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PUBLIC SPEAKING INSTRUCTORS' PERCEPTIONS
OF COLLEGE STUDENTS WHO STUTTER

by

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ABSTRACT

This study queried collegiate level instructors of public speaking asking if there was a gender based difference in their attitudes and beliefs about stuttering. The survey examined for relationships between instructor level of education and: sources of knowledge, knowledge of causation and, amount of knowledge about stuttering. Communication literature searches indicated there were few, if any, studies which specifically addressed the knowledge levels, sources of knowledge and causation information for stuttering. Stuttering occurs in approximately 1% of the worldwide population so it is reasonable to expect that most collegiate level instructors would have individuals who stutter presenting in their classrooms.

A Qualtrics survey, presented the *Public Opinion Survey of Human Attributes – Stuttering*, to participants across the United States who were members of the Basic Course in communication list serv or who were subscribed to CRTNET. A total of 134 individuals responded to the survey. The majority of respondents were native English speakers, with a small number speaking Spanish as a second language. Respondents represented thirty six of the fifty United States with 113 respondents reporting they actively were teaching the basic course in public speaking.

Statistical analyses indicated there were no significant differences between master and doctoral level educated instructors in their: sources of knowledge; information on causation of stuttering, and; amount of knowledge about people who stutter. There were no significant differences between instructor gender and attitudes about stuttering, and beliefs about people who stutter.

Findings underscored the limited amount of information which this sample of public speaking instructors possessed regarding the causation of stuttering as only 37.7% of respondents selected genetics as an underlying factor in the occurrence of stuttering. The majority of instructors reported *some information* to *none* about people who have a stuttering disorder. They indicated their knowledge was acquired through personal experiences, school, and to a lesser degree, print media.

Keywords: stuttering; attitudes about stuttering; beliefs about people who stutter; communication instructors, public speaking basic course

This study is dedicated to college students who stutter

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CHAPTER ONE: INTRODUCTION

Historically, the discipline of communication focused on and supported students in the learning and mastery of skills associated with public speaking. The early rhetorical tradition traces to ancient times in Greece, as early as the fifth-century, BC (Littlejohn & Foss, 2011) with the principles of effective speaking continuing to be taught today at college and university levels. Most post-secondary students experience this type of course during their post-high school experience and for many, such a course could be challenging due to prior negative experience with public speaking, limited knowledge and preparation for delivering a speech, or difficulty with understanding the purpose of such a course as part of the undergraduate curricula as preparation for future employment (Kendall, 1974).

For a small percentage of college students, however, enrolling in a public speaking course might be especially challenging, particularly if the student has been diagnosed with or is self-diagnosed with a disorder of fluency, or stuttering, as it is commonly known. The individual student may not want to speak publicly for fear of negative reprisals from peers in the form of social media mocking, being thought less intelligent because of their fluency breakdowns, or because the student fears that the instructor does not understand what it is they are hearing and will grade the student with a low performance score for a prepared speech. Many students who stutter rate “asking their instructor a question” as the most challenging aspect of enrollment in a course (Vanryckeghem, Matthews, & Yu, 2017) which could be problematic for any college student who stutters.

Most instructors in communication do not have formal coursework which provide the etiology or the manifestations of stuttering unless they arrive to the discipline from another academic background and learn about stuttering through the requirements of the first discipline. Instructors of communication have knowledge of communication apprehension, contemporaneously called reticence, shyness and/or communication avoidance (Daly et al., 2009) and its impact on college students' success (McCroskey, Booth-Butterfield, & Payne, 1989). Both groups, individuals who stutter and individuals experiencing communication apprehension, share similarities in their reticence to speak in front of others, but the root causes for their reluctance to speak are dissimilar. Many students reporting communication apprehension indicate prior negative performance during public speaking perhaps due to poor preparation, absence of knowledge in the organization of a presentation, or overall elevated levels of speaking anxiety. For those who stutter, stuttering is generally present from early childhood with the ebb and flow of fluency breakdowns occurring as a function of the persons with whom they are communicating, the time of day, size of speaking group, and importance of the message being communicated.

Justification

Communication instructor knowledge about stuttering is contained within broad college level data. Findings related to hard sciences, humanities, and social science are aggregated (Chastain & Bettagere, 2016; Daniels, Panico, & Sudholt, 2011; Dorsey & Guenther, 2000; Ruscello et al., 1990-1991). Thus, little information is known which specifically addressed communication instructor attitudes and beliefs about people who stutter and the disorder itself. Instructors who teach public speaking should be well-versed about stuttering as they are

instructing students whose aversion to public speaking goes beyond apprehension about presenting information and ideas to a group. Differences in knowledge bases and perceptions were associated with academic college and gender. Because of the nature of data reporting provided by researchers, more fine-grained information related to instructors of communication was not found. Thus, information specifically pertinent to communication instructor perceptions and knowledge of stuttering was absent from published literature.

The purposes of this study were to investigate college and university level communication instructors' sources and amounts of information about stuttering, their awareness of the causes of stuttering and to determine if there were gender based differences in their attitudes and beliefs towards stuttering and students who stutter.

For the purpose of sampling the knowledge, attitudes, and beliefs of communication instructors through this investigation, the *Public Opinion Survey of Human Attributes – Stuttering* (St. Louis, 2011) survey tool was utilized to obtain this information. The *POSHA-S* (St. Louis, 2011), a well-validated and reliable instrument previously administered to respondents in the United States and world-wide, has had close to 12,000 respondents as of 2014.

CHAPTER TWO: LITERATURE REVIEW

General Information on Stuttering

Stuttering, considered a low-incidence disorder by speech-language pathologists (Bloodstein & Bernstein-Ratner, 2008, p. 78; Whaley & Golden, 2000; Whaley & Langlois, 1996), persists in approximately one percent of the United States population (Yairi & Ambrose, 2013, p. 72; International Stuttering Association, 2014, p. 20). More males stutter than females with spontaneous recovery more likely to occur in female than male children (Yairi & Ambrose, 2013; Bloodstein & Bernstein-Ratner, 2008). This disorder requires specialized treatment such that the American Board of Fluency and Fluency Disorders (ABFFD) provides specialty certification for speech-language pathologists practicing with persons who stutter (PWS) (ABFFD, 2016).

The speech production of PWS, is characterized by what specialists term “core”, or involuntary stuttering behaviors which may consist of oral sound and syllable repetitions, monosyllabic word repetitions, silent and oral sound prolongations, and word breaks (Bloodstein & Bernstein-Ratner, 2008). Other disfluent behaviors, voluntarily used, may be noted which include multisyllabic whole word, phrase, and sentence repetitions, revisions, and interjections of sounds consisting of “ah, um, eh”, or short filler phrases marked by “you know, like, I mean, well, what I’m trying to say is” in their speech. Other overt symptoms of stuttering may include disordered breathing, and phonatory and articulation changes which some PWS adopt while attempting to avoid stuttering. Other symptoms include pallor, flushing, and excessive perspiration (Bloodstein & Bernstein-Ratner, 2008).

Diagnostically, the relative frequency of use of the core and other disfluent behaviors set the speech of PWS apart from the typical non-fluencies occurring in the speech of their non-stuttering peers (Yairi & Ambrose, 2013). These disfluent speech behaviors vary in frequency by speaking situation, the time of day, and according to the topic being discussed (Vanryckeghem et al., 2017; Yaruss & Quesal, 2006; Koedoot, Bouwmans, Franken, & Stolk, 2011). Additionally, PWS may report feelings of frustration due to the physical halting of their articulators and laryngeal movements while attempting to speak, with increased muscular tension noted during speech (Snidecor, 1955). Mild to moderate feelings of panic are reported as the individual approaches speaking situations, during the situations themselves, as well as following the situations (Bloodstein & Bernstein-Ratner, 2008; Vanryckeghem et al., 2017; Koedoot et al., 2011).

Some PWS report using what are termed “coping responses” to hide their fluency breakdowns, to help them to speak more fluently, or to avoid being disfluent (Vanryckeghem, Brutten, Uddin, & Van Borsel, 2004). That is, the individual who stutters may use fewer words when speaking, use nods, gestures or pointing in place of words, or even acknowledge agreement to what is said, even if they have reservations about what it is they are agreeing to in the conversation. Possibly the individual who stutters word substitutes because the person knows that a word beginning with a certain non-feared sound, through prior experience, can be spoken fluently. PWS often use circumlocutions to avoid feared words or to encourage the speaking partner to provide the desired word allowing the individual who stutters to successfully avoid fluency breakdowns (Daniels & Gabel, 2004). PWS take fewer communicative turns during conversations (Freud, Moria, Ezrati-Vinacour, & Amir, 2016) according to research examining

the amount of conversational exchanges between PWS and those who are fluent.

Communication exchanges are thus restricted (Lee, Van Dulm, Robb, & Ormond, 2015, p. 549) as the PWS manages his fluency through reductions in linguistic complexity.

For many PWS, their greatest challenge when completing their formal education at the post-secondary level was to master the skill of public speaking. Many fluent students acknowledged public speaking courses created apprehension for them but managed to engage in because of the knowledge and skills practice acquired through instruction. PWS prepare speeches for the public speaking course, not knowing if they could actually produce the prepared speech or if they will resort to strategies used previously to maintain fluency. Since many universities and colleges require most students to complete a basic public speaking course as part of their general education program, such a course would be challenging for the PWS. For many PWS, they fear producing publicly witnessed fluency breakdowns.

Shared History of the Disciplines of Communication and Communication Disorders

The field of communication disorders arose from the discipline of communication, with both fields benefitting from the work of early elocutionists (Cohen, 1994). Following the 1914 break from the oversight of elocution teachers by the National Council of the Teachers of English (NCTE, the National Association of the Academic Teachers of Public Speaking (NAATPS) (Cohen, 1994, p. 29) was formed. Teachers of speech were no longer associated with the departments of English which was the traditional home for elocution. The first master's degree program in public speaking was announced by the University of Wisconsin in the years between 1914 (Duchan, 2002, p. 5) and 1916 (Cohen, 1994, p. 53) including two possible tracks

of study: speech communication, and; communication disorders (Cohen, 1994, p. 53). Later, Wisconsin added the doctorate in speech to its academic offerings while in 1922 the University of Michigan established a program for speech correction (Eldridge, 1968). The University of Iowa also offered the doctorate in speech (Reid, 1990, p. 17) as did Cornell, Columbia, Michigan, and Northwestern (Reid, 1990, p. 12). As late as 1936 the National Association of Teachers of Speech (NATS) provided shared time at their annual conference for those practitioners interested in the correction of speech defects (The Program Committee, 1937). Medically-based presentations dominated topic agendas for the speech correctionists in attendance, including focus on advances in film which allowed motion studies of the speaker.

One early elocutionist formally trained as a psychiatrist was interested in speech defects. Smiley Blanton saw his own research on the prevalence of speech disorders published in the first volume of the *Journal of Speech Disorders*. Interestingly, Blanton received his training as an elocutionist during his early private school education in Boston (Duchan, 2011). Blanton later taught at the University of Wisconsin. Blanton wrote texts, one with Margaret Gray Blanton, for the emerging field of communication disorders. One book, *Speech training for children: The hygiene of speech* (Blanton & Blanton, 1920) was intended to guide individuals treating children with speech problems (Duchan, 2002) with a chapter devoted to stuttering, presenting the current beliefs on this disorder to late nineteenth-early twentieth century readers. These two writers and leaders were aware of the problems surrounding speaking disorders in children. Blanton focused his work on stuttering, voice and speech problems of children, as well as child welfare while investigating the overall occurrence of speech defects among the school-age population (Duchan, 2011) utilizing his medical and psychiatric backgrounds. He became a charter member of the

American Speech-Language and Hearing Association (ASHA) in 1926 (Duchan, 2011) along with Margaret Gray Blanton.

The rise of communication disorders as a profession emerged from earlier elocutionist interest in Europe in the mid-1800s (Barboa, 2008) and in the United States because of the needs of individuals with speech disorders, specifically stammering and lispings. Other disciplines involved in the early study of speech correction included teachers from education, medicine, psychology, and linguistics. Interest in speech correction also occurred in Scotland and England thanks to A. G. Bell and his father, Alexander Melville Bell, both trained elocutionists (Duchan, 2011). The Bells were busy in Scotland in the 1860s developing early technology related to the transmission of sound across distances (Duchan, 2002; Barboa, 2008) resulting in the telephone. Later, A.G. Bell invented the audiometer, an instrument still used by audiologists today to measure hearing acuity (Duchan, 2011).

The first journal addressing the communication disorder of stuttering, *The Voice*, was published from 1879 to 1892 by Werner (Duchan, 2002) who self-identified as a PWS. Philadelphia saw the publication of the first text on speech disorders in 1882 (Barboa, 2008). The term “speech pathologist” was used in 1930 according to Barboa (2008), although other reports state it was recognized earlier, in 1925, as a profession (Dudding, McCready, Nunez, & Procaccini, 2017). The referent term “audiologist” was coined in 1939 (Barboa, 2008) with audiology recognized as a profession in 1946 (Dudding et al., 2017) following World War II. Many early publications authored by the founders of today’s ASHA published their work in early communication journals.

Relationship of Stuttering to Public Speaking

To better understand the historical perspective of stuttering's place in public speaking courses it is illustrative to review the early work published by researchers in communication in which stuttering is mentioned. Early authors identified "stage fright" as a concern for instructors of public speaking to be aware of occurring in their students.

More contemporary research specifically related to stuttering as a disorder of communication sheds light on the transiency of periods of fluency breakdowns. Researchers in communication disorders focused more specifically on the speaking situations impacting PWS' situational fluency and linguistic complexity. First, a review of early communicative publications, in which stage fright and stuttering are mentioned, followed by later research in communication disorders will be presented.

College students were more confident in their public speaking following four months of instruction according to Gilkinson (1942, p. 155). Stuttering was identified as an indicator of stage fright during prepared speeches for a basic speech course (Baker, 1964, p. 235) in another communication study. Stuttering was identified as a member of the *Speech Disturbance Category (SDC)* (Mahr, 1956, p. 2) without further elaboration. Other elements included for scoring in the *SDC* were: interjection of ah; incomplete sentence; word repetition; an incoherent sound; neologism, and; omission (Mahr, 1956, p. 2). According to contemporary definitions of fluency breakdowns, some of these other elements provided in the *SDC* describe several of the core and other disfluent behaviors now generally associated with stuttering (Bloodstein & Bernstein-Ratner, 2008). Other early studies detail manifestations of stage fright in college

students in relationship to public speaking coursework (Dickens, Gibson, & Prall, 1950; Dickens & Parker, 1951; Bormann & Shapiro 1962, Clevenger, 1959). While findings from Gilkerson (1942) and Baker's (1964) research indicate that completion of a basic public speech course could reduce stage fright (Baker, 1964, p. 243) there was no mention, specific to participant demographics, to indicate if any PWS participated. In some of these publications the term "stutter" was placed on instructor speech rating forms (Gilkerson, 1942; Baker, 1964). Without an operational definition, or at best, a description of behaviors associated with it, perhaps instructors' tacit knowledge yielded common meanings for the behaviors comprising a stutter or what was thought to be a stutter.

Communication disorders literature provided measures of avoidance, reaction and frequency of avoidance of speaking situations reported for a sample of persons who do not stutter (PWNS) and PWS (Trotter & Bergmann, 1957, p. 42). Comparison of avoidance scores yielded distinctions between PWS and PWNS across forty speaking situations (Trotter & Bergmann, 1957, p. 42). The top ranking for avoidance by PWNS occurred for "making a speech to unfamiliar audience" while PWS ranked this in a tie at second place along with using the telephone (Trotter & Bergmann, 1957, p. 42). The top ranked feared speaking situation for PWS of "asking instructor question in class" (Trotter & Bergmann, 1957, p. 42) was ranked second by PWNS, however. Statistical comparison of the forty speaking situations for PWS and PWNS yielded significant findings that stutterers would avoid these speaking situations, overall. Significance differences were also reported for PWS indicating less enjoyment in speaking situations than the PWNS (Trotter and Bergmann, 1957). While it appears that PWS and PWNS

may avoid similar speaking situations the degree of avoidance and personal satisfaction were significant for the individuals who stutter.

PWS also reported different situations which affect their relative speech fluency, as found in the work by Brutten and Janssen (1981); Kraaimaat, Vanryckeghem and van Dam-Baggen (2002); Vanryckeghem et al., (2017) and; Koedoot et al., (2011). Those factors which PWS report include: making a speech to an audience that is not familiar; giving a prepared speech; being rushed when speaking; having a job interview; querying an instructor in class; using the telephone to request information; reciting in class (less than ten words); reading aloud to individuals considered friends; reading an unchangeable passage; providing unchangeable, usually personal, information; talking with the opposite gender, and; talking with superiors (Trotter & Bergmann, 1957; Brutten & Janssen, 1981; Vanryckeghem, et al., 2017).

Virtual reality (VR) based speaking situations were used in comparison with live audience speaking situations when investigating the affective, cognitive and behavioral responses of PWS. Two VR generated situations (Brundage & Hancock, 2015) in which the PWS faced a virtual challenging audience and a virtual neutral audience were utilized along with a live audience. PWS produced a higher percentage of syllables stuttered per minute in the virtual challenging audience situation. The challenging audience was operationally defined as “did not pay attention, did not make eye contact, and made other nonverbal distracting behaviors” (Brundage & Hancock, 2015, p. 143).

Variability of disfluent production during oral speaking and reading tasks was examined by Constantino, Leslie, Quesal, and Yaruss (2016). The majority of participating PWS were

variable in their produced disfluencies in three oral speaking tasks requiring language formulation, while disfluent productions varied little during two oral reading tasks (Constantino et al., 2016). Findings suggest that PWS may experience high variability in their percentage of syllables stuttered if language formulation is requisite for their task, whether in conversation, monologue or picture description tasks (Constantino et al., 2016). Language formulation is basic to the presentation of an oral speech unless the speech is read aloud.

Other researchers have investigated this area in a more granular fashion. One group of researchers analyzed linguistic changes PWS made in their language production when they were engaged in speaking (Lee, Robb, Van Dulm, & Ormond, 2016a; Lee et al., 2015). By profiling the interpersonal communication behaviors of adults who stutter researchers applied systemic functional linguistics. Literature found in linguistics and communication disorders document the word substitution strategies and circumlocutions which PWS used to make their speech more fluent (Bloodstein & Bernstein-Ratner, 2008; Iverach, Menzies, O'Brian, Packman, & Onslow, 2011; Lee et al., 2015; Vanryckeghem, et al., 2017) resulting in a subsequent loss of linguistic complexity. Lee, Robb, Van Dulm, and Ormond (2016b) report that untreated PWS use less complex linguistic structures than a control group of individuals who do not stutter (Lee et al., 2016b, pp. 914-915) based on their systemic functional linguistic model. In summary, many PWS are negatively affected by the speech situation in which they find themselves and the linguistic complexity required during interpersonal communication.

General Attitudes towards Stuttering and PWS

Awareness of the knowledge, attitudes and beliefs towards PWS of those individuals with post-secondary education who are not teaching in the discipline of communication provides

background about why it is important to inquire about public speaking instructors. Outcomes available relating to college-educated professionals, other than university level instructors, regarding their perceptions and attitudes towards PWS suggest that vocational counselors (Hurst & Cooper, 1983), speech-language pathologists (Yairi & Williams, 1970; Woods & Williams, 1971; Turnbaugh, Guitar, & Hoffman, 1979; Silverman, E-M., 1982; Lass et al., 1989), elementary and high school teachers (Crowe & Walton, 1981; Yeakle & Cooper, 1986; Lass et al., 1992; Silverman & Marik, 1993), school administrators (Lass et al., 1994), nurses (Silverman & Bongey, 1997) and, special educators (Ruscello, Lass, Schmitt, & Pannbaker, 1994) hold predominately negative perceptions of PWS in hypothetical scenarios. Perceptions of the individual who stutters by respondents included negative stereotypic terms of “shy, insecure, nervous, and anxious” (Lass et al., 1992, p. 80) which is consistent with reported terminology from earlier research conducted by Lass and colleagues (Lass et al., 1989) and other researchers (Crowe & Walton, 1981; Silverman & Marik, 1993).

Early investigation into college instructors’ perceptions of college students who stutter (CSWS) was conducted by one researcher to answer the questions frequently posed to him by CSWS. These college students perceived that discussions with professors in and out of class would lead the professor to view the CSWS as being “less intelligent and/or competent than they otherwise would” (Silverman, F., 1990, p. 319). Findings noted by Silverman indicate that the majority of the respondents selected neutral or a positive rating for ‘intelligent’. For the ‘competent’ selection only 4 (of 87) professors selected less than the neutral rating with the remaining professors choosing neutral or more positive ratings (Silverman, F., 1990, p. 320).

This particular study is an exception in its findings in that it directly queried intellect and competence in relationship to CSWS.

A different approach, using an adjectival questionnaire, was followed by another group of researchers for perceptions of college faculty about individuals who stutter (Ruscello et al., 1990-1991). Professors responded to a questionnaire describing four hypothetical stutterers comprised of one adult male, one adult female, one child male and one child female (Ruscello et al., 1990-1991). More than three quarters (81.8%) of the respondents knew someone who stuttered, but the majority (88.4%) had not had a course in stuttering. Approximately 58.7% had not completed any reading about stuttering (Ruscello et al., 1990-1991, p. 142-143). Over 37% of respondents had CSWS enrolled in a class. The findings suggest that three of the four PWS received predominately negative traits (72.1% to 73.5%) with a total of 63.9% negative traits assigned to all four PWS. The most frequent adjectives used were: shy, frustrated, and insecure (Ruscello et al., 1990-1991, p. 144).

Another investigation of professor attitudes towards CSWS also included college students as part of the sample (Dorsey & Guenther, 2000). Both groups of respondents were asked to rate either a hypothetical stuttering or a hypothetical non-stuttering college student on personality traits when thinking about how the hypothetical student would score on personality or intelligence tests (Dorsey & Guenther, 2000, p. 78). Interestingly, of the surveys returned, the majority of surveys were completed and returned for the hypothetical CSWS (Dorsey & Guenther, 2000, p. 79). Professors rated the CSWS more negatively for 15 traits and more positively on only one trait (less aggressive) in comparison to the average college student who did not stutter (Dorsey & Guenther, 2000, p. 79-80). Overall, professors rated the CSWS

negatively on eleven traits while the college student respondents rated them negatively on only five traits, a finding which was statistically significant.

Later, Daniels and colleagues (2011) utilized a 12-item questionnaire plus completion of open ended statements about CSWS in their research. The majority of respondents (49.7%) were unsure if stuttering resulted from a physical problem while 36.3% were undecided about it occurring from an underlying psychological problem. Significant differences in participants' level of agreement with statements emerged depending on if the instructor had taken a course in stuttering. Findings suggest that instructors without prior knowledge of stuttering thought stuttering was caused by psychological problems, did not know how to react to a CSWS in the classroom, and believed they had little influence on CSWS related to the students' stuttering (Daniels et al., 2011, p. 636). Gender of college instructors sampled in the Daniels and colleagues (2011) study was also examined. Female instructors disagreed, at a statistically significant level, with the statement that they "have little influence on the attitude of" CSWS towards their stuttering (Daniels et al., 2011, p. 636). Male instructors were undecided (Daniels et al., 2011, p. 636) about this statement. The greatest number of returned surveys came from instructors in the College of Arts and Science (60.2%) with the fewest being completed by instructors in the Colleges of Law (1.2%) and Pharmacy (1.5%) (Daniels, et al., 2011, p. 634). Interestingly, respondents from the College of Education were "more likely to disagree" that stuttering stemmed from underlying psychological problems than colleagues in the College of Engineering (Daniels, et al., 2011, p. 636) while instructors in the College of Arts and Sciences were more likely to agree with this statement than instructors in the College of Education. Since

data were aggregated for the various colleges represented in the survey the discipline-specific information was not provided.

The most recent research related to instructor knowledge about stuttering and CSWS, published by Chastain and Bettagere (2016) reported the responses of 45 college professors and 285 students to an online survey querying: the nature of stuttering; treatment of stuttering; general beliefs about stuttering; perceptions in the classroom of CSWS, and; personality traits which they associate with CSWS (Chastain & Bettagere, 2016, p. 208). Individualized breakdowns by academic discipline was not provided, however other than specific analysis of responses from instructors and students in the College of Health. Data collected from instructors and students representing other colleges, including Arts and Letters, Business, Education, Psychology, Nursing, and Science and Technology were reported as aggregated data. Findings indicated that a majority of undergraduate college students (88.3%) and professors (83.7%) believed that social anxiety and/or fear was the cause of stuttering while graduate students (50.9%) more frequently indicated the cause as a psychological disorder (Chastain & Bettagere, 2016, p. 210). The majority of all respondents (99.2%) indicated that stuttering was not due to low intelligence, consistent with F. Silverman's (1990) earlier report. Related to stuttering prevalence, between 57.6% and 68.9% of all respondents selected the option of stuttering occurring at a level greater than 1% but less than 10% (Chastain & Bettagere, 2016, p. 210). Other items, inquiring about how respondents would act while a CSWS is speaking, yielded the predominant choice of "wait patiently for the CSWS to finish speaking" (Chastain & Bettagere, 2016, p. 211). For this item 93% of the professors selected "wait patiently" while between 72.9% (graduate students) to 73.9% (undergraduate students) of participants made this same

choice. The beliefs portion of the survey found that all respondents selected “agree” to the statement indicating that CSWS feel embarrassed by stuttering.

In summary, findings from the literature reviewed indicate that professors have limited knowledge about stuttering and view CSWS in a negative stereotypic fashion. The only exception was the report of research conducted by F. Silverman (1990) relating specifically about the intelligence and competence of CSWS. One set of researchers, Daniels et al., (2011) reported that female faculty members recognized the impact their own attitudes have towards CSWS.

Impacts of Knowledge about Stuttering

Another pair of researchers (St. Louis & Rogers, 2011) suggest that if respondents to surveys know an individual who stutter, then attitudes about that individual could be more positive. This was the case in research published by Koutsodimitropoulos, Buultjens, St. Louis and Monfries (2016) who queried a small sample of speech pathology students via the *POSHA-S* (St. Louis, 2011). Main findings indicated that being educated about stuttering supports positive attitude formation (Koutsodimitropoulos et al., p. 49) towards PWS. Further, these same researchers recommend educational curricula should include information about perceptions of PWS and the negative outcomes resulting from these perceptions (Koutsodimitropoulos et al., 2016, p. 48).

Literature in communication relating to negative evaluations of non-fluency of speech in college students from Sereno and Hawkins (1967) and from literature published in communication disorders (e.g. St. Louis & Lass, 1981; Silverman, E-M, 1982; Ruscello, Lass, &

Brown, 1988; Panico, Healey, Brouwer, & Susca, 2005; Bowers, Crawcour, Saltuklaroglu, & Kalinowski, 2010; Hughes, Gabel, Irani, & Schlagheck, 2010; St. Louis et al., 2013, and; Chastain & Bettagere, 2016) are consistent with the negative perceptions previously reported for other college-educated professionals. St. Louis and Rogers (2011) report that if the individual completing the *POSHA-S* (St. Louis, 2009) knew a PWS then more positive attitudes could be predicted.

As noted, many college educated professionals are not aware of the negative perspectives and stereotypes about stuttering and people who stutter. Earlier, demonstration of the importance of this knowledge foundation was provided through the work of Lake, Blanchet, Radloff, and Klonsky (2009). Specifically, by surveying college students in one undergraduate and graduate program in communication disorders regarding their instructor who stuttered, Lake et al. (2009) drew conclusions from their qualitative study suggesting that the students' exposure to a PWS positively influenced their overall attitudes and perceptions of individuals through their classroom interactions with an instructor who stuttered (Lake et al., 2009, p. 31). These students had an opportunity to assess their attitudes towards the whole person and not just a hypothetical person with a stutter.

Faculty and Students Who Stutter

Literature relating to the college instructor acting as a resource for the CSWS is sparse. An earlier work on this topic (Krohn & Perez, 1989) offers suggestions for the fluent teacher at the preparatory and collegiate levels to avoid providing unhelpful suggestions to the PWS, which include: slow down, take a breath, think before you speak, stop and start over, and whisper

(Krohn & Perez, 1989, p. 13) which Whaley and Golden (2000, p, 262) and Whaley & Langlois (1996, p.66) also acknowledge should be avoided. Sometimes other advised distraction techniques, such as snapping fingers or foot stomping, call more attention to the individual's stuttering moments (Krohn & Perez, 1989, p. 13; Whaley & Langlois, 1996, p.66; Whaley & Golden, 2000, p, 262). PWS are usually aware of the generally negative perspective that fluent speakers have of their disfluent speech patterns, regardless of that individual's role in their life. In fact, researchers report that preschool children are aware of the difference in fluency of disfluent young children, recognizing their disfluent communications and may respond negatively (Vanryckeghem, Brutton & Hernandez, 2005; Langevin, Packman, & Onslow, 2009). Thus, it is especially important that fluent speakers make eye contact with the CSWS while monitoring their own facial features (Krohn & Perez, 1989, p. 13; Whaley & Golden, 2000, p, 262). Research recently published related to smiling following a fluent individual's public speaking turn suggests that the public speaker chemically responds to the smile of the "judge" as measured by rising or stable cortisol levels in their saliva; elevated levels of cortisol is seen with a dominant smile and no change in cortisol levels occurs following a rewarding smile or a smile of affiliation (Martin, Abercrombie, Gilboa-Schechtman, & Niedenthal, 2018).

Disability culture relating to PWS was addressed in an article published by Boyle, Daniels, Hughes, and Buhr (2016), all of whom are college instructors who stutter. Unintentional "negative" comments from fluent individuals minimize the PWS' experience of stuttering by treating the PWS in a maternalistic or infantizing manner. For example, in statements made by fluent individuals "...has always considered people who stutter... to be very smart and courageous" (Boyle, et al., 2016, p. 12); minimizing their stuttering experience by

attempting to reassure them by saying things like, “but you don’t stutter that badly” (Boyle et al., 2016, p. 14); referencing the individual’s fluency during periods of fluency and; providing advice and making observations which are unsolicited (Boyle, et al., 2016, p. 14). As well-intentioned these types of comments may appear, to the PWS they seem patronizing (Boyle et al., 2016). Another concern within the culture of the PWS is the focus which typically fluent persons might place on fluency (Boyle et al., 2016, p. 15). As Boyle and colleagues note:

Speech fluency is not synonymous with effective communication. There are many individuals who are extremely fluent who may be categorized as ineffective communicators. Although these individuals may be very fluent, they might also talk over their communication partners, constantly interrupt others when they are talking, make poor eye contact, demonstrate a lack of turn taking in a conversation, show ineffective listening skills, be unable to clearly state to their communication partners their wants and needs, and be unable to summarize their ideas and convey these thoughts concisely to others. On the other hand, a person with disfluent speech can also be passionate and persuasive, have appropriate pragmatic skills, convey information effectively, and make an emotional connection with communication partners. (Boyle et al., 2016, p. 15).

Responses to Stuttering

Members of the National Stuttering Association (NSA) participated in research by providing feedback about the behaviors which fluent speakers used to either make the communication easier and more satisfying or which made the communication more difficult and less satisfying (Whaley & Golden, 2000, p. 262). In their report, Whaley and Golden (2000) only summarized the positive recommendations. Analysis of responses indicate that PWS want the fluent speaker: to reflect acceptance and understanding; to be patient, to not interrupt the PWS, to allow the PWS to finish their thought; to treat the PWS as they would a fluent speaker by facing the PWS, using head nodding as is appropriate, focusing on the content of the

communication, asking questions for clarification, and; allowing a relaxed speaking environment by speaking slowly and calmly, asking one question at a time, and checking their stance so it is not perceived as confrontational (Whaley & Golden, 2000, p, 262). Respondents also suggested that advice to the PWS about how to overcome stuttering is not helpful nor warranted, joking about the stutter is unwanted, and that steady eye contact is welcome as shifting eye contact especially during a stutter signals discomfort and possibly shock. Facial movements of the fluent person, no matter how small they are, can be interpreted negatively by the PWS. Laughter is good as long as it is not at the expense of the PWS (Whaley & Golden, 2000, p, 264-264). Respondents indicated they were willing to answer questions about their stuttering and were open to being queried about what was helpful for the individual PWS. These findings also are echoed in more recent research providing evidence-based strategies and support for individuals who stutter (St. Louis et al., 2017).

Other researchers address quality of life of PWS as related to their own fear of negative evaluation (Brundage, Winters, & Beilby, 2017); judgments of occupational incompetence of PWS (Silverman, F. & Paynter, 1990); limited employment opportunities (Klein & Hood, 2004), and; restrictive occupational advice for PWS (Logan & O'Connor, 2012). Stuttering severity in relationship to educational achievement showed a negative relationship between the severity level of an individual's stutter and their level of educational achievement (O'Brian, Jones, Packman, Menzies, & Onslow, 2011). Others report adult disfluent speakers' own perceptions related to their quality of life (Koedoot et al., 2011) with a negative impact noted based on the severity of their stuttering but often ameliorated by the individual PWS's coping style.

One group of researchers changed the speech orientation of fluent university students asking them to assume the persona of individuals who stutter as they responded to a survey (Zhang, Saltuklaroglu, Hough, & Kalinowski, 2009). Findings support the barriers and challenges previously noted which are faced by PWS in employment, romance, activities of daily living (ADLs), social and family life, and general lifestyle (Zhang et al., 2009, p. 19-20) as being recognized by students without disorders of fluency.

Faculty and Students Who Stutter and US Laws Governing Accommodations

In this section, a brief discussion of United States laws providing for accommodations for students with disabilities is provided. This information, important to the college instructor as well as the student with a disability, guides instructors in providing a “level playing field” for such students enrolled in post-secondary programs without compromising the integrity of the skills component of the course in which the student with a disability is enrolled. Stuttering and other disabilities are recognized under the Americans with Disabilities Act (ADA) of 1990 (Title 42, 2009) and earlier, by Section 504, the Rehabilitation Act of 1973 (Section 504, 1973). Accommodations are offered to the individual requesting them if appropriate documentation is provided through the designated college or university office. Students may not receive accommodations until their specific request is verified and then certified by the designated college office.

Generally, though, the absence of information about disabilities and a lack of knowledge of the laws which allow for accommodations in the classroom impact both the student with the disability and the instructor (Bento, 1996, p. 495). Instructors who do take time to seek

information are overwhelmed with internet-based information about a specific disability, frequently not knowing which piece of information applies to their individual student. Often, following notification, the instructor “tweaks” the course within the limits of the course’s scope so that the enrolled student with a disability can participate (Bento, 1996). Stuttering could potentially cause some CSWS to experience difficulties when in communication with their course instructors, peers, and their advisors according to Walker, Mayo, and St. Louis (2016). Whaley with Langlois (1996) presents the caveat to college communication instructors to have an accurate understanding of stuttering as this understanding yields “more realistic attitudes about and expectations of their” CSWS (Whaley & Langlois, 1996, p. 66).

While different researchers and authors addressed the aspect of reasonable accommodations for collegians with disabilities (Krohn & Perez, 1989; Bento, 1996; Whaley & Langlois, 1996; Whaley & Golden, 2000 and; Worley, 2000) one other researcher summarized existing literature related to faculty attitudes towards college students with disabilities (Rao, 2004). Stating sparse investigative evidence regarding attitudinal barriers of faculty and students with disabilities Rao (2004) reviewed findings related to faculty gender, age, and experience with a student with a disability, departmental affiliation, and knowledge of disability laws (Rao, 2004, pp. 195-196).

Although some studies suggest that female faculty members present a more positive attitude towards students with disabilities than male faculty members, other studies indicate no gender effects (Rao, 2004, p. 195). Age of faculty members does not appear to be related to attitudes towards students with disabilities. Of the studies reviewed experience with a student or person with a disability yielded significantly “more positive attitudes of the ‘experienced’

faculty” (Rao, 2004, p. 195). Rank was also queried with findings suggesting there was no difference except for one study which found that instructors and full professors presented with more negative attitudes (Rao, p. 196). Departmental affiliation was investigated in seven studies with the majority yielding information that academic units in the ‘soft’ sciences presented more positive attitudes than those faculty teaching in ‘hard’ sciences with faculty from education departments reporting the most positive attitudes (Rao, p. 196). Relating to disability laws, findings suggest that those faculty who reported “a better knowledge of the legislation had a more positive attitude” (Rao, 2004, p. 196) towards students with disabilities.

Some findings from Rao’s review of published disability literature, specific to college faculty, are consistent with reports by Daniels and colleagues (2011), Dorsey and Guenther (2000), and Chastain and Bettagere (2016) relative to gender differences, rank, and negative attitudes towards stuttering as measured by college membership.

Why Communication Instructors Need to Understand Stuttering

The life experiences of PWS and particularly CSWS are different than that of other individuals with disabilities as their means of communicating with others could be challenged by the presence of mild to severe breakdowns in fluency (Bloodstein & Bernstein-Ratner, 2008; Yairi & Ambrose, 2013; Chastain & Bettagere, 2016; Lee et al., 2015) which are situation dependent. Awareness of these challenges, while it may not reduce the fluency breakdowns, would assist in reducing the negative perceptions which instructors, peers, and PWS themselves have when they are called upon to speak orally. Assistance offered by instructors of public speaking courses to CSWS should be compatible with the nature of the fluency disorder. Thus,

understanding the variable nature of the disorder, its situational fluctuations impacting fluency (and which frustrate the PWS) would encourage the college communication instructor to provide a safe place for the CSWS to learn about public speaking skills. Genuine interest in students and support of them, as offered by the authority figure at the head of the class, can make it easier and less threatening to show weaknesses to others and open the student to a more positive, productive learning experience.

Why this Research should be Conducted

The discipline of communication has moved away from its early rhetorical roots while the discipline of communication disorders branched out into other areas of study. The cross-pollination of information between these disciplines related to stuttering and other disorders of communication continues to occur but on a more limited basis. Sharing of research through the publication of findings within the covers of the same journal as well as joint annual conferences, while part of the shared historical roots of the disorders field does not continue to occur at this time. Does this potentially put the college communication instructor out of touch with advances in knowledge foundations for the disorder of fluency? Unless the college instructor actively seeks this information or finds it delivered via ‘push’ notifications to digital devices, this information may not be readily found. Additionally, the literature reporting on the knowledge foundations of instructors of communication regarding stuttering is sparse. If there is little evidence regarding communication instructors’ knowledge and their perceptions about stuttering and the individual presenting with a stuttering disorder, then determining this information would be a step towards increasing knowledge on this topic.

There is no communication research which suggests the level of education of the public speaking instructor makes a difference in the knowledge of causation for stuttering or that it enhances the amount of knowledge held by instructors. Sources of stuttering knowledge have not been queried exclusively in the discipline of communication to date. If there is a relationship between gender of instructor and attitudes and beliefs about stuttering and PWS, as noted by Daniels et al. (2011), this information is unavailable or, perhaps, has not been investigated. Daniels et al. (2011) also reported that instructors from the College of Education reported more accurate knowledge about stuttering than those faculty from Arts and Sciences and Engineering. Further, one study indicates that teacher rank negatively impacts perceptions of CSWS (Rao, 2004).

Meeting the needs of CSWS without compromising the integrity of the public speaking course is important for the instructor as well as the student so it is critical to have accurate and current knowledge about this disorder and to understand the perspectives of instructors of communication towards this disorder. Without this knowledge, making assumptions about this disorder and the student could be problematic for the instructor who might be offering accommodations to the student who stutters which may or may not be appropriate for this individual person.

Because of the absence of information about instructors of communication relative to CSWS the following research questions are proposed for this study:

RQ 1: What is the relationship between communication instructor level of education and their sources of knowledge about stuttering?

RQ 2: What is the relationship between communication instructor level of education and their information about the causes of stuttering?

RQ 3: What is the relationship between communication instructor levels of education and the amount of knowledge they have about people who stutter?

RQ 4: What is the relationship between communication instructor gender and attitudes about stuttering?

RQ 5: What is the relationship between communication instructor gender and beliefs about people who stutter?

CHAPTER THREE: RESEARCH METHODS

The current study was conducted using a cross-sectional survey design. The study was reviewed by the University of Central Florida Institutional Review Board and was determined as exempt from regulation with the review categorized as Exempt Determination, Category 2.

Respondent Sample

Instructors of communication, recruited from university, college, state college and community college communication programs across the United States, participated in an online survey querying their amount of knowledge, attitudes and beliefs related to stuttering and people who stutter. Participants were obtained through the National Communication Association's CRTNET listserv plus the Basic Course listserv for contact with instructors who teach the basic course in public speaking. Of 134 respondents, 89 (66.4 %) indicated they were female, with 40 (29.8 %) were male; and 5 (3.8%) either withdrew from the survey or did not respond to the gender item. Ages of respondents ranged from 23 to 75 years with an average age of 48 years.

Nine respondents did not complete the survey. The survey took an average of 13 minutes to complete by the 125 respondents who answered all items.

Demographic Descriptions of Respondents

Information collected in this study included demographic data requested of respondents in the *POSHA-S* (St. Louis, 2011). Employment and institutional items were inserted into the survey prior to the start of *POSHA-S* (St. Louis, 2011) items.

Instrumentation: Reliability, Validity and Internal Consistency

The *Public Opinion Survey of Human Attributes-Stuttering* (St. Louis, 2011) was utilized to assess beliefs and attitudes about CSWS. The *POSHA-S*, a reliable survey tool allows comparisons of respondent selections “relative to *existing and ongoing* survey results” (St. Louis, 2011, p. 259). Previous test-retest reliability calculated through Pearson Product-Moment Correlations yielded a correlation of 0.82 (St. Louis, Lubker, Yaruss, & Aliveto, 2009, p. 105). Following a course providing education about stuttering and reflecting contemporary agreement regarding “the nature and treatment of stuttering” (St. Louis, Reichel, Yaruss, & Lubker, 2009) construct validity measures for the *POSHA-S* supported measurement of change in beliefs and attitudes. Concurrent validity was also established by comparing the *POSHA-S* to the *Bipolar Adjective Scale (BAS)* (Woods & Williams, 1976) to measure similar ‘positive’ or ‘negative’ attitudes towards stuttering (St. Louis, Reichel et al., 2009) with the same group enrolled in a course about stuttering. Cronbach’s alpha coefficients as measures of internal consistency for the *POSHA-S* ranged from .79 to .90 for the different scales within the tool itself (Al-Khaledi, Lincoln, McCabe, Packman, & Alshatti, 2009). The *POSHA-S* had been administered to more than 12,000 individuals worldwide as of 2014.

Four demographic items were added prior to the start of the *POSHA-S* requesting information specific to respondents' current teaching role, the number of public speaking courses they taught in the past year, the number of semesters they had taught at least one public speaking course, and the type of institution at which the respondent was currently employed.

Survey Description

The *POSHA-S* is divided into four sections which follow an instruction page: (a) a demographics page; (b) a general section inquiring about human attributes; (c) a section relating to five characteristics of people, and; (d) a more detailed section eliciting opinions about stuttering. Refer to Appendix A for the *POSHA-S* (St. Louis, 2011). Survey contents included:

- (a) The demographic section requests information about the: date of completion; respondents' year of birth; state of current residence; state of birth; respondents' gender; marital status; parental status; level of education; work situation; job training; native language; language skills in a second language; family income; family income relative to the norm for the state in which respondent resides; race, and; religion.
- (c) In the general section respondents rated their own physical health, mental health, ability to learn new things and speaking ability on a scale of one to five (*very poor, poor, average, good, excellent*). A second portion asked respondents for ratings on respondent priority or importance of twelve aspects of their life using scales of one to five (*never important, usually not important, equally important or not important, usually important, always important*). In the characteristics section, respondents were then asked about "My overall impression of a person who..." for obesity, left

handedness, stuttering, mental illness, and intelligence using a five-point response scale of 1 - *very negative*, 2 - *somewhat negative*, 3- *neutral*, 4 - *somewhat positive*, 5 - *very positive*. Their desirability of membership as a person with one of these five characteristics was queried with “I would want to be a person who...” using a one to five point scale, ranging from 1 - *strongly disagree*, 2 - *somewhat disagree*, 3 - *neutral*, 4 - *somewhat agree*, 5 - *strongly agree*. Respondents were also asked “The amount I know about people who...” about these same five characteristics using a five-point rating scale ranging from 1 - *none*, 2 - *a little*, 3 - *some*, 4- *a lot*, 5 - *a great deal*. Participants were then asked to indicate who they knew with these characteristics using an open selection format to include *nobody*, *acquaintance*, *close friend*, *relative*, *me*, *other*.

- (d) The final section elicited more in-depth opinions about people who stutter. Response selections of *yes*, *no*, *not sure?* were offered for eight statements including: “People who stutter should try to hide their stuttering” and; “People who stutter can do any job they want”. Another item queried “If the following people stuttered, I would be concerned or worried” with response selections of *yes*, *no*, *not sure?* for “doctor,” “my neighbor,” “my brother or sister,” and “me”. Another item inquired about causation with “I believe stuttering is caused by...” with six options ranging from “genetic inheritance” to “a virus or disease” with response selections of *yes*, *no*, *not sure?*. Another item asked “I believe stuttering should be helped by...” followed by four options, including: “other people who stutter” and; “a speech and language therapist”. Six sources of knowledge about stuttering, including: “personal

experience” and; “school” with *yes, no, not sure?* selections completed the in-depth inquiry portion.

Survey administration

The *POSHA-S* (St. Louis, 2011) was delivered through an online link generated by Qualtrics software, and delivered via email and list serv communication to prospective respondents. No identifiable information, e.g. name, address, phone number, or other identification was requested, and respondents were reminded in the instructions that they were submitting the survey anonymously. Respondents were also reminded that participation in the survey was voluntary and that they could exit the survey at any point.

The name of the *POSHA-S* was masked in the delivery of the online survey to reduce pre-survey bias. Instead, the title presented was *A Survey of Public Speaking Instructors' Perceptions of Human Attributes*. See Appendix B for the Survey Title Modification letter from the University of Central Florida Institutional Review Board. Upon completion of the survey, participants were provided with the actual name of the survey and, if the respondent chose, an opportunity to read additional information about the *POSHA-S*.

CHAPTER FOUR: RESULTS

Descriptive Data from the *POSHA-S*

Information collected in this study included demographic data requested of respondents in the *POSHA-S*. Employment and institutional items were inserted into the survey prior to the introduction of *POSHA-S* items.

Regarding native language 126 (99.2%) were English speakers, and 1 (.8%) respondent was a native Spanish speaker. Twenty-three respondents (19.6%) reported having second language proficiency with 10 (43.5%) indicating Spanish as the most frequently spoken second language; six (26.1%) respondents reported French. Regarding race 119 (92.2%) respondents reported their race as White, with 5 (3.9%) Hispanic participants, 2 (1.6%) American Indian respondents and, 2 (1.6%) Black respondents. One respondent (0.8%) selected Other.

Respondents' places of residence at the time of completion of the survey represented 36 of 50 U.S. states. No non-U.S. places of residence were reported. Survey response rate was largest from those residing in Pennsylvania with 12 (9.1%), followed by Texas at 11 (8.3%), and 10 (7.6%) respondents each from Ohio and Illinois. Respondents indicated California 9 (6.8%) times as their state of residence while 8 (6.1%) participants selected Florida. Respondents represented Alabama, Alaska, Connecticut, Idaho, Kentucky, Louisiana, Minnesota, Nebraska, Oklahoma, Oregon, Tennessee, and Washington state with 1 (0.76%) survey from each state.

Respondent education level showed 3 (2.3%) held a 4-year university degree, 53 (40.5%) held a master or similar degree, while 75 (57.3%) held a doctoral degree. Regarding the work

situation query 103 (78.6%) respondents were teaching as instructors or professors, 4 (2.3%) were retired, and 24 (18.3%) were graduate students. One hundred thirteen (84.3%) participants reported they had taught a public speaking course in the past year while 21 (15.7%) indicated they had not taught this course in the past year. The range in the number of semesters a public speaking course was taught covered as few as two semesters for 4 (3%) respondents up to 100 semesters reported by 2 (1.5%) respondents.

Public universities employed 75 (56%) of respondents with 21 (15.7%) at community colleges, 15 (11.2%) at private universities, 13 (9.7%) at private colleges and, 10 (7.4%) at state colleges. Regarding teaching roles, 29 (21.6%) of respondents were graduate teaching assistants, 16 (11.9%) were adjunct faculty, 38 (28.4%) were full time non-tenure track faculty members, with 51 (38.1%) reporting they were full time tenure track faculty.

Respondents reported personal experience as their most frequent source of knowledge about stuttering, followed by school sources. The medical profession provided the least amount of information about stuttering to respondents, followed by Internet sources. This distribution is displayed in Table 1.

Table 1
Frequency and percentage of knowledge sources by types of sources

Knowledge source	Yes	No	Not Sure
Personal	74 (60.6%)	46 (37.7%)	2 (1.6%)
Radio, TV	55 (45.1%)	57 (46.7%)	10 (8.2%)
Print	56 (45.9%)	63 (51.6%)	3 (2.4%)
Internet	44 (36.1%)	74 (60.6%)	4 (3.3%)
School	69 (56.5%)	49 (40.2%)	4 (3.3%)
Medical	33 (27%)	82 (67.2%)	7 (5.7%)

Respondents most often selected genetics as a cause of stuttering but a higher percentage indicated they were not sure about this as a causative factor. The least frequently chosen cause was ghosts followed by an act of God. The distribution of respondents' selections appear in Table 2.

Table 2
Frequency and percentage of causation information by type of cause

Cause	Yes	No	Not Sure
Genetics	46 (37.7%)	18 (14.7%)	58 (47.5%)
Ghosts	0	120 (98.3%)	2 (1.6%)
Frightening event	14 (11.5%)	82 (67.2%)	26 (31.3%)
Act of God	6 (4.9%)	107 (87.7%)	9 (7.4%)
Habits	11 (9%)	79 (64.7%)	32 (26.2%)
Virus/disease	11 (9%)	78 (63.9%)	33 (27%)

Respondents' amount of knowledge ranged from *A little* to *Some* information. A small percentage of respondents indicated they had *A great deal* of knowledge about stuttering. The distribution of their selections appear in Table 3.

Table 3

Frequency and percentage of the amount of knowledge in response to "The amount I know about people who have a stuttering disorder"

None 1	A little 2	Some 3	A lot 4	A great deal 5
11 (8.7%)	40 (31.7%)	47 (37.3%)	20 (15.9%)	8 (6.3%)

Respondents most frequently selected *Strongly disagree* in response to the statement "*I would want to be a person who has a stuttering disorder.*" No respondents selected *Strongly agree* or *Somewhat agree* with this statement but 26 respondents provided a *neutral* response. The distribution of responses are displayed in Table 4.

Table 4

Frequency and percentage of responses to "I would want to be a person who has a stuttering disorder"

Scale value	Frequency	Percentage
Strongly disagree 1	56	44%
Somewhat disagree 2	44	34.60%
Neutral 3	26	20.50%
Somewhat agree 4	0	0%
Strongly agree 5	0	0%
Not sure?	1	0.80%

Respondents most frequently selected a *Neutral* response to the statement “*My overall impression of a person who has a stuttering disorder.*” Twenty-one respondents indicated a *somewhat positive* response to this statement. No respondents selected a *Very negative* response to the statement. The distribution of responses are displayed in Table 5.

Table 5
Frequency and percentage of responses to “My overall impression of a person who has a stuttering disorder”

Scale value	Frequency	Percentage
Very negative 1	0	0%
Somewhat negative 2	6	4.70%
Neutral 3	86	67.70%
Somewhat positive 4	21	16.50%
Very positive 5	11	8.70%
Not sure	3	2.40%

Relationship between Communication Instructor Levels of Education and their Sources of Knowledge about Stuttering

RQ 1 examined the relationship between communication instructor levels of education and their sources of knowledge about stuttering. Only those instructors who indicated educational levels at the master or doctoral degree levels were included in this examination since only 3 bachelor level respondents completed the survey. This research question was examined using Pearson’s Chi Square analysis using SPSS (v. 24) software. There were no significant

differences between levels of instructor education and the six knowledge sources queried. See Table 6 for these data.

Table 6
Pearson Chi Square for Communication Instructor Level of Education and Knowledge Sources about Stuttering

Knowledge Source	Educational Level	Yes	No	Not Sure	χ^2	df	<i>p</i>
Personal experience	Master's	28 (22.9%)	21 (17.2%)	2 (1.6%)	4.08	3	.261
	Doctoral	46 (37.7%)	25 (20.5%)	0			
TV, radio, or films	Master's	23 (18.8%)	24 (19.6%)	4 (3.3%)	.467	3	.926
	Doctoral	32 (26.2%)	33 (27%)	6 (4.9%)			
Print material	Master's	21 (17.2%)	28 (22.9%)	2 (1.6%)	1.825	3	.609
	Doctoral	35 (28.7%)	35 (28.7%)	1 (.8%)			
The Internet	Master's	24 (19.6%)	25 (20.5%)	2 (1.6%)	5.473	3	.140
	Doctoral	20 (16.4%)	49 (40.2%)	2 (1.6%)			
School	Master's	28 (23%)	21 (17.2%)	2 (1.6%)	.627	3	.890
	Doctoral	41 (33.6%)	28 (22.9%)	2 (1.6%)			
MDs, RNs, others	Master's	11 (9%)	38 (31.1%)	2 (1.6%)	2.630	3	.452
	Doctoral	22 (18%)	44 (36.1%)	5 (4.1%)			

Relationship between Communication Instructor Levels of Education and their Information about Causes of Stuttering

RQ2 examined the relationship between levels of education and information about the causes of stuttering. As in RQ1, only those instructors who selected educational levels at the master or doctoral degree levels were included. Data collected from 126 respondents were

analyzed using Pearson’s Chi Square statistic. There were no significant differences between levels of instructor education and the six causes of stuttering queried. See Table 7 for these data.

Table 7
Pearson Chi Square for Communication Instructor Level of Education and Information about the Causes of Stuttering

Knowledge Source	Educational Level	Yes	No	Not Sure	χ^2	df	<i>p</i>
Genetics	Master’s	21 (17.2%)	6 (4.9%)	24 (19.6%)	1.27	3	.736
	Doctoral	25 (20.5%)	12 (9.8%)	34 (27.8%)			
Ghosts, demons	Master’s	0	50 (41%)	1 (.8%)	.51	2	.776
	Doctoral	0	70 (57.4%)	1 (.8%)			
Frighten event	Master’s	4 (3.3%)	36 (29.5%)	11 (9%)	1.61	3	.656
	Doctoral	10 (8.2%)	46 (37.7%)	15 (12.3%)			
Act of God	Master’s	3 (2.4%)	44 (36.1%)	4 (3.3%)	.66	3	.882
	Doctoral	3 (2.4%)	63 (51.6%)	5 (4.1%)			
Learned or habit	Master’s	6 (4.9%)	32 (26.2%)	13 (10.6%)	1.26	3	.738
	Doctoral	5 (4.1%)	47 (38.5%)	19 (15.6%)			
Virus or disease	Master’s	7 (5.7%)	32 (26.2%)	12 (9.8%)	3.04	3	.386
	Doctoral	21 (17.2%)	46 (37.7%)	4 (3.3%)			

Relationship between Communication Instructor Levels of Education and the Amount of Knowledge they have about People Who Stutter

RQ3 examined instructor levels of education and amount of knowledge using an independent sample *t*-test with education level as the independent variables and knowledge level as the dependent variables. Levene’s Test for Equality of Variances indicated equal variance

could be assumed between the groups. Findings from the independent sample statistic were non-significant at $p = .05$. Data are displayed in Table 8.

Table 8
Educational level of respondents and knowledge about stuttering

Educational level	<i>N</i>	Mean	Std. Deviation	df	<i>p</i>
Master's	51 (41.4%)	2.90	1.10	121	.673
Doctoral	72 (58.5%)	2.77	.92		

Note: Means were based on a 1 to 5 scale with the larger numbers indicating higher levels of knowledge.

Relationship between Communication Instructor Gender and Attitudes about Stuttering

RQ4 investigated for relationships between instructors' gender and attitudes about stuttering. Levene's Test for Equality of Variances indicated equal variance could be assumed between the groups. Findings from the independent sample statistic were non-significant at $p = .05$. The 5-point Likert scale responses of participants to the item "*I would want to be a person who has a stuttering disorder.*" are included in Table 9.

Table 9
Gender of respondents and attitudes about stuttering

Gender	<i>N</i>	Mean	Std. Deviation	df	<i>p</i>
Male	38 (30.9%)	1.60	.68	121	.173
Female	85 (69.1%)	1.81	.81		

Note: Means were based on a 1 to 5 scale with the larger numbers indicating more positive attitudes.

Relationship between Communication Instructor Gender and Beliefs about People who Stutter

RQ5 investigated the relationship between instructors' gender and beliefs about people who stutter. Levene's Test for Equality of Variances indicated that equal variance could not be assumed between the groups. With equal variance not assumed, the difference between the groups was non-significant at $p = .05$. The 5-point Likert scale responses of participants to the item "My overall impression of a person who has a stuttering disorder." are displayed in Table 10.

Table 10
Gender of respondents and beliefs about people who stutter

Gender	<i>N</i>	Mean	Std. Deviation	df	<i>p</i>
Male	36 (29.7%)	3.22	.54	90.2	.329
Female	85 (70.2%)	3.34	.75		

Note: Means were based on a 1 to 5 scale with the larger numbers indicating more positive beliefs.

CHAPTER FIVE: DISCUSSION

The primary goals of this study were to ascertain if there were relationships between instructor levels of education and the sources and amount of their knowledge about stuttering as well as instructor awareness of the causes of the communication disorder stuttering. Additionally, this study examined instructor gender and its relationship with attitudes and beliefs about stuttering. The basic course in public speaking is frequently a general studies requirement of collegiate level students seeking associate or bachelor degrees. Many college students who stutter are hesitant to enroll in this type of course, sometimes saving this course for their final semester of study. These may be the students who consistently produced varying levels of stuttered speech. They also may have had prior negative experiences speaking in front of others or perhaps have avoided speaking in front of groups because of their stutter. Further, these students may think that they were the only individuals who have difficulty speaking fluently.

Communication instructors in this study reported knowing little to nothing about stuttering, professed uncertainty about the genetic causes of stuttering, possessed what information they had about stuttering from undefined personal and school sources, and to a more limited extent, mass media. Many respondents did not report accessing the Internet for information and received little information from medical resources. Their attitudes about themselves having the disorder of stuttering were mostly neutral to negative. Respondents, however, recorded neutral to very positive impressions toward a person who stutters, which is critical when you are teaching public speaking.

This study did not specifically pose research questions comparing public speaking instructors' responses to those generated by prior administrations of the *POSHA-S* with other populations. Other administrations of the *POSHA-S* were generally smaller samples of convenience in multi-national countries, administered in different languages. In those surveys, the *POSHA-S* was administered to families and friends of researchers, including to adults who stutter, public school teachers of young children, and adolescents, some of whom may stutter. Only one study (Gottwald, Hartley, Kent, & St. Louis, 2014) was identified which utilized the *POSHA-S* with a small sample of college professors and which showed positive changes in the overall stuttering scores and beliefs about stuttering following focused education about stuttering. None of these professors reported a background in communication disorders.

The Overall Stuttering Score (OSS) for professors participating in Gottwald and colleagues' (2014) pre-information about stuttering study yielded a mean score of 36 with the current study's OSS also 36. Self-Reactions to PWS for Gottwald et al.'s (2014) professors was 12 while the current study's participants was 15. Beliefs about PWS for the current study yielded a score of 58 with Gottwald et al.'s respondents (2014) scoring 59. While more detailed information has not been published by Gottwald et al. (2014) informal comparisons of the scores for both groups of professors suggests comparability of scores.

Personal experiences and school were the primary sources of knowledge of stuttering for most collegiate instructors in this study, regardless of their educational levels. While a majority of respondents reported having experience with stuttering, it was not possible, within the scope

of this study, to further determine specific school sources and the nature of respondents' personal experiences with stuttering. What is not known from this study related to the time in the respondents' experiences during which this information was obtained. Since this was not further investigated it's not known if this information came through formal coursework in college or during the graduate school experience, or if it was because of a peer or the respondent's own experience during grade or high school years. It might be present because of tutoring by a CSWS in the classroom, or youthful friendship with an individual who stutters. It appeared that communication instructors, regardless of their levels of education, may not be accessing information beyond that which was required for competent teaching of subject matter and for their respective research interests.

Because of the large number of respondents' who indicated their amounts of knowledge about the disorder as ranging from "*none*" to "*some*" then additional education about stuttering would benefit both the instructors and their students, creating a more welcoming environment for those whose speech disfluencies set them apart from peers. A campaign of thoughtfully crafted and well-placed articles in communication journals could provide this information to the public speaking course instructor currently teaching. Another option for knowledge dissemination, the placement of information about stuttering in public speaking textbooks, would further educate both the instructor and the undergraduate student. If useful information was not found in the assigned textbook, then this could be accomplished through the insertion of information into the instructional unit related to communication apprehension. Occasionally, undergraduate level textbooks might refer to stuttering as a behavior to be managed when presenting a speech without the benefit of further explanation or information. Instructors should understand that

interjected words may occasionally be overt manifestations of covert stuttering; feedback given would suggest that the speaker reduce the use of those interjected sounds or words. For the CSWS the use of interjected sounds or words may be their only way to retain their speaking fluency and their dignity, buying time for word changing, or substitutions to occur. For the fluent speaker though, interjected speech sounds or words may be indicative of inexperience or learned behaviors. The instructor must know the difference between these cases.

More importantly, teaching public speaking course instructors about stuttering before encountering a CSWS in their own classrooms would benefit not only the instructor but the student. More than one third of survey respondents reported no personal experience with stuttering thus, when they hear an individual stutter for the first time during a class presentation, their responses to the stutter could unconsciously reflect their discomfort with the stuttered speech, or their lack of understanding about what they were hearing, or both. The individual who stuttered would be immediately aware of the instructor's discomfort and/or lack of understanding and the frequency of stuttered speech or avoidance strategies would possibly increase. Instructors might not have awareness regarding recent research which demonstrated that a dominant smile (not a natural smile) signaled superiority of the listening partner of the individual whose fluency broke down (Martin et al., 2018). Are public speaking instructors comfortable with making eye contact that is, not breaking it, when an individual experiences a moment of stuttering (Krohn & Perez, 1989; Whaley & Golden, 2000, p, 262) while monitoring their own facial expressions? These immediate reactions might occur. For many people, instructors included, the first time hearing someone stutter creates confusion and discomfort on the part of the listener.

A number of ways in which this communication of information could occur would start with graduate students enrolled in a master level program. Particularly for those wishing to teach public speaking courses or were graduate teaching assistants (GTAs) within a program, a course is often required which focused on teaching that public speaking content. Information about stuttering should be presented as part of that communication curriculum. Many collegiate programs of any size require their GTAs to study effective teaching methods specific to the public speaking course. But how much information was provided about teaching special populations of students? The foci may be on teaching to the learning styles inherent in each student to maximize engagement and retention of information to the extent that little to no time was given to teaching students about speech disorders or understanding the etiology and course of that disorder.

While instructors of such a course may not be stuttering content experts themselves they could access resources which were available on campus. Many colleges and universities house offices which managed the instructional needs for students with disabilities. In larger colleges and programs there may be a faculty member who was a stuttering expert who could be sought out to provide this information. By opening this door to instructors and graduate students, those who did stutter would be encouraged to use their voices in a public speaking course instead of hiding behind avoidance and silence. Their instructors would possess this information in advance. If there are no content experts on campus, then the instructor could identify local chapters of the National Stuttering Association using a simple Internet search. If there were no local chapters of the NSA then the use of online, real-time video and audio media could

introduce individuals knowledgeable about stuttering to instructors and their graduate level classes.

Levels of education and the causes of stuttering were investigated with no differences in causation accorded to educational levels. Genetic causation was the most frequently cited cause of stuttering by slightly more than one third of respondents; the remainder of respondents selected either “no” or “not sure” for this option. From these responses, it appeared that many public speaking course instructors were not aware of ongoing genetic causation research, because of the large number of not sure and no responses recorded for this item. Perhaps, this absence of causation knowledge occurred because it was published by another discipline. This research, concisely summarized by Yairi and Ambrose (2013, p. 179) provided insights into current information implicating genetic inheritance as an underlying factor in the development of stuttering. Another possible reason for this lack of information about causation could be related to the absence of *physical, psychological or social anxiety* options for causation in the current study. In contrast, earlier studies yielded *undecided* responses about physical or psychological causes (Daniels, et al., 2011) or a combination of psychological and social anxiety (Chastain & Bettagere, 2016).

Investigation of a relationship between the gender of the respondent and reported attitudes towards the disorder of stuttering yielded no differences. Over seventy five percent of respondents reported neutral to negative attitudes towards the disorder of stuttering. This message was clearly communicated and appeared to not be affected by social desirability as not one respondent selected *somewhat agree* or *strongly agree* as a response on the 5-point Likert scale. Attitudes towards stuttering, as an abstract disorder of speech, were sampled through “I

would want to be a person who has a stuttering disorder.” This finding was in contrast to the outcome reported by Daniels and colleagues (2011) who reported that females were more likely to disagree with the statement that instructors’ did not influence the attitudes of students who stutter. Additionally, Daniels and colleagues reported generally negative attitudes about CSWS, particularly for those instructors teaching within a college of engineering (Daniels, et al. 2011). From these data it appeared that stigma, as described by Goffman (1963), continued to manifest in these respondents’ own attitudes towards stuttering.

As noted, the relationship between instructor gender and beliefs about stuttering were investigated. Close to all of the respondents indicated a strong, positive belief about their impressions of individuals who stutter thus there was no gender-based difference evident in the responses. Clearly, while public speaking instructors saw the disorder itself as being undesirable, particularly when asked if they would want to be a person who stutters, they reported that the person with the disorder should be treated non-judgmentally if not with positive regard. Instructors of public speaking included in this study held more positive impressions of an individual who stutters, perhaps because of their own educational backgrounds and focus on the interpersonal nature of human communication. These responses were consistent with Chastain and Bettagere’s (2016) small sample of professors whose responses yielded generally positive perceptions about CSWS in the classroom, specifically in response to statements related to the disorder’s impact on classroom speaking time, and in their own comfort levels with a CSWS enrolled in their course.

Limitations

This study accomplished an initial survey of instructors of the basic communication course by offering a single-discipline focus on stuttering and those who stutter not yet found in the literature. Generalizability to a larger population of public speaking instructors was not possible and concluding statements were made which were applicable only to the respondents included in this survey. The information collected appeared to be from predominately white, female, tenure-track public university faculty members educated to the level of the doctorate who had taught a public speaking course in the past year. While this sample is not representative it still presents information from a cross-section of instructors holding different academic ranks in different employment settings, across 36 states, the majority of whom were actively teaching a public speaking course as part of their assignments.

The closed-ended nature of this survey did not offer free-response options to respondents. Options for the provision of greater detail during collection of the free response types would permit a more nuanced understanding of respondents' information sources, causation knowledge, attitudes and beliefs.

Further Research

Expanding beyond the current cross-sectional survey format, which only collected data at one point in time, to an interview process, appeared warranted. Further research will guide our understanding of how public speaking instructors acquired their knowledge about stuttering and how their attitudes towards stuttering and those who stutter were developed.

A brief online survey of public speaking instructors regarding the inclusion of stuttering information could also be conducted. A survey could investigate the public speaking course implicit curriculum which is not published in a syllabus. Information could be collected about what is required to be presented in a public speaking course as determined by discipline-specific curriculum committees. A qualitative textual analysis of undergraduate public speaking course textbooks could be conducted to determine if stuttering information is presented with the purpose of evaluating its accuracy and to determine if additional informational resources were provided to both the instructor and the undergraduate student.

While stuttering will not end life prematurely in the manner that heart disease, diabetes, and motor vehicle accidents will, a stuttering disorder could limit the realization of that particular individual's potential for success in their dreamed about vocation instead of creating conflicts which might divert the CSWS into a profession which did not require frequent speaking. Public speaking instructors can play an important role in validating the aspirations of those students who stutter, perhaps even providing them with support group or treatment resources to ameliorate the overt as well as the unseen impacts of stuttering.

**APPENDIX A: THE PUBLIC OPINION SURVEY OF HUMAN
ATTRIBUTES-STUTTERING**

Instructions

Dear participant,

Thank you for agreeing to participate in this research project designed to explore public opinion about a number of human attributes and characteristics in various places around the world. The following survey asks for your honest opinions about five different human attributes and some information about yourself to help in interpreting the results from many people. The survey also asks for more detailed opinions about one of the human attributes.

Please do not write your name, address, or telephone number anywhere on the survey or on an envelope used to send it. It is important that your name is not included so complete confidentiality can be maintained.

Completely filled-out surveys will help provide a clearer picture of public opinion. Nevertheless, as you fill out the survey, you are free to omit any items or stop responding for any reason, without any prejudice or penalty.

The survey asks for a few written short answers and for clicking boxes [0] that apply to you. But mostly it involves making judgments by **selecting** your answer. Some of these judgments are numbers on number scales, while others are “Yes,” “No,” or “Not sure” choices. There are no right or wrong answers! *We ask you to work quickly and mark your first impression.* Please do not go back and change any of your responses unless you later discover that you did not understand an item or that you answered on the wrong line.

When you give your opinion, be sure to **click** the circle [0] for the number, “?,” or word that **best represents your opinion**. On the number scales, you may select any number, but feel free to mark the

extreme negative or positive ends of the scale as well as the exact middle if one of those best shows your opinion.

Following are four examples. The first one shows someone’s fairly positive opinion about being *tall*, the second, a very negative opinion about being *short*, neutral about *wearing glasses*, and either has no opinion or knows nothing about *wearing a hearing aid*.

My general impression of a person who...	Very negative	Somewhat negative	Neutral	Somewhat positive	Very positive	Not sure
is tall	1	2	3	④	5	?
is short	①	2	3	4	5	?
wears glasses	1	2	③	4	5	?
wears a hearing aid	1	2	3	4	5	②

The first four questions ask about your experience teaching public speaking.

Thank you very much for your help.

Demographics Pre-Survey

How many semesters, approximately, have you taught at least one Public Speaking course?

Have you taught a Public Speaking course within the last year?

_____ Yes

_____ No

What is your teaching role at your institution?

_____ Graduate teaching assistant

_____ Adjunct faculty

_____ Full time non-tenure faculty

_____ Full time tenure track faculty

In which type of institution do you teach?

_____ Community College

_____ State College

_____ Private College

_____ Public University

_____ Private University

A Survey of Public Speaking Instructors' Perceptions of Human Attributes

Please tell about yourself in this section.

Dates:	Month	Day	Year
Today's date is:	e.g., January _____	e.g., 23 _____	 <u>2018</u>
The year I was born was:			 _____

Residence	State (or Province)
I now live in:	 _____
Citizenship	
I was born in:	 _____

Check [✓] all that apply

I am: <input type="checkbox"/> Male <input type="checkbox"/> Female	I am/have been married: <input type="checkbox"/> Yes <input type="checkbox"/> No	I am/was a parent: <input type="checkbox"/> Yes <input type="checkbox"/> No
--	---	--

I have completed the following school levels:

<input type="checkbox"/> 4-year university degree (about 16 years total)
<input type="checkbox"/> Masters or similar degree (about 18 years total)
<input type="checkbox"/> Doctoral/professional degree (>18 years total)

My job or work situation now is...

<input type="checkbox"/> Student in school or university	<input type="checkbox"/> Unemployed or not working
<input type="checkbox"/> Working	<input type="checkbox"/> Retired

The job that I am best trained to do, or the job I worked at the longest, is (was):

My native language is: _____

I can also **easily understand and speak** the following languages:

1. _____

2. _____

3. _____

Select the number (or ?) beside each characteristic that apply.

My family's income is [...] compared to the yearly incomes of...						Not Sure ?
	Among the lowest	2	About average	4	Among the highest	?
my family's friends and relatives	1	2	3	4	5	?
all people in my country	1	2	3	4	5	?

My race is: _____	My religion is: _____
--------------------------	------------------------------

I would rate the following <u>aspects of my life now</u> as...	Very poor	Poor	Average	Good	Excellent	Not sure ?
my physical health	1	2	3	4	5	?
my mental health	1	2	3	4	5	?
my ability to learn new things	1	2	3	4	5	?
my speaking ability	1	2	3	4	5	?

For me, the <u>importance (or priority)</u> of each of these aspects in my life is ...	Never important	Usually <u>not</u> important	Equally important or not important	Usually importa nt	Always important	Not sure ?
being safe and secure	1	2	3	4	5	?
being free to do what I want	1	2	3	4	5	?
spending quiet time alone	1	2	3	4	5	?
attending parties or social events	1	2	3	4	5	?
imagining new things	1	2	3	4	5	?

helping the less fortunate	1	2	3	4	5	?
having exciting but potentially “dangerous” experiences	1	2	3	4	5	?
practicing my religion	1	2	3	4	5	?
earning money	1	2	3	4	5	?
doing my jobs or my duty	1	2	3	4	5	?
getting things finished	1	2	3	4	5	?
figuring out how to solve important problems	1	2	3	4	5	?

Now, please give us your opinions about people with all the characteristics listed.

My <u>overall impression</u> of a person who...	Very negative	Somewhat negative	Neutral	Somewhat positive	Very positive	Not sure ? ? ? ? ?
is obese (much overweight)	-2	-1	0	+1	+2	?
is left handed	-2	-1	0	+1	+2	?
has a stuttering disorder	-2	-1	0	+1	+2	?
is mentally ill	-2	-1	0	+1	+2	?
is intelligent	-2	-1	0	+1	+2	?

I would want to be a person who...	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Not sure ?
is obese (much overweight)	-2	-1	0	+1	+2	?
is left handed	-2	-1	0	+1	+2	?
has a stuttering disorder	-2	-1	0	+1	+2	?
is mentally ill	-2	-1	0	+1	+2	?
is intelligent	-2	-1	0	+1	+2	?

The <u>amount I know</u> about people who...	None	A little	Some	A lot	A great deal	Not sure ?
are obese (much overweight)	1	2	3	4	5	?
are left handed	1	2	3	4	5	?
have a stuttering disorder	1	2	3	4	5	?
are mentally ill	1	2	3	4	5	?
are intelligent	1	2	3	4	5	?

Following are people I have known who... (Check [✓] all that apply)	Nobody	Acquaint ance	Close Friend	Relative	Me	Other
are obese (much overweight)	0	0	0	0	0	0
are left handed	0	0	0	0	0	0

have a stuttering disorder	θ	θ	θ	θ	θ	θ
are mentally ill	θ	θ	θ	θ	θ	θ
are intelligent	θ	θ	θ	θ	θ	θ

Now, please give us more detailed opinions about the disorder of stuttering.

<u>People who stutter...</u>			Not sure
			?
should try to hide their stuttering	Yes	No	?
should have jobs where they have to correctly understand and decide important things	Yes	No	?
are nervous or excitable	Yes	No	?
are shy or fearful	Yes	No	?
have themselves to blame for their stuttering	Yes	No	?
can make friends	Yes	No	?
can lead normal lives	Yes	No	?
can do any job they want	Yes	No	?

<u>If the following people stuttered, I would be concerned or worried...</u>			Not sure
			?
my doctor	Yes	No	?
my neighbor	Yes	No	?
my brother or sister	Yes	No	?

me	Yes	No	?
----	------------	-----------	----------

If I were talking with a person who stutters, <u>I would</u>...			Not sure
			?
try to act like the person was talking normally	Yes	No	?
make a joke about stuttering	Yes	No	?
fill in the person's words	Yes	No	?
feel impatient (not want to wait while the person stutters)	Yes	No	?
feel comfortable or relaxed	Yes	No	?
feel pity for the person	Yes	No	?
tell the person to "slow down" or "relax"	Yes	No	?

I believe stuttering <u>is caused by</u>...			Not sure
			?
genetic inheritance	Yes	No	?
ghosts, demons, or spirits	Yes	No	?
a very frightening event	Yes	No	?
an act of God	Yes	No	?
learning or habits	Yes	No	?
a virus or disease	Yes	No	?

I believe stuttering <u>should be helped by</u>...			Not sure
			?
other people who stutter	Yes	No	?

a speech and language therapist	Yes	No	?
people like me	Yes	No	?
a medical doctor	Yes	No	?

My <u>knowledge</u> about stuttering <u>comes from</u>...			Not sure
personal experience (me, my family, friends)	Yes	No	?
television, radio, or films	Yes	No	?
magazines, newspapers, or books	Yes	No	?
the Internet	Yes	No	?
school	Yes	No	?
doctors, nurses, or other specialists	Yes	No	?

You have finished! Thank you very much.

**APPENDIX B: INSTITUTIONAL REVIEW BOARD EXEMPT REVIEW
LETTERS**



University of Central Florida Institutional Review Board
 Office of Research & Commercialization
 12201 Research Parkway, Suite 501
 Orlando, Florida 32826-3246
 Telephone: 407-823-2901 or 407-882-2276
 www.research.ucf.edu/compliance/irb.html

Determination of Exempt Human Research

From: UCF Institutional Review Board #1
 FWA00000351, IRB00001138
To: Charlotte M Harvey
Date: May 24, 2018

Dear Researcher:

On 05/24/2018, the IRB reviewed the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination, Category 2
 Project Title: A Survey of Communication Instructors' Knowledge, Beliefs and Attitudes about Stuttering and Individuals Who Stutter
 Investigator: Charlotte M Harvey
 IRB Number: SBE-18-13987
 Funding Agency:
 Grant Title:
 Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

This letter is signed by:

Signature applied by Renea C Carver on 05/24/2018 02:47:25 PM EDT

Designated Reviewer



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Determination of Exempt Human Research

From: UCF Institutional Review Board #1
FWA00000351, IRB00001138

To: Charlotte M Harvey

Date: June 15, 2018

Dear Researcher:

On 06/15/2018, the IRB reviewed the following modification as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Modification Type: Survey Title Modification
Project Title: A Survey of Communication Instructors' Knowledge, Beliefs and Attitudes about Stuttering and Individuals Who Stutter
Investigator: Charlotte M Harvey
IRB Number: SBE-18-13987
Funding Agency:
Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in IRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

This letter is signed by:

Signature applied by Gillian Morien on 06/15/2018 12:16:44 PM EDT

Designated Reviewer

APPENDIX C: PERMISSION TO UTILIZE THE *POSHA-S*

From: Kenneth St Louis <Ken.StLouis@mail.wvu.edu>
Date: February 28, 2018 at 12:48:05 PM EST
To: Charlotte Harvey <Charlotte.Harvey@ucf.edu>
Subject: Re: *POSHA-S*

Hello Charlotte,

I'm glad your committee approved your idea. Attached is the *POSHA-S* for your use. Again, if you plan to add items, it is best (though not absolutely mandatory) to do so at or near the end. It will make the standard results maximally comparable to the database results.

When you know the approximate number of respondents and groups (if more than one), let me know, and I'll send an Excel workbook for you to enter your data.

Good luck,

Ken

Kenneth O. St. Louis, Ph.D.
Certified Speech-Language Pathologist
Board Certified Specialist in Fluency Disorders
Dept. Communication Sciences & Disorders
805 Allen Hall, PO Box 6122
West Virginia University
Morgantown, WV 26506-6122
Phone: 304-293-2946
Email: ken.stlouis@mail.wvu.edu or kstlouis@wvu.edu

From: Charlotte Harvey
Date: Wednesday, February 28, 2018 at 9:35 AM
To: "Kenneth St. Louis"
Subject: Re: *POSHA-S*

Good morning, Ken:

Yesterday, I met informally with my thesis committee and they approved my request to utilize the *POSHA-S* as the survey tool for my thesis! Needless to say, I am thrilled! Thank you for offering it for my research.

The committee is aware of the three conditions you specified and are fine with the sharing of the raw data with you via spreadsheet, and the *POSHA-S* copyright recognition for publication/presentation purposes. UCF has a rigorous Institutional Review Board (IRB) process

in place which is a requirement here for any human or animal participant-based research. I am at the point with IRB that all of my coursework for it is complete and I am registered in the researcher system here.

Best regards,
Charlotte

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