

Title

Fluency and anxiety levels of non-stutterers in different speaking situations

Abstract

The current study examined how fluency of non-stuttering participants differed in various speaking situations and how the participants ranked their anxiety levels in each situation. A disfluency index was completed across the three situations. Results revealed that the participants were most disfluent when speaking to a familiar person and least disfluent when giving a classroom presentation. Anxiety levels varied across participants and speaking situations.

Summary

According to Starkweather and Givens-Ackerman (1997), speech fluency refers to the smoothness of speech production. Shipley and McAfee (2004) defined speech disfluency as “disruptions or breaks in the smooth flow of speech by unintentionally repeating a word or a phrase, forgetting a word mid utterance” or having too many interjections. A differential diagnosis between stuttering and normal non-fluencies can be determined by frequency of occurrence and the types of disfluencies. Normal non-fluencies generally occur in environments that provoke anxiety. Anxiety can be defined as a complex relationship that occurs through time between a person and a subjective experience of apprehension or tension, imposed by the expectation of danger or distress (Hallam, 1992; Kelly, 1980). Blood, Wertz, Blood, Bennett, and Simpson (1997) examined how daily stress and life stress affected fluency in adults who stuttered and adults who did not stutter and they found that there were no clear differences in the perceptions of life stress for people who stuttered and people who did not stutter. Miller and Watson (1992) examined how fluency is affected by communication attitude, anxiety, and depression. Their results were contradictory to the belief that people who stuttered were more anxious than those who did not stutter; however, results demonstrated that people who stuttered

had a poorer communication attitude. DiLollo, Manning, and Neimeyer (2003) determined that people who stuttered experienced a lack of meaningfulness of a fluent speaker's role and tested the theory of "personal constructs" of anxiety, specifically related to various speaking roles. Results revealed that cognitive anxiety varied as a function of the speaker role for both groups of participants. Craig (1990) examined the relationship between self-reported anxiety and stuttering and confirmed that individuals who stutter had more anxiety than individuals who did not stutter.

Overall, previous studies focused on anxiety and its affect on fluency, but results varied and did not address different speaking situations and anxiety levels. The purpose of the present study was to examine how fluency of non-stutterers was affected by different speaking situations and the related anxiety levels.

Method:

IRB approval was obtained prior to the initiation of the present study. A single subject design was used. Three college students, two males and one female, participated in this study. Subject A, a nursing major, was in his mid-20s. He worked as a children's minister and sang in his church band. Subject B, a biological science major, was in her early 20s. She worked in a dentist office and planned to pursue a career in dental hygiene. Subject C, also a nursing major, was in his early 20s. He was attending school full-time and was unemployed. Each individual was video-recorded in the following speaking situations: classroom presentation, conversation with an unfamiliar speaker, and conversation with a familiar speaker. A Panasonic Model PV-GS59 video camera and Olympus WS-100 digital voice recorder were used. After each speaking situation was video-recorded, the participants completed rating scales about their anxiety levels related to each speaking situation. After the tapes were collected for each speaking situation, the examiners (researchers) reviewed the recordings to conclude that the participants were not

people who stutter. A 150-word sample was collected. A disfluency index adapted from Shipley and McAfee was completed for each participant in each speaking situation to determine the types and percentages of disfluencies they produced. The disfluency index was simultaneously completed by three of the four researchers to ensure inter-rater reliability.

Results and Conclusion:

Results revealed that Subjects A, B, and C produced more disfluencies when speaking with an unfamiliar person as compared to a classroom presentation. The greatest amount of disfluencies was produced when speaking to a familiar person. When speaking with a familiar and unfamiliar person, 87% of disfluencies were interjections across all subjects. Other types of disfluencies found in the speech samples were revisions, incomplete phrases, and phrase repetitions. In the classroom presentation situation, the types of disfluencies were more varied with a higher incidence of revisions and silent pauses. Overall, anxiety levels varied between subjects and between speaking situations; however, some trends in the data were noted. All subjects rated the familiar speaking situation as least anxiety provoking, but each participant produced the highest rate of disfluencies when speaking with a familiar person. Subjects A and C rated speaking with an unfamiliar person with the highest anxiety level, but Subject B rated the classroom presentation with the highest anxiety level.

The results revealed that different environments and anxiety levels might have an affect on the fluency. Each participant produced the lowest percentage of disfluencies during his or her classroom presentation, and anxiety levels varied. The results differed from Starkweather and Givens-Ackerman's (1997) view that as the role of formality increases, so does the percentage of disfluencies, which may be due to the concentrated nature of the task and the familiarity with the presentation topic. The present study showed that the types of normal non-fluencies present in

each participant varied within the three speaking situations. Results also indicated higher percentages of disfluencies during conversations between the participants and their familiar conversation partners. Each participant ranked himself or herself as having a higher level of anxiety after speaking with an unfamiliar person. Results of the unfamiliar context revealed a smaller percentage of disfluencies. The anxiety levels of each subject were lower when speaking with a familiar person. These results might be due to the lack of familiarity with the conversation topics. Sound/syllable and whole-word interjections and revisions were the most frequent forms of disfluencies within the three participants. Anxiety was also present among the participants during unfamiliar and public speaking situations.

More research is needed in regard to anxiety levels related to speaking situations. Areas of future research may include a larger sample that is more representative of the general population and a larger number of speaking contexts, as the results of the studies can be applicable to people who stutter.

References

- Blood, I.M., Wertz, H., Blood, G.W., Bennett, S., & Simpson, K.C. (1997). The effects of life stressors and daily stressors on stuttering. *Journal of Speech, Language, & Hearing Research, 40*(1), 134-143.
- Craig, A. (1990). An investigation into the relationship between anxiety and stuttering. *Journal of Speech and Hearing Disorders, 55*, 290-294.
- DiLollo, A., Manning W.H., & Neimeyer R.A. (2003). Cognitive Anxiety as a function of Speaker role for fluent speakers and persons who stutter. *Journal of Fluency Disorders, 28*(3), 167-186.
- Hallam, Richard.(1992).Counseling for Anxiety Problems. California: Sage Publications.
- Hegde, M.N. (2001). Pocket guide to assessment in speech-language pathology (2nd ed.). Canada: Thompson Learning.
- Kelly, D. (1980). Anxiety and emotions: Physiological basis and treatment. Illinois: Charles C Thomas.

Miller, S., & Watson, B.C., (1992). The relationship between communication attitude, anxiety, and depression in stutterers and non-stutterers. *Journal of Speech and Hearing Research, 35*, 789-798.

ShIPLEY, K.G., & McAfee, J.G. (2004). *Assessment in Speech-Language Pathology: A resource Manual* 3rd edition. New York: Thompson Learning.

Starkweather, W.C., & Givens-Ackerman, J. (1997). *Stuttering: Pro-Ed studies in communication disorders*. Austin, TX: Pro-Ed.