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Listener's Perceptions of Stuttering

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Listeners' Perceptions of Stuttering

Linguistics Capstone Essay

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Listeners' Perceptions of Stuttering

Abstract

Stuttering is a neurodevelopmental disorder that causes disruptions in the normal flow of speech. Often, the disorder is accompanied by anxiety, stress, and discomfort in communication. Due to prominence of the disorder, stuttering can cause discomfort for both the listener and speaker. While some factors, such as level of fluency, familiarity with the disorder, and openness about the disorder can influence listener perceptions, the risk of negative stereotyping is high. In the following study, listener perceptions of stuttering are measured in a Christian, college-aged environment. 31 participants were asked to fill out a questionnaire about stuttering. Of the 31, 6 participated in an observation session and then completed an interview. The survey results demonstrated that stuttering had a moderate to small impact on the listener. The observation session revealed a variety of listener responses to stuttering and the interview gave participants an opportunity to explain perspectives. During the interview process, about half maintained that stuttering would have little to no effect and half argued that it would affect the relationship and the perception of the stutterer. The prevailing response to stuttering was one of both sympathy and admiration.

Key words: Listener's Perceptions, Stuttering, Sociolinguistics, Responses to Stuttering

Listeners' Perceptions of Stuttering

Introduction

Stuttering is a neurodevelopmental disorder that causes disfluencies or involuntary disruptions in the normal flow of speech (Craig, A., Blumgart, E., Tran, Y. 2009, Drayna, D. & Kang, C. 2011, Smith, A. & Weber, C. 2017, Iverach, L., Rapee, RM., Wong, QJJ., & Lowe, R. 2017, Noreen, H., Khan, S., Iftikhar, N., & Malik, S. 2017). Stuttering can include repetitions of sounds and words or hesitations in speech. Along with the physical manifestations of stuttering, Cortes, A. (2012) argues that fear, embarrassment, or irritation may also be exhibited. Anticipation of stuttering, even without the presence of dysfluent speech, can also be classified under stuttering (Jackson, E., Yaruss, J., Quesal, R., Terranova, V., & Whalen, D. 2015). While over 8% of three-year-olds are diagnosed with stuttering disorders, most children recover fluent speech within two years of onset (Nippold, M. 2018). About 1% of the population struggles with stuttering into adulthood (Smith, A. & Weber, C. 2017), which corresponds to about 55 million people (Byrd, C., McGill, M., Gkalitsiou, Z., & Cappellini, C. 2017). The ratio of men to women is 4:1 (Smith, A. & Weber, C. 2017).

The following study examines listener perceptions and reactions to stuttering. The literature review provides background regarding three questions: What causes stuttering? What are listener perceptions and reactions to stuttering? How do listener perceptions affect the person who stutters (PWS)? Following the literature review, the study will be described and its research will be discussed and analyzed.

Literature Review

Part 1: What causes stuttering?

Cortes, A. (2012) and Smith, A. and Weber, C. (2017) argue that stuttering is caused by a variety of factors: motor, linguistic, and emotional. Stuttering extends far beyond technical issues such as motor timing, linguistic processing, or auditory feedback loops (Smith, A. & Weber, C. 2017). While there may be a mechanical difficulty that contributes to stuttering, a multitude of factors contribute to and modify the mechanics of speech, including genetics, family history, and social-cognitive environments.

Current research agrees that a genetic component is present (Cortes, A. 2012, Byrd, C. et al. 2017, Drayna, D. & Kang, C., 2011). Drayna, D. and Kang, C. (2011) argue that mutation on two specific genes can cause stuttering; however, the genetic mutations account for less than 10% of the studied population and research is not conclusive. Cortes, A. (2012) argues that genetics and psychodynamic dilemmas combine to cause difficulties. The position is supported by Noreen et al. (2017), who argue that stuttering can be based in family history of anxiety, parental domination, physical limitations, or malnutrition. Jackson, E., Tiede, M., Beal, D., & Whalen, D. (2016) suggests that there is a connection between social-cognitive stress and stuttering; the article further recommends examining the relationship of stuttering to neurology.

In contrast, Byrd, C. et al. (2017) argue that stuttering is a neurophysiological, not psychological, while it probably has a genetic component. In a broader sense, neurodevelopment, motor aspects, language development, emotional aspects, and central neural aspects integrate to influence stuttering (Smith, A. & Weber, C. 2017). Based on the neurodevelopment of the child, brain pathways that support fluent speech can overcome stuttering even after its onset; however,

children that do not recover may not have “compensatory neural processes” that stabilize speech (Smith, A. & Weber, C. 2017).

The stuttering pathway forms when speech influences the behavioral and physiological responses which cause brain growth, developmental adaptation, and integration of neural networks. Up to 80% of PWS recover (Smith, A. & Weber, C., 2017). The following quote by Smith, A. and Weber, C. (2017) summarizes stuttering in a helpful manner: “Stuttering events are not static, rather the dynamic and continuous processes contributing to stuttering disfluencies ‘may be quite distant in time and space’ (Smith, A 1999)” (2484).

Part 2: What are listener perceptions and reactions to stuttering?

Byrd, C. et al. (2017) state, “persons who stutter are significantly vulnerable to stereotype threat” (70). Further, fluent speakers can be uncomfortable and anxious when listening to stuttering, which can cause the listener to assume speakers also have discomfort (Byrd et al. 2017). In a variety of studies PWS have been described as shy, nervous, or quiet among other adjectives (Boyle, M. 2015, Byrd, C. et al. 2017, Wiedner, M., St. Louis, K., Makisci, E., & Ozdemir, R. 2017, Hughes, C., Gabel., R., Palasik, S. 2017, Erikson, S. & Block, S. 2013). If PWS experience anxiety in a variety of speaking contexts, they are likely to pull away from the social situations, causing the audience to perceive the PWS as less intelligent and competent (Erikson, S. & Block, S. 2013). Erikson, S. and Block, S. (2013) discuss the bullying that can accompany adolescent stuttering, most commonly take the form of imitation for the purpose of making fun of PWS.

Weidner, M. et al. (2017) argue that the public typically has wrong perceptions of PWS, perceptions which are widely accepted across the globe. These incorrect attitudes range from ignoring the speaker to feeling bothered, such attitudes can begin as young as preschool

(Weidner, M. et al. 2017). One reason for the discomfort could be the misrepresentation of PWS in media (Byrd, C. et al. 2017). Movies that contain stuttering often portray PWS as insecure, weak, or incompetent. Even in the movie, *The King's Speech*, the king is often portrayed as insecure and fearful when stuttering. While fear is a genuine aspect of stuttering, the King is only portrayed as having power in moments when he does not stutter, which feeds the perception of stuttering as weakness.

Byrd, C. et al. (2017) and Hughes, C. et al. (2017) argue that self-disclosure leads to more positive reactions in listeners, including higher ratings in intelligence, personality, and appearance. In these studies, self-disclosure is referred to as the speaker mentioning the stutter early in the conversation. Self-disclosure has had an interesting, positive impact on the listeners' perceptions, including an overall improved attitude toward PWS by 72% (Byrd, C. et al. 2017). Without the self-disclosure, listeners felt more embarrassed and had a more negative attitude toward the PWS (Byrd, C. et al. 2017). The statistic is significant since, according to Erikson, S. and Block, S. (2013), only a little over 50% of adolescents self-disclose their stutter, perhaps contributing to the negative reactions felt by adolescents. The debate between self-disclosure or not ranges into the areas of therapy as well, according to Nippold, M. (2018). The author presents two therapy systems, one that addresses stuttering difficulties directly and one that seemingly ignores the stutter and focuses rather only on affirming the fluent speech. In one therapy technique, the therapists would discuss stuttering and try to correct the stuttering explicitly, while the other therapy technique would simply include implicit therapy, without direct statements. Both have challenges and benefits; however, the effectiveness of self-disclosure ought to be considered in decisions regarding therapy (Nippold, M. 2018). Along with self-disclosure, familiarity with PWS may have a positive impact on listeners. According to

Hughes, C. et al. (2017), positive perspectives toward stuttering correspond with the significance of relationships between listeners and PWS. In contrast, Byrd, C. et al. (2017) found that previous interactions with PWS did not have an impact on listeners' perceptions of stuttering. Rather, self-disclosure was shown to lead to improved interactions (Byrd, C. et al. 2017).

Factors outside of self-disclosure and familiarity that determine listener responses include severity of stuttering, strength of coping strategies, and effect of stutter on PWS (Hughes, C. et al. 2017). In each case, the more fluent the PWS's speech, the less affect stuttering had on the listener. Similarly, if listeners perceived stuttering as a variable based on situation, listeners perceived the PWS as anxious, self-conscious, and nervous (Hughes, C. et al. 2017).

Part 3: What is the impact of reactions on those who stutter?

Craig, A. et al. (2009), Hughes, C. et al. (2017), Erikson, S. and Block, S. (2013), agree that negative attitudes toward people who stutter have a negative impact on their quality of life. Craig, A. et al. (2008) argue that PWS have higher reported levels of anxiety, more psychosocial difficulties, and thus decreased ability to enjoy life. However, Boyle, M. (2015) argues with appropriate social support, empowerment, self-help, and group identification, PWS can have improved quality of life, even overturning some of the negative repercussions of stuttering.

While stuttering does not seem to negatively affect marital or family happiness, Craig, A. et al. (2009) stated that stuttering influences emotional levels of the PWS. Erikson, S. and Block, S. (2013) support the position and claim that reactions to teasing often include anxiety, sadness, and avoidance of both people and speech. Anxiety typically occurs after the onset of stuttering, according to Brundage, S., Winters, K., and Beilby, J. (2017), indicating that anxiety is caused by social reactions to stuttering rather than stuttering in itself. PWS can feel stigmatized, causing them to distance themselves from stuttering (Boyle, M. 2015). Craig, A. et al. (2008) indicate

that PWS are more likely to have higher levels of fatigue, lower levels of social function, and decreased social interaction capacity. Boyle, M. (2015) argues that these negative emotional and physical implications could be diminished if the PWS became involved in a supporting community.

Jackson, E. et al. (2015) discuss the PWS's response to stuttering anticipation. Most significantly, the study found that PWS avoid situations that would require stuttering, by circumlocution or communicating in alternative forms, such as email instead of conversation (Jackson, E. et al. 2015, Craig, A. et al. 2008). While this reaction to stuttering by avoidance is often recommended by speech therapy (Iverach, L. et al. 2016), it does not solve the root problem of difficulty with fluency (Jackson, E. et al. 2015). Speech restructuring fixes the top layer of the issue but does not have power over the deeper issues of anxiety and fear, according to Iverach, L. et al. (2016). Craig, A. et al. (2008) state that the mere presence of the disorder has implications on quality of life, regardless of frequency of stuttering. In contrast, Noreen et al. (2017) argued in favor of using self-therapy to monitor various aspects of stuttering. While researchers claim that PWS often withdraw or avoid situations, Boyle, M. (2015) argues that involvement and support are two of the most beneficial ways to improve quality of life.

While listener responses can cause anxiety, researchers argue that PWS with anxiety have a preconceived attitude toward possible responses to the stuttering (Iverach, L. et al. 2016, Erikson, S. & Block, S. 2013). For example, according to Iverach, L. et al. (2016), PWS that also have anxiety often assume that listeners will negatively evaluate them and will make life miserable, and often form a negative opinion of themselves, among other coping mechanisms. The fear of negative evaluation can lead to a higher perception of threat (Brundage, S. et al. 2017). The increased social-cognitive stress can cause a decrease in speech motor control, which

increases the chances of dysfluency (Jackson, E. et al. 2016). Erikson, S. and Block, S. (2013) further this research by indicating that adolescents who stutter have a higher level of communication apprehension and perceive themselves as poor speakers, which can be based on past responses from listeners, according to Iverach, L. et al. (2016). The negative responses can cause PWS to try and hide the stutter, with only 2/3 of adolescents talking about their stutter (Erikson, S. & Block, S. 2013). Boyle, M. (2015) argues, though, that finding support is one of the most helpful ways to overcome negative reactions to stuttering.

The present study adds to the research about listener perceptions and responses to stuttering. By analysis of questionnaires, listener responses to videos, and interviewing, the study examines listener perceptions from a variety of angles. In the following, the research study attempts to answer the following question: What are listener perceptions of stuttering and what are the listeners' reactions?

Methods

Part 1: Questionnaire

Throughout two weeks, 31 participants aged 18 to 25 filled out a two-part questionnaire. 28 of the participants are current college students and all 31 have a strong Christian belief system. The questionnaire was divided into two primary parts. First, participants were asked to explain levels of familiarity with PWS, from having a friend with a stutter to hearing stuttering in real life. The questionnaire also asked for the participant's age and gender to measure for gender differences.

The second part of the questionnaire included seven questions set up as a five-point Likert scale survey. The questions were determined to measure for listener perceptions of stuttering and potential responses to stuttering, by asking questions ranging from engagement

with PWS to body language while talking to PWS. Targeting listeners' comfort level, ability to focus, and attitude when interacting, the questions were focused on the way listeners think about and react to stuttering. The specific questions can be seen in Appendix A.

Part 2: Observation

Of the 31 participants who filled out the questionnaire, six of them also participated in an observation session and following interview. The differentiation of group size was largely due to time commitment and availability for participants. The observation section required participants to watch a short video of an audition for America's Got Talent.¹ As an audition for an aspiring comedian with a stutter, the video gave participants an opportunity to watch how stuttering manifests itself in a range of settings from both serious and emotional to comedic. The comedic effects provided interesting opportunities for observation. During the video, the listener's reactions were observed and recorded, looking specifically for any gestures, sounds, facial expressions, and interactions with the researcher.

Part 3: Interview

The interview addressed both the video and generalized perspectives on stuttering in a one-on-one discussion-based setting. To address the video, participants were asked to describe emotional responses to the video in two words. The interview also included questions about ease in understanding content of the video, perception of the speaker's intelligence level, and comfort meeting the speaker versus a stranger without a stutter. Participants were also asked about distinct memories of PWS and were given the opportunity to share any other thoughts on stuttering in general. Throughout the interview, the researcher took notes on the participants'

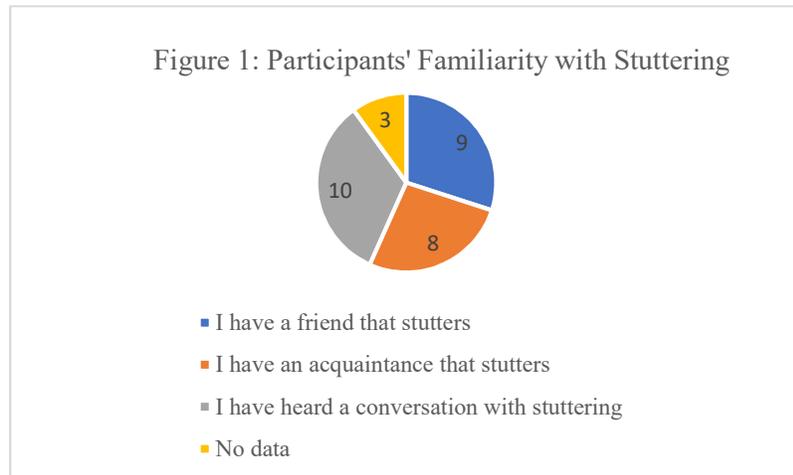
¹ Drew Lynch Stuttering Comedian Wins Crowd Over America's Got Talent 2015 [Video file]. Retrieved from https://www.youtube.com/watch?v=1ERf6cUa_1k

responses. Although the researcher had six questions for the interview, she asked clarifying questions as needed. The specific interview questions are listed in Appendix B.

Results

Part 1: Questionnaire

As summarized in Figure 1, the survey provided a range of responses for familiarity with



stuttering. Of the 31 participants, 3 did not provide data for this aspect of the questionnaire. 9 indicated a friendship with PWS, 8 indicated at least an acquaintance that stutters, and 10 of the remaining had heard

someone stutter in conversation before. Of the participants, 8 had a previous conversation with someone who stutters about stuttering. While these variables did not greatly affect the results of the remainder of the questionnaire, they provided some background for which individuals participated in the research study.

The second part of the questionnaire provided more unique responses to stuttering. Figure 2 summarizes the data regarding participant perceptions of stuttering. Over half the participants (55%) somewhat agreed that different speech styles were distracting while 26% stated that speech styles were not distracting. While the majority stated that differences in speech styles were distracting at some level, 81% argued that they could focus on PWS even if the speech style was different. Responses for comfort level ranged from 32% agreed at some level to feeling uncomfortable around PWS, 32% had a neutral response, and 36% disagreed to feeling

uncomfortable. In response to avoidance of stuttering, 87% disagreed that they avoided PWS.

87% also disagreed that they avoided eye contact when speaking to PWS, however 19% acknowledged that they somewhat agreed to avoiding eye contact. 81% did not think attitudes toward stuttering influenced relationships with PWS and 71% were unaffected by stuttering.



Part 2: Observation

The second part of the study examined listeners' reactions to stuttering in a less analytic context. Six participants' responses to the video were recorded, looking particularly at Eye Contact, Facial Expression, and Sound Responses. The observation section provided the researcher with more opportunity to observe natural responses to stuttering.

Eye contact provided interesting information in the participants' need for affirmation in reacting to the comedian. P1, P2, P3, and P4 all looked at the tester to see how she responded to the humor.

Not only did the eye contact indicate the participants' responses, but also the facial reactions of the participants were noted. P1 and P3 had a furrowed brow. During the comedic portions, P1 opened her mouth and acted uncomfortable with the humor. P3 shook his head and had a serious, sympathetic expression on his face. P4 and P5 had a smile on her face as she watched the video. While P4 looked at the tester to see how she responded to humor, she did not act particularly uncomfortable throughout the video. P6 maintained a straight face throughout the video, only laughing occasionally at the jokes.

In sound response, P2 and P3 were the only ones with recorded sound responses. P2 responded with "aww" throughout the video. P3 responded with "hmm" throughout the video. While some participants did respond in laughter, others were unable to laugh at the jokes that largely pointed fun at the speaker's own stutter.

Part 3: Interview

The interview section was divided into responses to the video and thoughts about stuttering more generally. Participants experienced a range of emotions as a result of watching the video; these were discussed in the interview. As the first question, the interviewer asked for

Table 1		
<i>Emotional Responses to Video</i>		
<u>Inspiration</u>	<u>Sympathy</u>	<u>Happiness</u>
Heartfelt	Stressed	Fun
Encouraged	Sad	Happy
Supportive	Discouraging	
Inspired	Compassionate	
Proud (2x)		

an emotional response to the video in two words. The primary emotional responses can be categorized into the three categories of inspiration, sympathy, and happiness. Specific words are displayed in Table 1. These emotional responses can be seen in the observed reactions seen throughout the video. For example, P1 gave the words "stressed and sad" as her emotional

response. This mirrors her furrowed brow and slightly open mouth throughout the video. P4 and P5 gave the words “happy and fun” and “inspired and proud,” respectively. This mirrors the smiles they had throughout the video.

The interviews gave participants an opportunity to elaborate on responses from the questionnaire and to explain perceptions toward stuttering. When asked how hard or easy it was for the listener to understand the content, participants gave a range of responses. P1, P2, P3, and P4 all stated the content was not harder to understand in the end but understanding required more concentration and longer attention span. P5 gave some insight into the question by stating that the message was harder to understand but that the effort needed to listen gave her added incentive. Since the material was more difficult, she wanted to give the effort and focus to understand the content. In contrast, P6 stated that understanding was easy.

When asked to rank the person's intelligence level, participants again gave various responses. P1 stated that she knew there was no medical difference in intelligence, but she conceded that listeners in general may perceive an intelligence difference. P2, P4, and P5 stated that there was no perceived difference in intelligence level. P3 and P6 argued that they did perceive a difference in intelligence level, but both were hesitant to acknowledge the perspective. P3 stated that he did not want to have a negative perception toward PWS, but his natural response was negative.

Similar reactions were given to comfortability in meeting the stranger from the video or a different stranger who did not stutter. P4 and P5 argued that the speaker in the video was friendly and would be easy to talk to, so meeting him would not be uncomfortable. P2, P3, and P6 stated that meeting a stranger who did not stutter would be easier and perhaps more comfortable. Again, the participants were hesitant and almost disappointed in themselves to state their opinion

on the topic. P1 stated that she would be startled to meet someone who stuttered but once she realized she would adjust and be alright.

By asking participants for specific stories of PWS or generalized comments about stuttering in general, the interview had an open ending, providing the researcher with a broader perspective on attitudes toward stuttering. The predominant responses fell into categories of either sympathy or support; stories of bullying, respect, and achievement were shared. One participant shared that as much as she would want to say she could be friends with someone who stuttered, the communication barrier might strain the relationship and prevent true friendship. However, another participant stated that PWS deserve “all the respect in the world” from others since they overcome stuttering daily.

Discussion

The questionnaire provides general information about listeners' responses to stuttering. While the results demonstrate that over 60% of participants are distracted by speech styles that vary from the participants' own style, 81% of participants claimed they could focus on content even if the speaker had a stutter. Participants reported that they did not avoid situations where they had to talk to someone with a stutter and the stutter would not limit the relationship. While 32% noted discomfort if someone stutters consistently, 71% were unaffected by the stutter. The questionnaire would indicate that stuttering does not have a large impact on listeners and PWS should experience very little negative responses to the stutter.

The observation portion of the study allowed the researcher to see responses independent of how the participant perceived themselves and reactions. While the facial reactions ranged from smiling (P4 and P5), to furrowed brows (P1 and P3), the generalized response could be

categorized into three emotional groups: inspirational, sympathetic, and happy, as indicated by the participants' responses in the interview.

Most striking from the observations, was the participants' response to humor. Since the humor centered around the comedian making fun of his own stutter, the topic was somewhat sensitive. The prevailing response from P1, P2, P3, and P4 was to break eye contact with the video to look at the researcher following each joke. While the researcher responded only mildly to the humor in the video, the participants looked to the researcher before reacting to less politically correct content in the video.

The observation and interview combined with the questionnaire provided the researcher with an opportunity to mix survey responses with discussion of tangible reactions to stuttering. The structure allowed participants to qualify what had previously been stated.

While the questionnaire responses must be taken as valid examples of what the participants perceived to be a response, the interviews provided an opportunity for participants to safely say and explain responses to stuttering that may not be desired. This accounts for some of the less positive responses to stuttering that can be seen in the interviewing data; specifically, P3 and P6 stating that they would likely feel more comfortable meeting a stranger who did not stutter and they would perceive PWS as less intelligent than themselves. P1 qualified her response to the intelligence question by stating that medically the PWS would have similar intelligence level, but he could be perceived as less intelligent. The data from the interview contrasts with the questionnaires in some cases. For example, P1, P2, P3, and P6 were within the 86% of respondents that disagreed or strongly disagreed that she would avoid people who stutter. However, each one of these participants also noted that they would be more comfortable meeting a stranger without a stutter than the one found in the video.

Three of the participants' answers were apologetic throughout the interview. P1 stated that she wanted to be willing to befriend someone with a stutter, but the friendship would be difficult. She stated that she was already "impatient enough" and the longer time needed to communicate would make friendship difficult. P3 discussed his response that he would be more comfortable meeting a stranger without a stutter. He stated that as a Christian, he wanted to be less focused on the stutter, but as would ultimately be more comfortable meeting someone without a stutter.

One striking example of the contrast between the questionnaire and the interviews can be found in the responses to comprehension level. In the questionnaire, 77% of the participants agreed or somewhat agreed that they could focus on what others said even if the speaker had a stutter. However, the participants that I interviewed qualified being able to understand stuttering by saying that it took more attention and concentration. While each one said they could understand the content all but one participant clarified that understanding took effort. Interestingly, P5 stated that she was more interested in what he had to say since she knew that the speaker would not say anything casually.

While some participants did have hesitations with stuttering, others maintained a positive and open attitude toward stuttering and PWS. P4 and P5 indicated no change in perceived intelligence and a similar comfort level in meeting the speaker from the video or a stranger without at stutter. The two participants also shared stories of people in their life that handled stuttering well and were skilled in a variety of areas.

The contrasting attitudes from impatience to inspiration indicates a variety of factors in the participant responses. Three prevalent factors are personality differences, cultural sensitivity, and the participants' Christian background. In personality, each individual reacts to new,

different, or surprising situations uniquely. Some can adapt well to new situations and to accept all aspects of people, including barriers in communication. However, others must work harder to respond well when interacting with PWS. Not only is personality a factor, but the cultural climate today influences responses. As individuals raised in the age of cultural tolerance and acceptance, participants in the college-age group are more likely to respond to questions with acceptance, especially if not given an opportunity to discuss responses. This can be seen in the differences between the questionnaires and the interviews.

Finally, the responses that were received in both the questionnaires and the interviews could indicate some Christian influence. The Christian culture is taught to have a perspective that is focused less on differences and more on our unity in Christ (1 Corinthians 12:12). This unity requires a celebration of unique aspects of life and an attempt at harmony and cohesiveness despite differences. The desire for unity can correspond to the largely positive responses from the questionnaires as well as the somewhat apologetic responses heard in the interviews.

Conclusion

The prevailing perceptions of stuttering can be summarized into two groups: positive and negative. The positive responses to stuttering are indicated by the 87% who will not avoid conversations with PWS and who responded to videos of stuttering with encouragement, pride, and happiness. The positive perceptions of strength, intelligence, and diligence of PWS can be drawn from the listener responses. Negative responses correspond to perceived discomfort in meeting PWS, as indicated in four of the interviews. These responses indicate perceptions of decreased intelligence and sociability.

While the questionnaires provided an opportunity to research what participants perceive and desire personal attitudes to be, the interviews provided an opportunity to express actual

expected responses to PWS as well as reasoning behind these responses. Based on responses of the listeners, the stated perceptions may be concluded. Ultimately, the influence of personality, cultural sensitivity, and Christianity most influence the responses of the participants and are factors in the perceptions that listeners have toward PWS.

Limitations and Future Research

Limitations for the study fall into two primary categories: the sample size and the video choice. The sample size, particularly for the second half of the study, was small and not varied. The video did not only target responses to stuttering, but also targeted an emotional response to a story of successfully overcoming difficult circumstances. By varying back and forth from serious and sad to funny and optimistic, listener responses are difficult to trace to the content of the video versus the stuttering found in the video. With a video of someone stuttering in a typical conversation, the research could be more balanced.

The study provides opportunities for future research. While the current study examined responses to stuttering, future studies could examine reasons behind the perceptions. Studies that would be helpful include a comparison study between a Christian population and a secular population, a study on the role of political correctness in changing perspectives on sensitive topics, and a study on the impact of negative responses on PWS.

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Appendix A: Attitudes toward Stuttering Questionnaire

<i>Attitudes toward Stuttering Questionnaire</i>				
Stuttering: involuntary disruptions of speech or repetitions of speech sounds				
I have a friend that stutters: Yes or No				
I have an acquaintance that stutters: Yes or No				
I have heard someone stutter in conversation: Yes or No				
I have had a conversation about stuttering with someone who stutters: Yes or No				
Please circle the number that most applies to you.				
1- Agree	2-Somewhat Agree	3-Neutral	4-Somewhat Disagree	5-Disagree
I get distracted if I am talking to someone with a different speech style(dialect/disorder)				
1	2	3	4	5
I can focus on what someone says even if he has a stutter.				
1	2	3	4	5
I feel uncomfortable if someone stutters consistently.				
1	2	3	4	5
I avoid situations where I have to talk to someone who stutters.				
1	2	3	4	5
When speaking to someone who stutters, I usually avoid eye contact.				
1	2	3	4	5
My attitude toward people who stutter limits my relationship with them.				
1	2	3	4	5
I am affected by others' stuttering.				
1	2	3	4	5
Please sign:			Age:	Gender:

Appendix B. Interview Questions

- Describe your emotional response to the video in two words.
- How hard or easy was it for you to understand and process the content?
- Does the stuttering affect how you view the intelligence level of the speaker?
- Would you feel more or less comfortable talking to the person in the video or a different stranger that did not stutter?
- Do you have any distinct memories with someone who stutters? What are they?
- Any other comments?