speak fluently comes with relative ease. Stuttering is a state of continual hyper-vigilance where the monitoring system [3] is constantly engaged. To be clear, we do not believe stuttering is caused by this monitoring system [4]. Instead, this monitoring system is the direct result of an abiding sense of general vulnerability to stuttering which is even employed by the perceived mild stutterer, using a plethora of strategies in order to maintain said status. Mild stutterers typically learn a rapid-fire style of speech consisting of short utterances followed by interjections, hesitations, and pauses, followed by another rapid fire round of utterances and then more stoppages. Their words are often juxtaposed, circumlocuted, and they utter much less than intended or hoped for [5.6], but they eliminate most of the feared prolongations and audible and inaudible postural fixations [6-8]. The mild PWS, who wishes to not make his or her disorder known, can go years without anyone knowing of this inner struggle. It may appear to observers that they are fluent speakers, while daily fighting to keep the manifestations at bay. Petrunik and Shearing [7] recognize that, "some stutterers manage to maintain the identity of a 'normal speaker' virtually all the time" (p.129). This struggle is constant and is sometimes a conscious maneuvering around difficult words and sometimes happens in the subconscious [7]. Douglass and Quarrington [6] provide a descriptive account:

The interiorized stutterer is characterized by constant awareness of his speech difficulty and of stuttering threats contained in speaking situations. Constant preparedness, constant vigilance to guard against revelation of his stutter, complete avoidance of possible situations anticipated as threatening, are all evidenced. Every eventuality must be anticipated so that he can either avoid the danger entirely or meet it fully prepared. To be caught unprepared would be a tragedy (p. 379).

The manipulation of speech mechanisms to avoid overt stuttering seems to be ingrained in the PWS's procedural memory. We hypothesize that there exists an inherent hierarchy for concealment, among all PWS, that when unsuccessful ends with revealment. Some PWS are keenly able to communicate while operating under the strict demands of concealment while others are unable to avoid the infiltration of revealment.

Concealment to revealment

At the top of this hierarchy is the perpetual scanning of sounds or words that operate to engage the error repair system. We believe the presence and need for perpetual scanning is in fact the core component of the sense of general vulnerability to stuttering. Once a possible error has been detected (i.e., specific vulnerability to stuttering), the practice or attempt to avoid sounds, words, people and/or places is first considered. The person who stutters who has accepted his or her stuttering may feel as though they have graduated from this first level of concealment, but we believe that as long as stuttering remains there will always be some instances of reverting back to avoidance, even if used solely as a tool for communicative efficiency. When this option is not deemed sufficient, the PWS then scours his or her lexicon for a suitable substitution in order to most efficiently express the desired utterance without notice of an overt manifestation of stuttering. Temporal demands limit this process of searching for a satisfactory substitute, and when one cannot be located, the PWS then employs circumlocution. This all happens in the moment of conversation and at a rate that is typically not perceived by the listener. Still

at the level of concealment, but with less ease, exists subperceptual stuttering [9-12]. This is stuttering that is perceived by the person who stutters but is not perceived by the PWS' listening counterparts. We believe there are two levels of subperceptual stuttering. The first level occurs when a block is felt, though the PWS is able to continue with the desired sound or word and is able to say it without the listener recognizing that a block was present. This is a highly experiential phenomenon but one that is essential to a thorough account of the experience of stuttering. There are then times that a PWS begins the gesture to produce speech and feels a block (subperceptual block). The PWS perceives approaching failure in easily overcoming the ensuing block, decides not to move forward, and instead reverts and cycles back through the levels of concealment. The last level is revealment, which is the overt stutter. Overt stuttering can be the result of acceptance of stuttering where the PWS is comfortable with others witnessing the repetitions, prolongations, and/or postural fixations, but is more likely the result of unsuccessful attempts at the concealment phase. The level at which stutterers are unable to subdue the revealment of stuttering, we believe coincides with the severity level assigned to each PWS. Some PWS are able to maintain this concealment of specific vulnerability to stuttering amidst the continual presence of general vulnerability to stuttering. Petrunik and Shearing [7] provide an

Interiorized stutterers place great importance on preserving a social identity and will go to extraordinary lengths to preserve it...a self-employed businessman in his early forties concealed his stuttering from his first wife. He confided in his second wife, but continued to conceal his stuttering from his children (p. 129–130).

One of the authors has experienced two clients in the past 6 years who were married with children, yet their wives were completely unaware of their disfluent speech. In order to accomplish this concealment, Petrunik and Shearing [7] suggest, "successful interiorized stutterers develop a particular sensitivity to the intricacies of syntax" (p. 129). If this monitoring system and subsequent error repair system were to become disengaged, we believe the mild stutterer would immediately become a moderate or severe stutterer, as defined by the overt manifestations of stuttering occurrences. What varies across emotional and physical states, settings, communication partners, and ability to produce fluent speech is not the PWS's general vulnerability to stuttering, which we feel is always present, but instead, the PWS's capacity to overcome the instances of specific vulnerability to stuttering. In some situations and settings, the PWS is able to overcome specific vulnerability with relative ease, resulting in less disfluent speech [13,14]. In contrast, more stressful situations often result in overt stuttering or avoidance behaviors [15,16], where the anxiety impedes the PWS's capability to overcome specific vulnerability. Again, regardless of the presence or absence of instances of specific vulnerability to stuttering, general vulnerability to stuttering remains present. The ever-present nature of general vulnerability to stuttering makes stuttering both an on-line disorder (in the moment of speaking) and off-line disorder (before the speaking moment). Bloodstein [16] put it well, "there are stutterers for whom its features are not always confined in an easily identifiable manner to discrete 'moments'" (p. 1). We go a step further and say this is the case with all stutterers - perceivably mild to severe. It is then proposed that stuttering is defined by the presence of general vulnerability to stuttering, which results from one or more of the following: overt symptoms, covert behaviors, subperceptual stuttering, anticipation of stuttering, and/or the broad awareness of the presence of stuttering. Foundational to this hypothesis is general vulnerability to stuttering makes stuttering a disorder that is not intermittent, as it has come to be defined [7,17,18]. The term

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