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Stuttering: A Quandary that can be Cured

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Abstract

This paper aims to analyze the phenomena of stammering and a few therapies in psycholinguistic paradigm. It is based on 2010 U.K film production, "King's Speech". With 12 Oscar nominations, "The King's Speech" is among the most nominated films of all time as it has the double impact of reality because its story is based on the real life of British King George VI, the father of the present Queen of England.

Keywords: Stammering; Psycholinguistic Paradigm; Disorder; Speech Therapist; Communication.

Introduction: Stammering

The problem of stammering has received much attention in the world of verbal communication. Stammering is basically a speech impediment which is identified by different types of irregularities in speech. It is characterized by prolongations and repetitions of sounds, syllables or full monosyllabic words and it could be either perceptible or soundless. Stammering may also be accompanied by phrase repetition and interjections.

To cope with their stuttering, stutterers show exaggerated or inappropriate movements of the peripheral speech mechanism, improper body-related movements. They also have in coordination of articulatory subsystems for speech while speaking. The stammering male to female sex ratio is 3 or 4 to 1.

It has been defined differently by different scholars. Some of the well known definitions of stammering are as follows.

International Classification of Diseases (WHO, 1977) has defined stammering as:

"Disorder in the rhythm of speech, in which the individual knows precisely what he wishes to say, but is unable to say it because of an involuntary repetition, prolongation, or cessation of sound".

Wingate (1984) has explained Stammering as:

"Disruption in the fluency of verbal expression that is characterized by involuntary audible or silent repetitions or prolongations in the utterance of short speech elements, namely: sounds, syllables, and words of one syllable. These disruptions usually occur frequently or are marked in character and are not readily controllable".

Theories of Stuttering

Stammering is a speech problem which has been studied by many scholars who tried to find out the reason behind it. According to Bloodstein (1995), Aristotle believed that stuttering stemmed from a problem with the tongue, and in the 1840s, tongue reduction surgery was also performed to alleviate stuttering. There are many theories of the cause of stuttering and it is difficult to mention them all. The following is the brief discussion of causes of stuttering in the realms of psychology, learning theory, and biology.

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(a). Psychological Approach

Psychological approach, basically viewed stuttering as simply an obvious symptom of something else, it could be unconscious, deep seated neurotic disorder(s). Psychologists assume that the cause may be due to a touching conflict and an inability to respond adequately because of neurosis. 'Anticipatory Struggle Hypothesis' is a Psychological theory which states that 'Stammering is anticipatory, apprehensive, hypertonic avoidance reaction' which means, stammering occurs when a person anticipates the problem and becomes tense in an attempt to avoid it. Authors maintain this point of view, however, differ in what they understand to be the specific nature of the conflict. Coriat (1928) asserted that the problem is characteristic of libido fixation at the oral stage of infant psychosexual development, Fenichel (1945) was also of the view that the conflict originally occurred during the anal stage, lending it more aggressive characteristics.

(b). Behaviorism and Learning Theory

The idea that stammering has a behavioral basis that is it is a "bad habit" which is learned in wrong environment is very old. Bloodstein (1995) provided a tremendous outline of theories of stuttering that have their basis in behaviorism and learning. Any discussion of stammering in the paradigm of behaviorism and learning theory is incomplete without mentioning Wendell Johnson's diagnosogenic theory (Johnson et al.,1959) which states that stammering begins in the ears of the parents when they react excessively to their child's normal disfluencies. The child attempts to avoid the disfluencies and, stammering develops in this struggle.

(c). Biologic Theories

The better known early biologic theories of stuttering, however, come from the 1920s and 1930s. They may be grouped loosely into four sections: these are

(i) Sensory Theories
(ii) Central processing Theories
(iii) Motor Theories
(iv) Genetic Theories

(i) Sensory Theories

The role of auditory function has long been discussed in the field of stuttering. Sensory theories state that Stammering reduces in noisy environments, and it may be reduced or even eliminated with delayed auditory feedback or white noise in one or both ears. This effect is even more curious in that when normally fluent speakers have delayed auditory feedback, their speech tends to become disrupted. Shane (1955) demonstrated that stuttering was reduced with high levels of binaurally applied noise. She concluded that when PWS cannot hear themselves, speech anxiety is reduced and so is the stuttering.

There is another theory of Stammering which is called auditory aphasia theory. According to this theory, the individual stutters on certain words because the auditory images of those words become temporarily weakened or are inhibited so that they do not rise in consciousness, as an upshot of which the affected person is unable to recall the sounds of the words. Therefore according to this theory he will experience difficulty in evoking or pronouncing the words whose auditory images are weak and this difficulty will assume the form of stammering. Another reason of stammering cited in this theory is a rush of blood to the brain when the person is excited in the presence of others, lowering the activity of the auditory center thus inducing auditory as a result of which stammering is caused. Other causes which are associated with stammering are disorientation, fear etc but they are all secondary

and are the result of the primary cause. Consequently the chief aim of the treatment is to overcome the primary defect, i.e the weaker auditory images. The subject should have either a strong auditory imagery, or none at all. Thus the psycholinguistic therapy mainly includes training of auditory sensations. The subjects are trained to think, how the words are going to reverberate, and must continually recall their sounds.

(ii) Central Processing Theories

Scientists have also suggested that the outbreak of stammering has a neurological basis and may be due to cerebral dominance. 'Cerebral Dominance Theory' which is also known as 'handedness theory' says that a big number of stammerers start stammering because of the conflict between the two halves of the cerebrum to control the activity of speech organs. The right and the left half of tongue, jaw and other midline structures receive their motor nerve impulses from separate sources in the two cerebral hemispheres; hence to get smooth and fluent speech these two impulses need to be coordinated mechanically. In normal cases one cerebral hemisphere is dominant over the other but if no hemisphere is dominant over the other then both will function equally and independently as a result of which the two halves of the oral musculature will be poorly coordinated and there will be a penchant of speech breakdown.

(iii) Motor Theories

Zimmermann (1980) conducted articulatory dynamics experiments to find out that stammering occurs because of motor deficit. In the speech of adults who stutter, he described slower and asynchronous movements in their fluent speech, and aberrant positioning of articulators during stuttered speech. Zimmermann concluded that stuttering was a disorder of movement, and explained that as we speak, there is a temporal and/or spatial range of movement that is tolerable to the system. As long as the speaker remains within that range, there is no fluency breakdown. If, however, the range is exceeded, due to emotional, perceptual, and/or physiological events, the system is thrown off balance with conflicting signals to and from the brain at a reflex level, leading to oscillations (repetitions) and fixations (blocks and prolongations). Additional studies examined the motor system as reflected in the planning, initiation, and execution stages of speech. A broad range of studies generally found slower reaction times for individuals who stutter as compared to normally fluent speakers for at least some tasks. Prosek, Montgomery, Walden, and Schwartz (1979) found differences in acoustic, but not manual or laryngeal, reaction times. Similarly, Reich, Till, and Goldsmith (1981) concluded that PWS had longer initiation times for speech vocalization, but not for non speech vocalization, or manual tasks.

(iv). Genetic Theories

There is also a group of scholars who believe that stammering has genetic basis. Bryngelson and Rutherford (1937) reported that the incidence of stuttering among relatives of stuttering has high probability as compared to others. Early studies focused on family incidence and personal characteristics, such as handedness, of PWS (Bryngelson& Rutherford, 1937). From the 1930s to 1990s, a number of theoretical perspectives on the cause of stuttering were given. Roughly 87 investigations (e.g., Andrews, Morris-Yates, Howie, & Martin, 1991; Felsenfeld et al., 2000; Godai, Tatarelli, &Bonanni, 1976; Howie, 1981) explored twinning and stammering. In all, the rate of concordance for stammering (both stammered) was higher for monozygotic (identical) than dizygotic (fraternal) twins, indicating a strong genetic factor. But, if stuttering was completely governed by genetics, then if one identical twin stuttered, his or her twin should also stutter who is brought up in another environment, but this is not the

case—the rate is much less than 100, this indicates the existence of strong environmental factors. Andrews and Harris (1964) published the first statistical analysis of the pattern of expression of stuttering in families. They found a higher risk of stuttering for relatives of females who stutter, and documented that more males than females stutter. Kidd (1984) confirmed these findings, determining that susceptibility to stuttering was transmitted vertically, that is, generation to generation, with sex modified expression, consistent with genetically controlled traits. They concluded that males are more susceptible to stuttering, with females having a higher threshold requiring more factors for stuttering to be expressed.
Its causes have been explained by assorted professionals in so many ways but no single theory has yet been propounded to explain the etiology of its occurrence.
It was also widely believed in 1920s that an unusual number of people who stammer were half-handed or ambidextrous or had been forcefully shifted to right handedness in childhood. As far as the present paper is concerned 'Cerebral Dominance Theory' seems to be more close to the case taken up in the film 'King's Speech'. This film presents a report of the onset of stammering after enforced change of handedness of King George VI by his father.

Data

Some of the linguistic peculiarities of King George's speech as conveyed through the film are:

Within-word dysfluencies

Monosyllabic whole-word repetition:
Sound/syllable repetition: /d/, /k/,/p/,/t/,/m/ as initiators

Audible prolongation: certain sounds are lengthened unusually

Inaudible prolongation: Unusual long pauses

Phrase repetition: E.g. how much (how much) been the amount, are you(are you) charging for this Polysyllabic whole word repetition. Interjections were also very prominent feature of his speech.

The movie beautifully presents some purely psychological and some psycholinguistic therapies of stammering. A very important application of psycholinguistics in speech therapy, which the film presents, is the choice of lexicons by the speech therapist. To quote a few "The words that keep coming up when we hear Lionel Logue, the speech therapist are 'charisma' and 'confidence.' He never said, 'I can fix your stammering.' He used to say, 'You can get a handle on your stammer. I know you can succeed,'" and there were many other examples of such type.
Logue suspected that the Duke's speech impediment might be connected to his domineering father, King George V, who had, among other things, forced the left-handed Prince, to use his right hand for writing, something that is associated with stammering.
However as a part of his technique he made the Duke believe the opposite: that is, his condition was physical rather than psychological and could be cured by breathing exercises and saying tongue twisters. This gave the Duke a kind of confidence that he had been lacking hitherto.
Another part of Logue's unconventional approach was to insist on addressing the Duke by his nick name, Bertie, much to the Duke's initial discomfort. He also insisted that their

consultations should take place at his office rather than at the palace, in order to make the atmosphere less formal.

Conclusions

The following conclusions were drawn on the basis of the analysis of the film

(i) As said by Albert's speech therapist, Lionel Logue, 'no one is born stammering, i. e, no child starts acquiring language with stammer.

(ii) No one therapy dominates the field.

(iii) stuttering usually begins around four or five years of age.

(iv) Stammering may be caused by a terrifying incident such as being forced to change from being left handed to right handedness. Albert tells his speech therapist that he was forced to change from being left handed to being right handed when he was around four or five. This was the time when he started stammering.

(v) It was also observed from the film that anger can produce fluency in stutters. Albert could be observed in the film nearly fluent always when he was angry and cursing. It is generally accepted even today that when stammerers are angry they lose their inhibitions. That is anxiety can squeeze the voice box, and we become less inhibited when we swear because the words don't hold meaning in the same way. However certain exceptions are always there.'

In a nutshell movie beautifully explains the applied aspects of Psychology in general and Psycholinguistics in particular.

Rosemarie Hayhow, a leading speech therapist who is also a spokesperson for The Royal College of Speech and Language Therapists, says some of the methods used by Logue are still relevant today. One of the treatments used on the King was getting him to sing the words he was having trouble speaking.

'Singing is a very different process to speaking because the timing is dictated by the music,' Hayhow says. Another method Logue used was to play music to the King through headphones while he was reading, so that he couldn't hear himself and become self-conscious, something known today as 'masking'.

References

Andrews, G., & Harris, M. 1964. *The Syndrome of Stuttering: Clinics in Developmental Medicine*, No. 17. London: Spastics Society Medical Education and Information Unit in association with Wm. Heinemann Medical Books.

Andrews, G.etal.1991. Genetic Factors in Stuttering Confirmed. *Archives of General Psychiatry*, 48, 1034–1035.

Bennett, E.M. 2006. *Working With People Who Stutter: A Lifespan Approach*. Columbus, Ohio, Pearson, Merrill, Prentice Hall.

Bloodstein, O. 1958. Stuttering as Anticipatory Struggle Reaction, In J. Eisenson (Ed.), *Stuttering: A Symposium* (pp. 1–70). New York: Harper & Row.

Bloodstein, O. 1995. *A Handbook on Stuttering (5th ed.)*. San Diego, CA: Singular.

Bryngelson, B., & Rutherford, B. 1937. A Comparative Study of Laterality of Stutterers and Non-stutterers. *Journal of Speech Disorders, 2, 15–16*.

Coriat, I. 1928. Stammering: A Psychoanalytic Interpretation. *Nervous and Mental Disorders Monographs, Series 47, 1–68.*

Curlee, R.F. & Siegel, G.M. 1997. *Nature and Treatment of Stuttering: New Directions, (2nd ed.)*. Needham, MA: Allyn& Bacon.

Felsenfeld, S. etal. 2000. A Study of the Genetic and Environmental Etiology of Stuttering in a Selected Twin Sample. *Behavior Genetics, 30, 359–366.*

Fenichel, O. 1945. *The Psychoanalytic Theory of Neurosis*. New York: W. W. Norton.
Fitch, J., & Batson, E. 1989. Hemispheric Asymmetry of Alpha Wave Suppression in Stutterers and Nonstutterers. *Journal of Fluency Disorders, 14, 47–55.*
Godai, U., Tatarelli, R., &Bonanni, G. 1976. Stuttering and Genetics in Twins. *Acta GeneticaeMedicae et Gemellologiae, 25, 369–375.*
Howie, P. M. 1981. Concordance for Stuttering in Monozygotic and Dizygotic Twin Pairs. *Journal of Speech and Hearing Research*, 24, 317–321.
Ingham, R. 2001. Brain Imaging Studies of Developmental Stuttering. *Journal of Communication Disorders*, 34, 493–516.
Johnson, W. and Associates. 1959. *The Onset of Stuttering: Research Findings and Implications*. Minneapolis: University of Minnesota.
Kidd,K. K. 1984. Stuttering as a Genetic Disorder. R. F. Curlee and W. H. Perkins (Eds.), *Nature and Treatment of Stuttering: New Directions (pp. 149–169)*. San Diego, CA: College-Hill.
Peters, T.J. and Guitar, B. 1991. *Stuttering: An Integrated Approach to its Nature and Treatment*. Baltimore, MD: Williams & Wilkins.
Pinsky, S., and McAdam, D. 1980. Electroencephalographic and Dichotic Indices of Cerebral Laterality in Stutterers. *Brain and Language, 11, 374–397.*
Prosek, R., Montgomery, A., Walden, B. and Schwartz, D. 1979. Reaction-Time Measures of Stutterers and Non-stutterers. *Journal of Fluency Disorders*, 4, 269–278.
Reich, A., Till, J., & Goldsmith, H. 1981. Laryngeal and Manual Reaction Times of Stuttering and Non-stuttering Adults. *Journal of Speech and Hearing Research*, 24, 192–196.
Moore, W. 1938. A Conditioned Reflex Study of Stuttering. *Journal of Speech Disorders*, 3, 163–183.
Moore, W. and Haynes, W. 1980. Alpha Hemispheric Asymmetry and Stuttering: Some Support For A Segmentation Dysfunction Hypothesis. *Journal of Speech and Hearing Research*, 23, 229–247.
Palmer, M., and Gillette, A. 1938. Sex Differences in The Cardiac Rhythms of Stutterers. *Journal of Speech Disorders, 3, 3–12.*
Shane, M. 1955. Effect on Stuttering of Alteration in Auditory Feedback. W. Johnson & R. Leutenegger (Eds.), *Stuttering in Children and Adults (pp. 286–297)*. Minneapolis: University of Minnesota Press.
Starkweather, C.W. and Givens-Ackerman, J. 1997. *Stuttering*. Austin, TX: Pro-ed.
Travis, L., Tuttle, W. and Cowan, D. 1936. A Study of the Heart Rate During Stuttering. *Journal of Speech Disorders, 1, 21–26.*
Wingate, M. E. 1964.. A Standard Definition of Stuttering. *Journal of Speech and Hearing Disorders,29,484-489*
Yairi, E. and Ambrose, N.G. 2005. *For Clinicians by Clinicians:Early Childhood Stuttering. Austin, TX, Pro-Ed.*
Zimmermann, G. 1980. Stuttering: A Disorder of Movement. *Journal of Speech and Hearing Research, 23, 122–126.*

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