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The Effects of Written Stuttering Disclosure on Young Adult's Perceptions of Children Who Stutter

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THE EFFECTS OF WRITTEN STUTTERING DISCLOSURE ON YOUNG ADULT'S

PERCEPTIONS OF CHILDREN WHO STUTTER

by
Ashlee Manahan

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the
requirements of the Sally McDonnell Barksdale Honors College.

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The effects of written stuttering disclosure on young adult's perceptions of children who stutter

Abstract:

Purpose: This study measured between-group differences in perceived speech skills and personality characters of a 12-year-old male child who stutters (CWS) as a function of a written factual stuttering disclosure statement, delivered by a male CWS, his "mother", and his "teacher".

Methods: Four-hundred twenty-four college aged adults were randomly assigned to one of four groups. The groups included three experimental groups (i.e. written self-disclosure, written mother-disclosure, written teacher disclosure) and a control group (no written disclosure). Participants in the control condition viewed a brief video of a 12-year-old male who stutters. In the experimental conditions, participants viewed a brief written disclosure statement for 30 seconds, followed by the same video used in the control condition. Following the videos, participants completed surveys relative to their perceptions of the boy's speech skills and personality characteristics.

Results: Results support previous research in that the use of stuttering disclosure statements yield significant differences in participant perceptions. However, the significant differences found in the current study, using written disclosure, were less substantive compared to previous research using either live or video disclosure statements. Based on these data, stuttering disclosures written by the mother were associated with significant perceptual differences of the CWS.

Conclusions: While written disclosure statements were found to significantly impact select perceptions of a CWS, these data were less compelling than previous studies using live or video disclosure statements. Implications for future research and applications are discussed.

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LIST OF ABBREVIATIONS

SLD	Stuttering Like Disfluencies
PWS	People Who Stutter
SLP	Speech Language Pathologist
CWS	Children Who Stutter
IRB	Institutional Review Board
CSD	Communication Sciences and Disorders

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The effects of written stuttering disclosure on young adult's perceptions of children who stutter

The Science, Incidence, and Prevalence of Stuttering

Stuttering is generally documented as a speech disorder, with hallmark features including sound or syllable repetitions, prolongations, and inaudible postural fixations (Bloodstein & Ratner, 2008). Past scientific perspectives on stuttering have suggested that the fluency disorder originates from either a psychological or motor genesis(Bloodstein & Ratner, 2008; Drayna & Kang, 2011; Seery, 2005). However, more recent research documents genetic and neurological underpinnings to the disorder (Barnes et al., 2016; Raza et al., 2010, 2012, 2015)

Research approximates that as much as 5% of the pediatric population produce stuttering like disfluencies (SLDs) at some point during their linguistic development (Bloodstein & Ratner, 2008; Yairi & Ambrose, 1999). However, the majority of children producing SLDs spontaneously recover during their childhood years (Gordon, 2002; Yairi & Ambrose, 1999). Those that do not spontaneously recover from producing SLDs during childhood, which account for approximately 1% of the global population, will demonstrate persistent stuttering throughout their lifespan (Bloodstein & Ratner, 2008; Gordon, 2002; Yairi & Ambrose, 1999). Existing data suggest that factors contributing to persistent stuttering include the age of onset, family history of the disorder, duration of the child's production of SLDs, linguistic proficiency, and gender (Yairi et al., 1996; Yairi & Ambrose, 1999). Moreover, research also documents that recovery from stuttering and persistence of stuttering is associated with genetic factors (Ambrose et al., 1997).

Negative Stereotyping of Stuttering

Research documents that the stuttering population is often subject to unfounded prejudice and negative stereotypes (Klassen, 2001). Documented negative stereotypes among persons who stutter (PWS) are generally considered as quiet, reticent, guarded, avoiding, fearful, unpleasant, introverted, passive, self-derogatory, anxious, tense, nervous, shy, introverted, non-assertive, and afraid (Bajaj et al., 2017; Boyle, 2016; Snyder, 2001). Additional documented stereotypes include the presumption that PWS have low intelligence (Byrd, McGill, et al., 2017). Adolescents who stutter likewise view stuttering negatively as a socially stigmatized condition (Blood et al., 2003). Despite efforts to change and improve the acceptance of such documented negative stereotypes, data reveals that these widespread beliefs are often resistant to change (Doody et al., 1993; Leahy, 1994; McGee et al., 1996; Snyder, 2001).

Individuals in authority positions, such as teachers, speech-language pathologists (SLPs) and parents of children who stutter (CWS), are also documenting as holding negative stereotypes of those who stutter as well (Boyle, 2014; Fowlie & Cooper, 1978; Yeakle & Cooper, 1986). Specifically, SLPs are documented as feeling more judgmental, annoyed, and non-understanding towards the stuttering population (Boyle, 2014). Additionally, mothers have been documented as attributing negative personality characteristics toward their CWS (Fowlie & Cooper, 1978). Furthermore, research reveals that despite exposure to stuttering, teachers hold negative stereotypes relative to the personality traits of CWS (Yeakle & Cooper, 1986).

Negative Stuttering Stereotypes Impacts Quality of Life in Adults & Children

Due to the widespread prevalence and acceptance of unfounded negative stuttering stereotypes, research has documented a variety of negative impacts on the quality of life for PWS (Klompas & Ross, 2004), career advancement, relationships, and other social opportunities (Beilby et al., 2013; Craig et al., 2009; Klein & Hood, 2004; Mayo & Mayo, 2013; Van Borsel et

al., 2011; Zhang et al., 2009). Survey data reveals that more than 70% of PWS report the perception that stuttering decreases the likelihood of being hired or promoted, and 20% of respondents reporting that they felt excluded from job opportunities or promotions because of stuttering (Klein & Hood, 2004). In addition to reduced occupational opportunities and outcomes, research revealed that many PWS report anxiety about dating (Beilby et al., 2013). Such perceptions made by those within the stuttering community were supported with data of fluent college students reporting that potential dating partners were significantly less attractive if stuttering was present, thereby suggesting additional challenges in establishing and maintaining interpersonal relationships for PWS (Mayo & Mayo, 2013). Furthermore, research suggests that PWS may have a lower social functioning, which further supports the supposition that stuttering is associated with unfavorable outcomes relative to social interaction success (Craig et al., 2009).

The consequences of these unfounded negative stereotypes extend to the child's educational performance as well (Curlee & Yairi, 1997; Nippold, 2004). Research reveals that CWS are less academically successful than their fluent counterparts (Williams et al., 1969). A correlation between communication disorders (including fluency disorders) and educational performance has been documented by researchers and educators (Bennett & Runyan, 1982; Westby, 1979). However, research also suggests that the use of various early intervention strategies, as a part of an effective therapeutic treatment regimen, may minimize possible negative outcomes in the future lives of CWS (Curlee & Yairi, 1997).

Limitations of Stuttering Treatment on Quality of Life

While a variety of studies document stuttering treatment efficacy (Amster & Klein, 2008; Franken et al., 1992; Murphy et al., 2007; Yaruss et al., 2006), researchers also report that effective, long-term treatment for stuttering remains elusive (Blomgren et al., 2005; Conture,

1990). Traditional stuttering treatments typically improve effective communication skills by employing behavioral strategies, such as stuttering modification and fluency shaping, as a means of reducing moments of overt stuttering (Blomgren et al., 2005; Yaruss et al., 2012). However, such traditional treatments are also documented as having limited carry over into the real world applications (Kalinowski et al., 1994). Furthermore, they have been found to produce slow and unnatural sounding speech (Dayalu & Kalinowski, 2002; Ingham et al., 1985; Ingham & Onslow, 1985; Runyan et al., 1990; Stuart & Kalinowski, 2004). In addition, relapse following stuttering treatment is common for adults (Dayalu et al., 2002; Ingham et al., 2015). As a consequence of an absent cure for stuttering, coupled with other documented educational, social, and linguistic challenges associated with negative stuttering stereotypes, stuttering continues to negatively impact the quality of life of CWS and PWS (O'Brian et al., 2011; Yaruss, 2010).

Leveraging Self-Advocacy & Verbal Stuttering Disclosure on Perceptions of PWS

As traditional stuttering treatment efficacy remains limited and may not effectively address a variety of psychosocial aspects of living with stuttering, the inclusion of supplemental self-advocacy strategies, such as stuttering disclosure, are documented as improving the quality of life for those within the stuttering community (Boyle, 2015; Boyle et al., 2018; Byrd, Croft, et al., 2017; Curlee & Yairi, 1997; Nippold, 2004; O'Brian et al., 2011; Yaruss, 2010). For example, research documents that listeners perceive PWS who verbally self-disclosed stuttering to be more friendly, confident, and outgoing relative to PWS who did not self-disclose stuttering (Bajaj et al., 2017; Byrd, McGill, et al., 2017). As a consequence, the effective use of verbal self-disclosure of stuttering strategies has shown to be an effective way to reduce the effects of negative stereotypes (Bajaj et al., 2017; Byrd, McGill, et al., 2017).

The Effects of Advocate Verbal Stuttering Disclosure on the Perceptions of CWS

While verbal self-disclosure remains an effective strategy in reducing the unfounded negative stereotypes for both CWS and PWS (Bajaj et al., 2017; Byrd, Croft, et al., 2017; Byrd, McGill, et al., 2017; Murphy et al., 2007), research documents that children may not be able to effectively advocate on their behalf (Allen, 1989; Martin et al., 1993). As a response, researchers have measured the effects of child advocates verbally disclosing stuttering on the child's behalf (Snyder, Williams, et al., in press). Specifically, data reveals that optimal results (relative to the child who stutters) were obtained when stuttering was verbally disclosed by the child himself, or the child's "teacher" (Snyder, Williams, et al., in press). Interestingly, negative perceptions of a 12-year-old boy who stutters saw no significant change when stuttering was disclosed by the child himself, or the child's "teacher". However, study participants viewed the child who stutters more negatively relative to select speech skills and personality traits when the child's stuttering was disclosure by the "mother" (Snyder, Williams, et al., in press). Given the differential efficacy of verbal stuttering disclosure, as a function of the source of disclosure, coupled with results revealing that child verbal self-disclosure of stuttering yielded consistent significant improvements relative to attitudes of a CWS (Snyder, Williams, et al., in press) additional research as a means of creating new self-disclosure alternatives for CWS is warranted.

The Rise of Written Digital Media as a Primary Source of Communication

Interpersonal communication has significantly changed over the past decade, with the prolific adoption of digital media by the general population (Alonso & Oiarzabal, 2010; Morreale et al., 2015; Thomas, 2011; von Muhlen & Ohno-Machado, 2012). Written digital media have been known to provide outlets for those who have previously felt as if they do not have a voice due to bullying or fear of rejection of peers (Baruah, 2012; Mahadi et al., 2016; Sponcil & Gitimu, 2013; Steinfield et al., 2008). As data documents that CWS have additional

challenges in personal verbal advocacy (Allen, 1989; Alonso & Oiarzabal, 2010; Martin et al.,

1993; Morreale et al., 2015; Thomas, 2011; von Muhlen & Ohno-Machado, 2012), cultural

trends such as the rise of written digital media (i.e. email, text messaging, and social media

platforms) could provide CWS with new and accessible methods of stuttering disclosure.

Research suggesting inherent challenges for CWS relative to verbal self-advocacy and

verbal stuttering disclosure strategies (Allen, 1989; Martin et al., 1993; White et al., 1982). Due

to the rise of written digital media as a prevailing method of interpersonal communication

(Alonso & Oiarzabal, 2010; Morreale et al., 2015; Thomas, 2011; von Muhlen & Ohno-

Machado, 2012), a novel method of self-advocacy is to leverage the widespread adoption of

written digital media as a means of stuttering disclosure (Boulianne, 2015; "Digital Media and

Society," 2015; Fox & McEwan, 2017; Gee & Hayes, 2011; Morreale et al., 2015; Pynoo et al.,

2011; von Muhlen & Ohno-Machado, 2012; Whiting & Williams, 2013). Accordingly, the

purpose of this research was to study the effects of written stuttering disclosures, originating

from the CWS as well as common child advocates (i.e., mother and teacher) on the perceptions

of a 12-year-old boy who stutters.

Method

Overview of Study Design

This research employed a modified between-group stuttering disclosure study design

measuring the effects of verbal stuttering disclosure on the perceptions of a 12-year-old boy who

stutters (Snyder, Williams, et al., in press). The research paradigm used one control and three

experimental disclosure conditions, including: (1) the no stuttering disclosure control condition,

(2) the CWS providing his self-disclosure of stuttering, (3) the CWS's mother provided the

stuttering disclosure on the boy's behalf, and (4) the CWS's "teacher" providing the verbal

stuttering disclosure on the boy's behalf experimental speaking conditions. A transcript of the written stuttering disclosures can be found in Appendix A.

Primary Video Stimuli

Every condition included a 55-second video segment featuring a 12-year-old Caucasian boy who stutters reciting a personal narrative (approximately 125 syllables in length) of an American history homework assignment. This video segment was filmed in a quiet well-lit room. The boy was placed in front of a neutral-colored bare wall, and the video was focused on the speaker's head and chest. This 55-second verbal passage consisted of a stuttered syllable frequency of 13.6%, and the three longest moments of stuttering averaged 2 seconds in length. Secondary stuttering behaviors included irregular and fast rate of speech and eye blinking. Two trained research assistants analyzed stuttering speaking segments to reveal a 90% (SE=0.57, p=.000) inter-judge reliability (Cohen's kappa) on the 55-second video segment.

Control & Written Disclosure Conditions

The disclosure statements used during this study are factual in nature and have been used in previous research (Appendix A) (Snyder, Williams, et al., in press). Relative to this study, all written disclosure statements were projected on a screen using white text against a black background for 30-seconds immediately prior to the 55-second video. Pronouns within the written disclosure statements were modified to reflect the author of the written disclosure statement (i.e., CWS, "mother", and "teacher). Each condition displayed one of the written disclosure statements (i.e., CWS, "mother", or "teacher"), except for the control condition which provided no written disclosure prior to the video. Following the 55-second video segment, participants were instructed to complete the speech skills and personal characteristics surveys.

Survey

This study utilized a survey that was adapted from peer-reviewed publications measuring the perceptions of college students relative to fluency disorders (Farrel et al., 2015; Lake et al., 2009; Snyder, Williams, et al., in press; Woods & Williams, 1976). The first section of the survey consists of 6 questions pertaining to the participants' perceptions of the speaker's "Speech Skills." These questions are measured on a 7-point scale, with higher numbers being the least desirable and lower being the most desirable on the scale. Additionally, two questions were included in this section of the survey as follows: "In your opinion, how likely is this person to succeed in school?" and "Is your disbelief in the success related to the person's speech fluency." For the next section of the survey, 10 questions were provided in relation to the speaker's "Personal Characteristics." These responses were also measured using a 7-point scale in the same manner as the first section, with lower values of the 7-point scale being more desirable. This study was approved by an Internal Review Board (IRB) and can be found in Appendix B.

Participants

Participants in this study consisted of college-aged adults from various institutions within northern Mississippi enrolled in a wide array of disciplines, including: English, elementary education, applied sciences, engineering, social work, business, general studies, liberal arts, journalism, and pharmacy. The only major excluded from the study was communication sciences and disorders (CSD). Recruitment consisted of flyers, word of mouth advertisement, and general education classroom environments. In total, 424 participants (mean age 20.35 SD= 3.76) were included in the data set. Out of these participants, 284 were female (65.9%) and 147 were male (34.1%). Exclusion criteria for this study included (a) affiliation with the Department of Communication Sciences and Disorders, and (b) if participants reported one or more immediate

family members who stutter. Participants were randomly assigned relative to gender and major of study for each experimental condition.

Procedures

Participants were provided with a study description and informed consent, in which they read and completed, prior to participation in the study. Once the form was reviewed and completed, each participant was assigned to one of the four written disclosure conditions, which were presented to participants in a quiet and distraction-free room. Once participants had finished viewing the video, they were asked to complete the survey described above.

Study Design & Analysis

One-way ANOVA was used to analyze data from this study and Bonferroni post-hoc analyses were used to document significant between-group differences. The likelihood of type 1 errors was reduced by making adjustments to the alpha, resulting in an acceptable p-value of .005 in the speech skills survey, and a p-value of .008 in the personal characteristics survey.

Results

Data were analyzed using a one-way ANOVA measuring the effects of written stuttering disclosure as a function of the originator (e.g. child, "mother", and "teacher") on perceived speech skills and personal characteristics of a boy who stutters. These results are detailed in Tables 1 and 2.

Table 1

Speech Skills	F Statistic	P Value	Select Bonferroni Post–Hoc Comparisons
Speech Intelligibility	2.450	.063	
Speech Fluency	2.921	.034	
Speech Rate	3.413	.017	
Speech Volume	.161	.923	
Ease of Listening	5.145	.002*	Mother disclosure outperforms self-disclosure (p=.008) Teacher disclosure outperforms self-disclosure (p=.006)
Degree of Handicap by speech abilities	1.948	.121	

*denotes statistical significance (p=0.008), post Alpha adjustments

Table 2

Personal Characteristics	F Statistic	P Value	Select Bonferroni Post-Hoc Comparisons
Calm/Nervous	5.525	.001*	Self-disclosure outperforms control (p=.029) Mother disclosure outperforms control (p=.001)
Reliable/Unreliable	2.288	.078	
Relaxed/Tense	4.911	.002*	Mother disclosure outperforms control (p=.007) Mother disclosure outperforms self-disclosure (p=.021) Mother disclosure outperforms teacher disclosure (p.020)
Unafraid/Fearful	2.977	.031	
Intelligent/Unintelligent	.898	.442	
Confident/Insecure	2.756	.042	
Friendly/Unfriendly	1.359	.255	
Outgoing/Shy	2.537	.056	
Competent/Incompetent	1.831	.141	
Approachable/Unapproachable	.776	.508	

*denotes statistical significance (p=0.005), post Alpha adjustments

Speech skills

Data on perceived speech skills, as a function of stuttering disclosure, can be found in Table 1. A main effect of stuttering disclosure was found on perceptions of ease of listening, as detailed in Figure 1 [$F(3, 419) = 10.937$, $p = .002$]; Bonferroni post-hoc comparisons reveal significant differences between the child stuttering disclosure condition versus the mother and teacher stuttering disclosure conditions ($p=.008$ and $p=.006$, respectively).
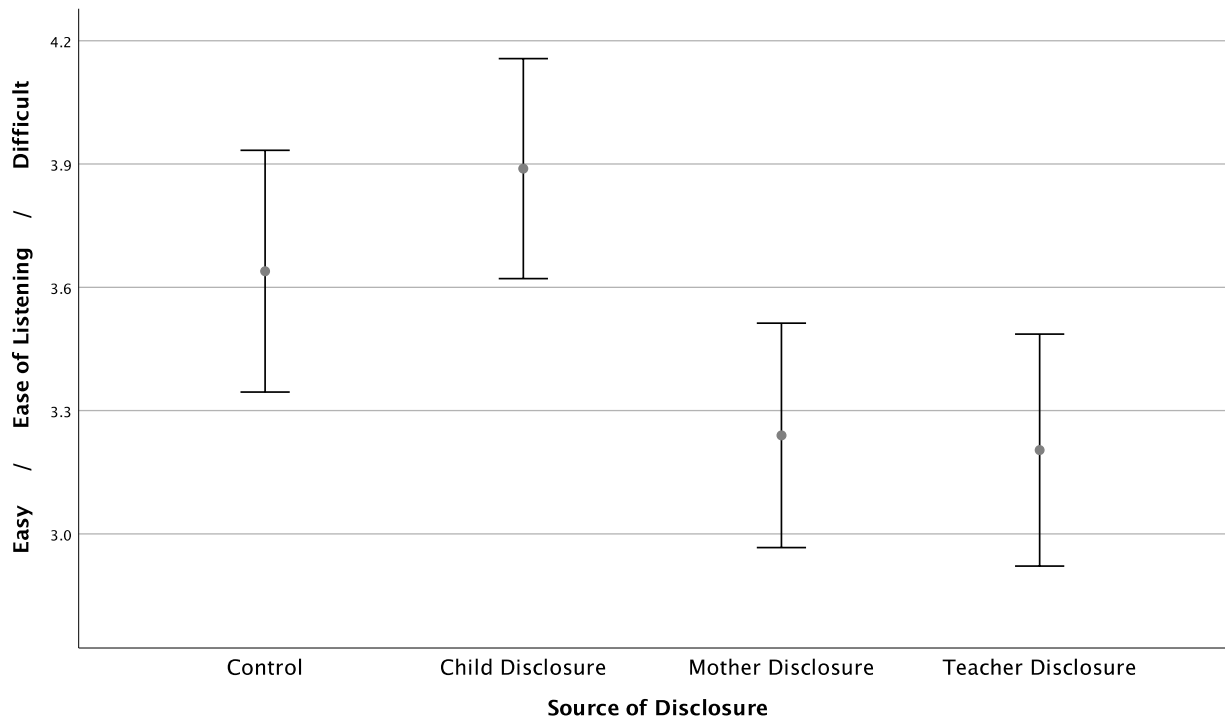
Figure 1

Figure 1: The distribution of participant responses for "Ease of Listening" as a function of the source of written stuttering disclosure statements.

Relative to perceptions of speech skills, no main effects were found (after Type 1 error corrections) relative to participant perceptions of the following dichotomies: Intelligible/Unintelligible, Fluent/Disfluent, Appropriate Rate/Inappropriate Rate, Appropriate Volume/Inappropriate Volume, Not Handicapped/Handicapped.

When asked if the boy would be able to succeed professionally, 87% of the participants reported that he would be successful and 13% of the participants reported that he would not be successful. When participants were asked if the child's success was related to their speech fluency, 81% cited the child's fluency would have an effect, whereas 19% cited it would not have an effect.

Personal Characteristics

Data on perceived personality characteristics, as a function of stuttering disclosure can be found in Table 2. A main effect of stuttering disclosure was found on participant responses relative to a calm/nervous spectrum, as detailed in Figure 2 [$F(3, 419) = 14.257$, $p = 0.001$]; Bonferroni post-hoc comparisons reveal significant differences between the no disclosure versus the child-disclosure and mother disclosure conditions ($p=.029$, $p=.001$, respectively). Similarly, a main effect of stuttering disclosure was found on participant ratings relative to the relaxed/tense trait pair, as revealed in Figure 3 [$F(3, 418) = 12.596$, $p < 0.002$]. Bonferroni post-hoc comparisons revealed significant differences between mother disclosure versus the no disclosure, child disclosure, and teacher disclosure conditions ($p=.007$, $p=.021$, $p=.020$, respectively).
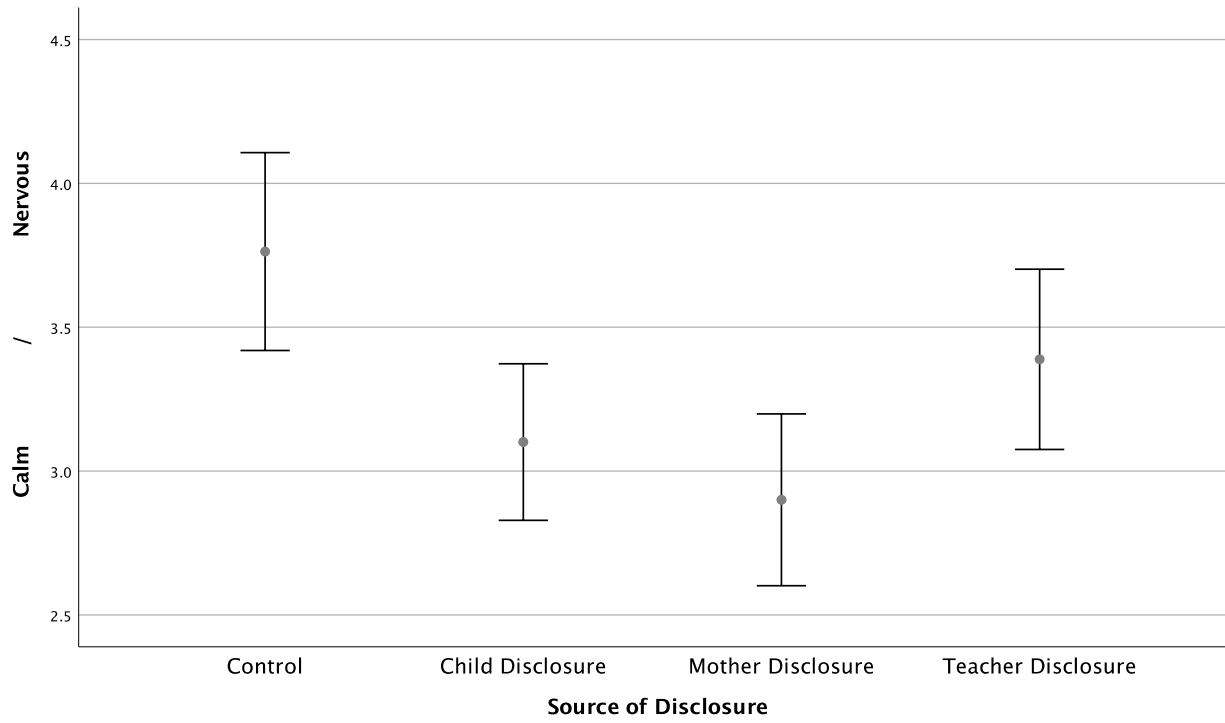
Figure 2

Figure 2: The distribution of participant responses for the "Calm/Nervous" trait pair as a function of the source of written stuttering disclosure statements.

Figure 3
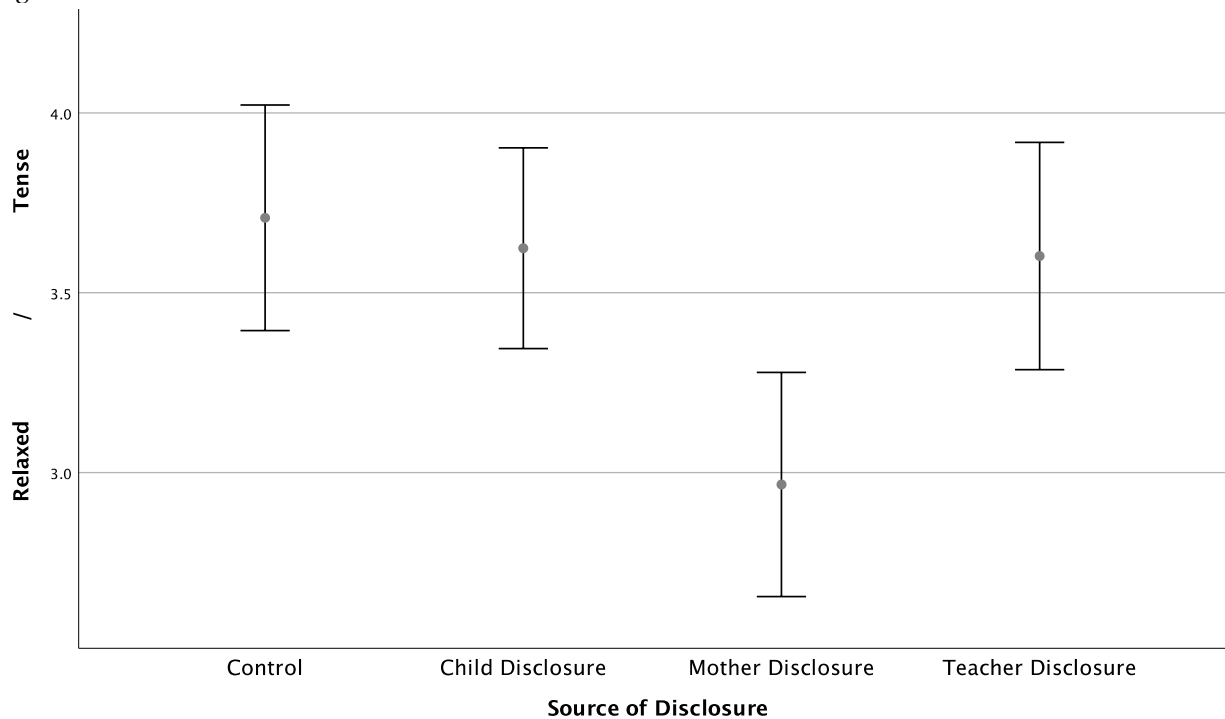
Figure 3: The distribution of participant responses for the "Relaxed/Tense" trait pair as a function of the source of written stuttering disclosure statements.

Relative to personality characteristics, no main effects were found (after Type 1 error corrections) relative to participant perceptions on the following dichotomies: Reliable/Unreliable, Unafraid/Fearful, Intelligent/Unintelligent, Confident/Insecure, Friendly/Unfriendly, Competent/ Incompetent, Approachable/Unapproachable.

Discussion

While effective at modifying select perceptions of the CWS, written stuttering disclosure statements do not appear to be as effective as live or video disclosures within the existing stuttering disclosure research paradigm (Bajaj et al., 2017; Byrd, Croft, et al., 2017; Byrd, McGill, et al., 2017; Murphy et al., 2007). Research studying the rise of social media (Alonso & Oiarzabal, 2010; Morreale et al., 2015; Thomas, 2011; von Muhlen & Ohno-Machado, 2012) suggests that the reduced efficacy of written stuttering disclosures could be attributed to the overwhelming amount of written digital media that is constantly forced upon the population (Cormack, 2008; Lutz et al., 2014; Reinke & Chamorro-Premuzic, 2014; Rutkowski & Saunders, 2010). Additionally, data findings reveal an association between the dramatic increase of electronic communication (i.e. email, texting, social media, etc.) and the general population responding more positively to live or in-person exchanges (Cummings et al., 2002; Kraut et al., 1998; Parks & Roberts, 1998). Reduced efficacy by the provided disclosure could be in relation to the use of email as a disclosure method, which may have inherently caused participants to view the CWS in a more negative light due to emotional distress and irritancies surrounding email usage (Dabbish & Kraut, 2006). Moreover, written digital media struggles to relay emotional content effectively, allowing the participants to misinterpret the disclosures (or the intent of the disclosures), which may result in reduced effectiveness (Byron, 2008). In addition, misinterpretation of written media is known to cause communication issues between various groups of people (Derks et al., 2007); accordingly, the use of emoticons to convey friendliness has become an essential component in modern digital communication and thereby associates serious transcriptions as angry or emotionless (Jibril & Abdullah, 2013).

The Effects of Written Disclosure on Perceptions of Speech Skills

Results from the survey regarding perceptions based on the child's speech skills can be found in *Table 1*. The results of the study reveal that written self-disclosure was found to be an overall ineffective source in changing perceptions of the boy's speech skills. When compared to written self-disclosure, written disclosure statements from the "mother" and "teacher" were associated with significant differences in participant perceptions of the boy's speech skills, particularly the "ease of listening" continuum. Specifically, participants were more likely to report improved ease of listening when the mother or teacher disclosed stuttering, as opposed to when the child self-disclosed his own stuttering over written media. There were no other significant differences found regarding the perceptions surrounding the boy's speech skills.

The Effects of Written Disclosure on the Perception of Personal Characteristics

Results relative to personal characteristics can be found in *Table 2*. Significant differences in perceived personal characteristics as a function of disclosure include the trait pairs calm/nervous and relaxed/tense. Respective to the calm/nervous trait pair, participants within the control group perceived the CWS to be more nervous in comparison to the use of self-disclosure and mother disclosure. Referring to the relaxed/tense pair, significant differences were found between mother-disclosure and all other disclosure conditions. A factor to note about this category is the presiding effectiveness the mother disclosure carried over all other modes of disclosure used in this study. Relative to all other disclosure conditions, mother disclosure statements typically yielded more positive participant perceptions. These differences included pairs: relaxed/tense, unafraid/fearful, confident/insecure, outgoing/shy, although only one of these trait pairs were found to be significant. This was most prominently noted with the relaxed/tense trait pair, where the mother disclosure statement yielded significantly more favorable perceptions for the CWS.

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Results from this study indicate that mother disclosure, followed by teacher disclosure, were effective in differentiating select perceptions of the CWS via written disclosure statements. Respective to these data, mother-disclosure yielded the most significant differences in perceptions of a CWS, albeit more so in the boy's perceived personal characteristics. However, while significant differences via written stuttering disclosures were observed, live or video stuttering disclosure statements are documented as yielding greater, and more clinically advantageous, perceptual differences (Snyder, McKnight, et al., in press).

Social acceptance of over-parenting may provide insight as to why written disclosure statements, by the mother, yielded significant differences in perceptions of a CWS. For example, over-parenting techniques, including "helicopter parenting" and "lawnmower parenting" have taken precedence in modern caregiver idealism (Locke et al., 2012; Padilla-Walker & Nelson, 2012; van Ingen et al., 2015). This could potentially mean participants found the mother to be especially caring for her son thereby creating higher levels of sympathy responses, especially in cases in which a participant is a caregiver themselves (Holtz et al., 2015). Furthermore, it is possible that even respondents who are not in a caregiver position could have made a personal connection with the mother's disclosure. This might have occurred through mental reassignment (Laible & Carlo, 2004), since no visual stimulant was provided for responders to connect with, they may have been subconsciously envisioning their own mother through the statement (Cook et al., 2007).

Results from the disclosure statement featuring the child's teacher held a significant difference relative to self-disclosure regarding the continuum ease of listening. However, overall this source proved to be ineffective in all other perceptual metrics of the CWS. Possible reasons for these results might include a lack of emotional connection perceived between teachers and

their students (McHugh et al., 2013). That is, the lack of an emotional connection may cause participants to perceive a level of indifference from the teacher disclosure because interpersonal relationships between the two seem to be unauthentic (Cook et al., 2007).

When comparing results from previous verbal studies versus the current study, child self-disclosure was found to be ineffective and even provoked negative feedback from participants in select perceptual categories. Less favorable perceptions of the CWS were documented when the child disclosed for himself rather than his mother, teacher, or when no disclosure was provided. A potential explanation as to the ineffectiveness of written self-disclosure suggests that participants perceived the CWS was using written media in an attempt to avoid live or video personal disclosure (Peebles, 2014), suggesting a lack of resilience and an overall weak character, thereby tarnishing his appearance to respondents (Craft & Gregg, 2019; Sapouna & Wolke, 2013). Likewise, if participants perceived the child's absence of resilience as a means of personal weakness, negative responses may have ensued due to the current culture's push for accepting oneself and overcoming fear (Browning, 2015). Additionally, data suggests growing distrust and skepticism over written media, such as false identities (Goga et al., 2015) and false pretenses (Peterson-Badali et al., 2003; Tabone & Messina, 2010).

Limitations & Future Research

Limitations of this study include, but are not limited to, the sample size and possible demographic issues due to all participants being college-aged, people who exceed or fall below the age limit placed on this study may hold significantly different perceptions than the results from this study provide. Other limitations include a lack of knowledge that these participants may have had in regards to the true nature of stuttering; it was noted that many participants were not aware that stuttering is a legitimate speech disorder, which may have provided survey

limitations as well. Other drawbacks from this study include the absence of demographic markers such as status of parenthood or lack thereof, which may have provided limitations within mother disclosure experimental conditions.

Future research to further improve this study should explore the effects of handwritten notes to measure any differences in perceptions when compared to written digital media. Further research should also include an informative statement providing a scientific definition of stuttering to provide participants with knowledge about the disorder. Larger sample sizes should be employed, as well as variations in respondent ages to measure differences in perceptions between age ranges. Further research should also employ new variations of advocate disclosures, for example, father, siblings, significant others, and/or, live disclosure, to further assess the importance of self-disclosure.

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Appendix A: Text of Stuttering Disclosure

"The video you are about to watch features [me, a person who stutters / my child who stutters / one of my students who stutters]. You may see or hear [me / him] stutter during this video. I appreciate you taking the time to watch this video and completing a brief survey afterwards."

Appendix B: Speech Skills & Personal Characteristics Survey

SURVEY OF STUDENTS' PERCEPTIONS
OF A SPEAKER'S VIDEOTAPED PRESENTATION

> **I. SPEECH SKILLS:** Please circle one number on each line to show your rating of the speaker's oral speech skills along each dimension. **For example**, for "Speech Intelligibility," a rating of "1" would indicate completely intelligible speech, and "7" would indicate completely unintelligible speech.

1.	Speech Intelligibility:								
Intelligible		1	2	3	4	5	6	7	**Unintelligible**
2.	Speech Fluency:								
Fluent		1	2	3	4	5	6	7	**Disfluent**
3.	Speech Rate:								
Appropriate Rate		1	2	3	4	5	6	7	**Inappropriate Rate**
4.	Speech Volume:								
Appropriate Volume		1	2	3	4	5	6	7	**Inappropriate Volume**
5.	Ease of Listening (i.e., how easy is it to listen to this person's speech):								
Easy		1	2	3	4	5	6	7	**Difficult**
6.	Degree to which you feel the person is handicapped by his speech abilities:								
Not Handicapped		1	2	3	4	5	6	7	**Handicapped**

7. In your opinion, how likely is this person to succeed in school?		
Yes	**No**	**Undecided**

*If you answered **NO** or **UNDECIDED** to **Question 7**, please answer **Question 8.**

8. Is your disbelief in the success related to the person's speech fluency? Please **circle** one:

Yes	**No**

II. PERSONAL CHARACTERISTICS: Please circle one number on each line to show your rating of the speaker along each of the following personal characteristics. **For example**, for "Calm/Nervous," a rating of "1" would indicate that the speaker is judged to be extremely calm, and "7" would indicate that the speaker is judged to be extremely nervous.

1.	**Calm**	1	2	3	4	5	6	7	**Nervous**
2.	**Reliable**	1	2	3	4	5	6	7	**Unreliable**
3.	**Relaxed**	1	2	3	4	5	6	7	**Tense**
4.	**Unafraid**	1	2	3	4	5	6	7	**Fearful**
5.	**Intelligent**	1	2	3	4	5	6	7	**Unintelligent**
6.	**Confident**	1	2	3	4	5	6	7	**Insecure**
7.	**Friendly**	1	2	3	4	5	6	7	**Unfriendly**
8.	**Outgoing**	1	2	3	4	5	6	7	**Shy**
9.	**Competent**	1	2	3	4	5	6	7	**Incompetent**
10.	**Approachable**	1	2	3	4	5	6	7	**Unapproachable**

III. PARTICIPANT DEMOGRAPHIC INFORMATION:

1. Gender:	Female		Male	2. Age:	

3. Race (please **circle** one):

African American	Asian American	European American	Latin American	(North American) Native American	Other

4. Major:

5. Class (Rank):

6. Number of **immediate** family members who stutter:

7. Number of **extended** family members who stutter:

8. Number of **friends** or **acquaintances** who stutter:

9. Number of your total **previous/current instructors** who stutter:

10. Number of **stuttering courses** you have taken (a course that devoted 50% of class time to stuttering would count as ½ a stuttering course):