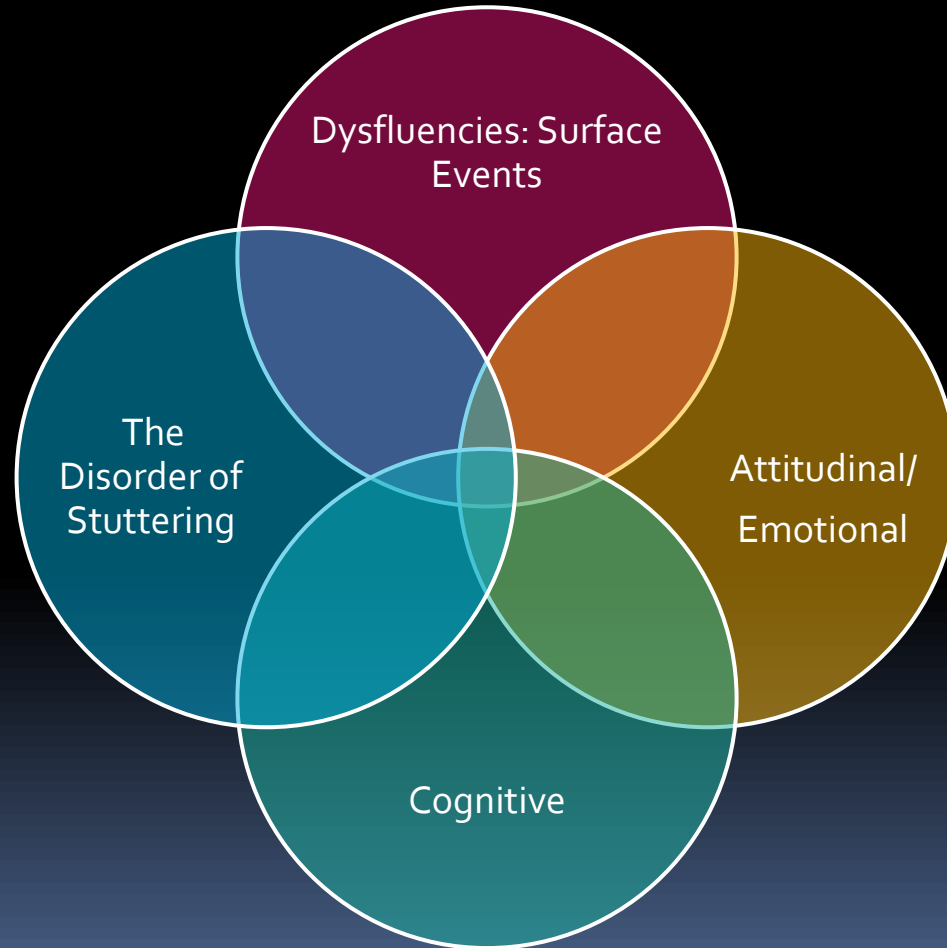



OVERVIEW OF STUTTERING...BY ROD GABEL & DIANE GAMES





Definition of Stuttering



The **definition** of stuttering is complicated due to the many variables involved with this communication disorder. Shapiro (1999) concludes that “stuttering refers to individualized and involuntary interruptions in the forward flow of speech and learned reactions thereto interacting with and generating associated thoughts and feelings about oneself as a communicator, and the communicative world in which we live. Etiology, yet unknown, is conceptualized to relate to the interaction of physiological, psychological/psychosocial, psycholinguistic and environmental factors. Stuttering occurs within the context of communication systems. Thus affecting and being affected by all persons who communicate with this person who stutters. Stuttering is a diagnostic label referring to a complex, multidimensional composite of behaviors, thoughts and feelings of people who stutter.”



Definition of Stuttering

One can see, from Shapiro's definition, that stuttering is more than just disfluency. One of the most detailed definitions of stuttering was forwarded by Wingate (1964). In this definition, stuttering has seven components:

1. Disruption of fluency of verbal expression.
2. Characterized by involuntary, audible, or silent repetitions or prolongations in the utterance of short speech elements.
3. Disruptions usually occur frequently.
4. Disruptions are not readily controllable.
5. Disruptions are sometimes accompanied by accessory activities involving the speech apparatus, and related or unrelated body structures.
6. Indications of the presence of an emotional state, fear, embarrassment, and irritation.
7. Discoordination in the peripheral speech mechanism.



Definition of Stuttering

These definitions suggest that there are several aspects of stuttering that need to be considered. First, is the frequency of disfluency. People who stutter are generally more disfluent than people who do not stutter. Second, people who stutter produce different types of disfluencies. Blocks, repetition of parts of words, and prolongations of sound are not produced by adults and children who do not stutter. Finally, duration of disfluency also differentiates people who stutter from those who do not. People who stutter will often have longer moments of stuttering. These three factors will be discussed further in the assessment section.



Definition of Stuttering

Wingate's fourth point suggests that the moments of disfluency are not controllable. Additionally, Perkins (1990) suggested that the core problem to stuttering is the speaker's loss of control. For people who stutter, the moment of stuttering may represent a moment of trauma in which they are unable to gain the necessary control to finish or initiate their message. This can often be a debilitating experience for the person. When having a stuttering moment, it will take great effort to maintain any sense of control that will allow them to produce fluent speech (Van Riper, 1982). In assessment and treatment, this lack of control should be taken in to account.




Definition of Stuttering

Points 5 and 6 of Wingate's definition describe ways in which most individuals who continue to stutter into adolescence and adulthood cope with stuttering. Those individuals in which stuttering is a chronic problem often develop a wide array of affective (feelings), behavioral (physical), and cognitive (beliefs and attitudes) reactions to stuttering (Cooper, 1993). These reactions are often termed the A-B-Cs of stuttering. The set of reactions that a person develops are their means of coping with stuttering and will often not be effective in helping them communicate successfully. Measuring and treating the A-B-Cs of stuttering will be discussed.



Definition of Stuttering

It is important to note that pre-school aged children who stutter often appear to be unaware or unconcerned about their stuttering, but some children in this age group may begin to show signs of awareness and concern. It is expected that this will change as an individual continues to stutter into late childhood, adolescence, and adulthood, the problem becomes much more complex. As an individual continues to stutter over a number of years, the experience of being a person who stutters takes a toll. Difficulties communicating, failure to accomplish goals, being ridiculed and other types of disappointing communication experiences may lead to many negative reactions to disfluency and communication.






Definition of Stuttering

There are a possible set of physical or behavioral reactions that are used by people who stutter. These behaviors are often referred to as secondary behaviors or reactive behaviors (Van Riper, 1982). These behaviors are done to avoid, postpone, or escape from a core behavior (disfluency) (Guitar, 2006). These behaviors are thought to be learned reactions to the core behaviors. Often, the secondary behaviors become so habituated that the speaker is unaware that they are producing them. When doing therapy with adults and adolescents who stutter, it is critical to help clients identify and remove all of their physical secondary behaviors. Issues with avoidances and other behavioral reactions will be discussed in the assessment section.



Definition of Stuttering

The final types of reactions are cognitions or beliefs, or the C of stuttering. Older children, adults and adolescents will often develop many negative attitudes and beliefs about themselves, communication, and certainly their stuttering. These beliefs are based on the person's subjective experiences with their stuttering and are likely to be limiting to the person.



Though negative reactions are much more developed in adolescents and adults, preschool and younger children also will also react to their stuttering. It is often assumed that this would not be the case, but clinicians should be sure to consider all aspects of stuttering in all age groups.




Facts About Stuttering

The **incidence** of a disorder is the rate of occurrence, or chance of occurring. The incidence of stuttering, an estimate of how many people have ever stuttered, is about 5% of the population. The **prevalence** of stuttering, how many people have the disorder at any point in time, is 1%; leaving 4% of the population who stop stuttering through some sort of recovery (Yairi & Ambrose, 2005). Thus, nearly 80% of the children believed to begin to stutter will outgrow the problem. This is referred to as spontaneous recovery.



Facts About Stuttering

The gender ratio, the number of boys who stutter compared to girls, is between 3:1 or 4:1 (Guitar, 2006). At onset, usually between 2 and 3 years, the ratio is essentially 1:1 (Yairi & Ambrose, 2005). This data suggests two questions. First, why do more males stutter than females? The best answer to that may be simply that males tend to be more likely to have developmental disorders in general. Second, why does the ratio change as children develop? There is not a clear answer as to why this change occurs, but the most obvious answer may be that girls are more likely to develop out of stuttering behaviors.






Factors Leading to Stuttering

Historically, there have been many different theories of causes for stuttering. These theories have been varied, considering physiological, psychological, and environmental factors. Contemporary models of stuttering consider all of these factors in describing the mechanisms that are present at onset of stuttering and also contribute to the development of stuttering (Guitar, 2006; Manning, 2008).



Factors Leading to Stuttering

Reviewing all of the recent models describing the mechanisms underlying stuttering are beyond the scope of this discussion. What we would like to do is review several identifiable aspects of stuttering behavior that are important to consider when thinking about assessment and treatment of children who stutter. For a broader review of models and theories of stuttering, one should review several recent texts in stuttering (Bennet, 2006; Guitar, 2006; Manning, 2008; Yairi & Ambrose, 2005).





Factors Leading to Stuttering

First, genetics are an important consideration in understanding stuttering. Though the exact transmission of stuttering is unknown, there is evidence that suggests that stuttering is genetic in nature. A very consistent and robust finding is that people who stutter are more likely to have family members who stutter than individuals from the general population (for review, see Felsenfeld, 1997 and Yairi & Ambrose, 2005). In addition, several research teams are in the process of research studies that are beginning to identify combinations of chromosomes that may prove to be linked to stuttering (Drayna, 1997; Yairi, Ambrose, & Cox, et al., 2000). Thus, family history is important to consider when diagnosing children who stutter.




Factors Leading to Stuttering

Second, phonological issues are important to consider when diagnosing children who stutter (Yairi & Ambrose, 2005). Children who stutter tend to have more errors in articulation and phonology than children who do not stutter. This difference is most likely related to differences in motor planning that are also related to disfluency. Though delayed language development may be related to disfluency, data no longer suggests that kids who stutter do not tend to be more likely to be language delayed or disordered than kids who do not stutter. Thus, language complexity may be an important contributor to the occurrence of stuttering behavior, but kids who stutter do not tend to be language disordered.



Factors Leading to Stuttering

Third, emotional development and emotional states are important. In children, it is important to think about emotionality in children as temperament (their emotional set) or reactivity (Yairi & Ambrose, 2005). Stuttering is not a psychological disorder or secondary manifestation of anxiety. Some research suggests that kids who stutter tend to be more sensitive in temperament and react differently to environmental stimuli than other children. Thus, emotional reactivity and the child's experiences with communication may exacerbate stuttering behaviors. The child's emotional set does not cause stuttering, but may lead to stuttering behaviors becoming much more complex.





Factors Leading to Stuttering

Finally, neurophysiology is believed to be the underlying factor to understanding the cause and chronic nature of stuttering. Recent research, primarily with adults, has begun to uncover regions of the brain that appear to behave differently in people who stutter. Those interested in gaining a deeper understanding the neurology of stuttering, should explore the citations listed throughout this section.