

CROSS-CULTURAL COMPARISON OF PUBLIC ATTITUDES  
AND ADVERSE IMPACT OF STUTTERING

By

Angelica Wozniak

A THESIS

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

Communicative Sciences and Disorders—Master of Arts

2021

## ABSTRACT

### CROSS-CULTURAL COMPARISON OF PUBLIC ATTITUDES AND ADVERSE IMPACT OF STUTTERING

By

Angelica Wozniak

The purpose of this study was to explore potential links between public perceptions of stuttering and the adverse impact of these perceptions on the experiences of individuals who stutter. This was completed by analyzing data from a demographic survey, the Public Opinion Survey of Human Attributes (POSHA), the Overall Assessment of the Speaker's Experience of Stuttering (OASES), and the Stuttering Perception Scale (4S). Data was collected from the United States and Australia. This qualitative study involved 24 people who stutter from the United States and 22 people who stutter from Australia, as well as 45 people who do not stutter from the United States and 48 people who do not stutter from Australia who were recruited via research registries, personal contacts, stuttering associations, and so forth. A descriptive analysis was completed using the student's t-test, the Chi Square test, and percentage 'yes'. No significant differences were found regarding adverse impact and self-stigma between respondents from the United States and Australia, as well as public perceptions of stuttering between respondents from the United States and Australia. The following results indicate that there are minimal differences cross-culturally for adverse impact and self-stigma in respondents who stutter, as well as minimal differences cross-culturally for public perceptions of stuttering in respondents who do not stutter.

## ACKNOWLEDGMENTS

I would like to thank my supervisor Dr. J. Scott Yaruss and my committee members Dr. Bridget Walsh and Matthew Phillips for their invaluable advice, continuous support, and patience during my master's study. Their immense knowledge and plentiful experience have been very encouraging during the time of my academic research and daily life. I would also like to thank Dr. Kenneth St. Louis and Dr. Michael Boyle for providing their surveys, the Public Opinion Survey of Human Attributes–Stuttering (POSHA-S) and the Stuttering Perceptions Scale (4S) as well as scoring templates for the purposes of this master's research.

## TABLE OF CONTENTS

|   |      |
|---|------|
| LIST OF TABLES .....  | vi   |
| LIST OF FIGURES.....  | viii |
| KEY TO ABBREVIATIONS .....                                  | ix   |
| Introduction .....  | 1    |
| Literature Review .....                                     | 5    |
| I. Adverse Impact of Stuttering .....                       | 6    |
| II. Self-Stigma .....                                       | 8    |
| III. Public Perceptions of Stuttering and the WHO-ICF ..... | 9    |
| IV. Conclusion .....  | 12   |
| Methods .....   | 14   |
| I. Participants .....                                       | 14   |
| a. Participants Who Stutter .....                           | 14   |
| b. Participants Who Do Not Stutter.....                     | 15   |
| II. Measures.....   | 15   |
| a. Demographic Surveys .....                                | 15   |
| b. OASES-A .....  | 16   |
| c. POSHA-S .....  | 18   |
| d. 4S.....  | 19   |
| III. Data Analysis .....                                    | 22   |
| Results .....   | 23   |
| I. Public Perceptions .....                                 | 23   |
| a. Demographic Information .....                            | 25   |
| b. Beliefs About People Who Stutter .....                   | 26   |
| i. Traits & Personality .....                               | 26   |
| ii. Help From .....   | 26   |
| iii. Cause.....   | 27   |
| iv. Potential to Lead a Normal Life.....                    | 27   |
| c. Self-Reactions of People Who Stutter .....               | 28   |
| i. Accommodating/Helping .....                              | 28   |
| d. Social Distance/Sympathy.....                            | 28   |
| e. Knowledge/Experience.....                                | 29   |
| f. Knowledge Source .....                                   | 29   |
| g. Subscores.....   | 29   |

|  |    |
|--|----|
| i. Overall Impression of People Who Stutter .....              | 29 |
| ii. Would “Want to Be” a Person Who Stutters .....             | 30 |
| iii. Amount Known About.....                                   | 30 |
| iv. Overall Stuttering Score .....                             | 30 |
| IV. Perceptions of People who Stutter .....                    | 39 |
| a. Demographic Information .....                               | 40 |
| b. Section I: General Information.....                         | 41 |
| c. Section II: Your Reactions to Stuttering .....              | 41 |
| d. Section III: Communication in Daily Situations .....        | 42 |
| e. Section IV: Quality of Life .....                           | 43 |
| f. The Stuttering Perceptions Scale .....                      | 53 |
| Discussion .....   | 57 |
| I. Summary of Findings: Public Perceptions of Stuttering ..... | 57 |
| II. Summary of Findings: Adverse Impact and Self-Stigma.....   | 58 |
| III. Overall Summary .....                                     | 58 |
| IV. Limitations .....  | 59 |
| V. Future Directions.....                                      | 60 |
| VI. Conclusion .....   | 61 |
| APPENDICES.....  | 62 |
| APPENDIX A: Surveys .....                                      | 63 |
| APPENDIX B: Open-Ended Responses.....                          | 79 |
| BIBLIOGRAPHY .....   | 84 |

## LIST OF TABLES

|  |    |
|--|----|
| Table 1. Demographic information: POSHA-S mean ratings of respondents from the United States and Australia (93 samples [45 from the United States; 48 from Australia] circa August 2020 reflecting first POSHA-S administrations), the median score from prior administrations of the POSHA-S (208 samples [16,603 respondents]), and sample percentiles of respondents from the United States and Australia relative to all previous POSHA-S samples..... | 25 |
| Table 2. POSHA-S mean ratings of respondents from the United States and Australia (93 samples [45 from the United States; 48 from Australia] circa August 2020 reflecting first POSHA-S administrations), the median score from prior administrations of the POSHA-S 9208 samples [16603 respondents]), and sample percentiles of respondents from the United States and Australia relative to all previous POSHA-S samples.....                           | 34 |
| Table 3. Table 3. POSHA-S percentages of respondents from the United States and Australia who responded ‘Yes’ for POSHA-S variables, as well as p-values and Chi Scores for categorical data (93samples [45 from the United States; 48 from Australia]).....   | 36 |
| Table 4. t statistics and p-values for POSHA-S variables for continuous data that did not necessitate a Chi Square test, including responses from the United States and Australia (93 samples [45 from the United States; 48 from Australia]).....   | 37 |
| Table 5. Open-ended responses from the United States and Australia answering the question, “What characteristics in people who stutter lead you to provide the answers you provided?” (Transcripts were edited for typographical errors).....  | 38 |
| Table 6. OASES and 4S demographic information of respondents from the United States and Australia (46 samples [22 from the United States; 24 from Australia]).....   | 40 |
| Table 7. OASES means (and SDs) for Sections I-IV for respondents from the United States and Australia with p-value and t-statistic additionally indicated.....   | 45 |
| Table 8. Open-ended responses from respondents from the United States and Australia answering the question, “Based on your perception of self-stigma, what does that lead you to do in your own life?” (Transcripts were edited for typographical errors) .....  | 52 |
| Table 9. Number of participants from the United States and Australia who did vs. did not receive speech and language services for stuttering.....  | 52 |
| Table 10. Means (and SDs) for respondents from the United States and Australia with p-values and t statistics for the 4S.....  | 54 |

Table 11. Open-ended responses from respondents from the United States and Australia answering the question, “Based on your perception of self-stigma, what does that lead you to do in your own life?” (Transcripts were edited for typographical errors).....79

Table 12. Open-ended responses from the United States and Australia answering the question, “What characteristics in people who stutter lead you to provide the answers you provided?” (Transcripts were edited for typographical errors)..... 80

## LIST OF FIGURES

|  |    |
|--|----|
| Figure 1. “Update of Yaruss and Quesal’s (2004) representation of how the World Health Organization’s International Classification of Functioning, Disability and Health (ICF) can be applied to stuttering. Copyright © 2019 Seth E. Tichenor and J. Scott Yaruss” (Tichenor & Yaruss, 2019)..... | 2  |
| Figure 2. Summary POSHA-S Graph for the United States and Australian Samples.....  | 32 |



## KEY TO ABBREVIATIONS

SLP Speech-Language Pathologist

US United States

AUS Australia

POSHA-S The Public Opinion Survey of Human Attributes – Stuttering

OASES-A The Overall Assessment of the Speaker's Experience of Stuttering – Adults

4S Self-Stigma of Stuttering Scale

## Introduction

Individuals who stutter are faced with a daily challenge of confronting the adverse impact that stuttering may have on their lives. Several studies have found that stuttering may result in elevated levels of internalized self-stigma and an overall negative impacting on overall quality of life (Boyle, 2013, 2015b; Boyle & Fearon, 2018; Carter, Breen, Yaruss, & Beilby, 2017; Carter, Breen, & Beilby, 2019; Tichenor & Yaruss, 2018). Additionally, research has indicated that societal perceptions toward stuttering are mostly negative on a global scale and that people who do not stutter characterize people who do stutter with adverse traits (St. Louis, 2005; Abdalla & St. Louis, 2012a; Valente, St. Louis, Leahy, Hall, & Jesus, 2017).

The World Health Organization's International Classification of Functioning, Disability, and Health (WHO- ICF; 2001) can be used to describe the adverse impact of stuttering, as well as the effect of the personal and environmental context, on the lives of individuals who stutter. As seen in Figure 1, the WHO-ICF provides a framework for investigating how health issues affect the areas of impairment, activity limitation, and participation restriction in an individual's life (WHO, 2001). Additionally, the WHO-ICF describes how an individual's personal and environmental context may also have an impact on their health issues (WHO, 2001). Taking into consideration the relevant aspects of the WHO-ICF, it can be seen that the domains of activity and participation are negatively impacted by stuttering (Tichenor & Yaruss, 2019; Yaruss, 2007b; Yaruss & Quesal, 2004). Additionally, individuals who stutter may face challenges in their environment from negative societal perceptions as a result of their stuttering. This may include other people in the public holding a stereotypical image of people who stutter.

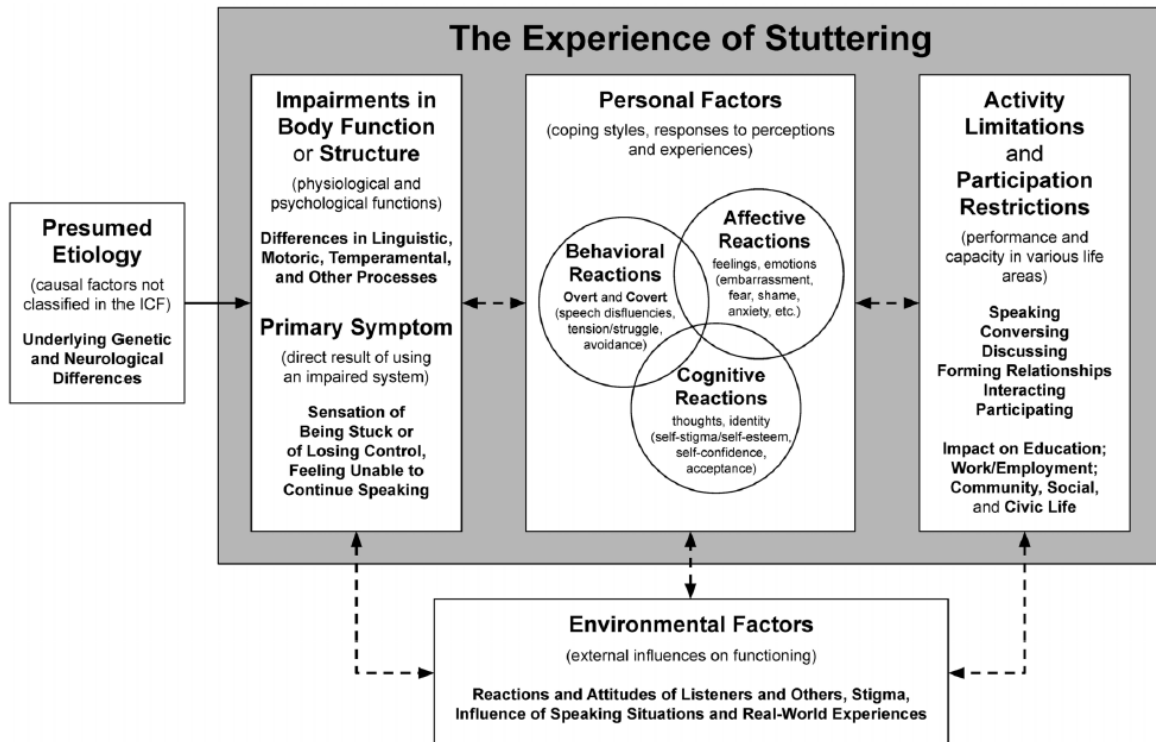


Figure 1. "Update of Yaruss and Quesal's (2004) representation of how the World Health Organization's International Classification of Functioning, Disability and Health (ICF) can be applied to stuttering. Copyright © 2019 Seth E. Tichenor and J. Scott Yaruss" (Tichenor & Yaruss, 2019)

The OASES (Yaruss & Quesal, 2016) has been used to describe and quantify the adverse impact of stuttering on the person who stutters in terms of the key domains described in the WHO-ICF (Yaruss & Quesal, 2016). The OASES focuses on the experience of the person who stutters rather than the attitudes toward stuttering of the general public. Prior studies involving the OASES have highlighted that people who stutter hold more negative perceptions about themselves and about their speaking abilities.(Carter, Breen, Yaruss, & Beilby, 2017; Carter, Breen, & Beilby, 2019; Tichenor & Yaruss, 2018).

Although the OASES describes the impact of stuttering on a person's life, it does not explain the reasons for that impact. One potential source of impact that has been identified in the literature is self-stigma, which may result from societal stigma. The 4S was developed to measure the self-

stigma, self-esteem, self-efficacy, and life satisfaction in people who stutter (Boyle, 2013b). Research using the 4S has shown that individuals who stutter have higher levels of internalized self-stigma and that this self-stigma negatively impacts their feelings of hope, self-esteem, and self-efficacy. Furthermore, these high rates of internalized self-stigma can adversely impact the physical health and stress levels of individuals who stutter (Boyle, 2013b, 2015b; Boyle & Fearon, 2018).

Ample research has also shown that societal perceptions of stuttering are commonly negative. For example, prior studies using the POSHA-S (St. Louis, 2011, 2013) have shown that people tend to hold inaccurate beliefs about those who stutter. The majority of respondents to POSHA-S studies across various countries, including the U.S, hold these negative opinions not only about stuttering but also about the personality of individuals who stutter (St. Louis, 2005; Abdalla & St. Louis, 2012a; Valente, St. Louis, Leahy, Hall, & Jesus, 2017). A vast amount of research has been done on societal perceptions of stuttering across the globe. No POSHA-S data has previously been collected in Australia. Therefore, public reactions toward stuttering and people who stutter are unknown for this region.

Overall, stuttering has a significant adverse impact in the daily lives of individuals who stutter, though the source of these negative self-perceptions is still unknown. The purpose of this study is to explore potential links between public perceptions of stuttering and the adverse impact of stuttering and self-stigma that people who stutter experience in their lives. Identifying if societal attitudes toward stuttering are associated with the individual experiences of people who stutter might help to explain one source of the negative reactions that people who stutter develop towards themselves and their stuttering.

Data was collected in the U.S. and Australia. Australia was selected as an optimal region to collect data about societal perceptions of stuttering for several reasons. Primarily, the U.S. and Australia share a common language as well as similar cultural norms. Additionally, there is a scarcity of public perception data toward stuttering from Australia and collecting this data would provide a foundation for later public perception research to be done in Australia.

This research will provide greater insight into what societal perceptions are like in Australia, as this data does not yet exist in the region. Additionally, this research will highlight the value of public education campaigns to inform people about stuttering. Findings from this study might also help explain why individuals who stutter who live in different societies have different degrees of adverse impact associated with their stuttering. Taken together, these results will support improvements in the quality of life of people who stutter by shedding light on the potential reasons as to why they experience negative reactions and ways that such negative reactions can be diminished.

## Literature Review

A significant amount of research has examined public perceptions of stuttering, as well as the experience of individuals who stutter. There is a general awareness that various cultures perceive stuttering as negative, and that these negative perceptions manifest differently across cultures. Likewise, individuals who stutter experience adverse impact as a result of their stuttering, and self-perceptions of people who stutter are generally negative, resulting in higher levels of internalized self-stigma. However, the reasons behind negative self-perceptions, adverse impact, and their potential connection to public perceptions of stuttering are yet to be explored. Discovering a link between public perceptions of stuttering, the adverse impact of stuttering, and self-stigma in individuals who stutter would provide guidance for improving stuttering awareness campaigns and projects that seek to increase quality of life for those who stutter and to improve public perceptions about stuttering.

Several self-help/support organizations focus on public perceptions of stuttering. In the United States, the primary organizations include the *National Stuttering Association (NSA)*, the *Stuttering Foundation (SFA)*, the *Stuttering Association for the Young (SAY)*, *Friends: The National Association of Young People Who Stutter*, all of which provide resources and services to individuals and families of people who stutter, with a goal of empowering these individuals and their loved ones. Projects such as the *International Stuttering Awareness Day (ISAD)* was also created on October 22, 1998 to continue to raise global public awareness of stuttering (International Stuttering Association, 2020). The *International Project on Attitudes Toward Human Attributes (IPATHA)* (St. Louis, 2010) also seeks to examine public attitudes about stuttering and to reduce stigma toward those who stutter (St. Louis, 2010). These as well as other organizations and events seek to provide individuals who stutter with supportive communities to

discuss their wants, needs, and feelings. The public has also been educated about the details of stuttering. Nevertheless, public attitudes toward stuttering, as well as self-perceptions of those who stutter, remain negative. Therefore, more research needs to be done on these negative public and personal attitudes to maximize the benefit of awareness campaigns.

## I. Adverse Impact of Stuttering

Substantial research has shown that stuttering can have a significant negative impact on the daily lives of individuals who stutter. According to the WHO-ICF, stuttering can affect the areas of body function and body structure (impairment), as well as activities and participation. Such adverse consequences are mediated, to a large extent, by personal reactions and the reactions of those in the person's environment (Tichenor & Yaruss, 2019; Yaruss, 1998; Yaruss & Quesal, 2004). Individuals who stutter may experience impact in each of these domains, and this may negatively affect their daily lives (WHO, 2001).

To better understand the ways in which stuttering might affect a person's life, the *Overall Assessment of the Speaker's Experience of Stuttering for Adults* (OASES-A) protocol was designed to gather information on the experiences of stuttering from the perspective of adult individuals who stutter. The OASES-A assessment considers the aforementioned WHO-ICF areas and asks people who stutter to rate the level of adverse impact that stuttering has on these areas and thus in their daily life (Yaruss & Quesal, 2006, 2016). Results from prior studies using the OASES have shown that stuttering can indeed have an adverse impact on individuals who stutter and their daily lives (J. Beilby, 2014; J. M. Beilby et al., 2013; A. Carter et al., 2017; S. E. Tichenor & Yaruss, 2019; S. Tichenor & Yaruss, 2018; Yaruss, 2010; Yaruss & Quesal, 2006, 2016).

The adverse impact that stuttering has on individuals who stutter is largely seen in the area of activities, participation, as well as in negative reactions which involve social communication (Yaruss, 2007b; Yaruss & Quesal, 2004). The OASES-A describes specific social situations where stuttering may have a negative impact, such as “sustaining a conversation” and “conversing with many people” (WHO, 2001; Yaruss & Quesal, 2004). Stuttering can adversely impact individuals who stutter during social situations, as the disfluencies caused by stuttering may not be expected during a communicative act (Tichenor & Yaruss, 2019; WHO, 2001; Yaruss, 2007; Yaruss & Quesal, 2004). This can hinder the ability of an individual who stutters to become involved in social events and cause a decrease in overall quality of life (Tichenor & Yaruss, 2019; Tichenor & Yaruss, 2018).

For instance, people who stutter can be negatively affected by stuttering in the workplace. Research has shown that, on average, the general public believes that individuals who stutter should not work somewhere that requires a large amount of talking (Boyle, 2017; Logan & O’Connor, 2012; St. Louis, 2005). This negative public perception has prevented individuals who stutter from fully participating in the workplace. For example, an individual who stutters whose job revolved around making and delivering group presentations stated that “...his boss was ‘hesitant’ to let him make the actual presentation...” (Klein & Hood, 2004, p. 267) as a result of his stuttering. This person who stutters was unable to successfully participate in the activities of his work environment because of the adverse impact that stuttering can have in social situations. Such experiences shed light on the consequences that individuals who stutter may face in their daily life as a result of their stuttering (or of other people’s reactions to their stuttering).

These negative perceptions that people who stutter face, exist in various environments such as the workplace, school, and casual conversations. As a ramification of negative public attitudes,



people who stutter show increased difficulties in the ICF areas of activity limitation and participation restriction. Such negative public opinions may aggravate the adverse impact that stuttering has on an individual who stutters.

## II. Self-Stigma

Self-stigma can be described as a social phenomenon where an individual describes their differences as unsatisfactory in comparison to societal norms (Bathje & Marston, 2014). The *Self-Stigma of Stuttering Scale* (4S; Boyle, 2015a) was created to better understand the self-stigma, self-esteem, self-efficacy, and life satisfaction in individuals who stutter. In consideration of the WHO-ICF domains, this scale aims to discover how the aforementioned factors affect the overall quality of life of a person who stutters. Prior studies conducted using the 4S scale have identified that people who stutter show decreased levels of hope, empowerment, social support, as well as increased levels of depression and anxiety (Boyle, 2015a).

Additional research completed using the 4S scale has identified that as a result of the speech disruptions associated with stuttering, people who stutter may become frustrated at themselves and their stuttering. Studies have shown that this internalized frustration can lead to feelings of shame and self-consciousness, heightened levels of anxiety, and cause a lower quality of life (J. M. Beilby et al., 2012; Boyle, 2013b; Craig & Tran, 2006; Iverach et al., 2017; Messenger et al., 2004). Such frustration and negative labeling of one's differences can lead to social isolation and disempowerment, as well as lower levels of self-esteem and self-efficacy (Bathje & Marston, 2014; Boyle, 2013b; A. K. Carter et al., 2019).

Another reason for increased self-stigma is that individuals who stutter feel as though their communicative competence is lower than that of non-stuttering individuals (J. M. Beilby et al.,

2012; Blood et al., 2001). For example, a study done with adolescents who stutter found that participants who stutter carried more negative self-perceptions about themselves and their stuttering than participants who did not stutter. This resulted in lower scores in all areas of self-esteem, specifically in the areas of being accepted by other peers, making close relationships, and in general educational competence (Adriaenssens et al., 2015).

Overall, individuals who stutter show higher rates of internalized self-stigma. The cause of this internalized self-stigma may be linked to negative public perceptions toward stuttering. However, more research is needed to explore a potential link between levels of self-stigma in individuals who stutter and public perceptions of stuttering.

### III. Public Perceptions of Stuttering and the WHO-ICF

Numerous studies have shown that public perceptions of stuttering are mostly negative and that they vary across cultures. These negative perceptions and stereotypes are manifested in a variety of behaviors and environments. These behaviors can then negatively impact individuals who stutter and have an adverse impact on their overall quality of life (WHO, 2001; Yaruss, 2007b; Yaruss & Quesal, 2004).

To further study how negative perceptions of stuttering reveal themselves within a society, research has employed the *Public Opinion Survey of Human Attributes – Stuttering* survey (St. Louis, 2013). The POSHA-S survey has been used extensively to measure and demonstrate how people in different societies perceive diverse human characteristics, such as stuttering. In combination with demographic questions, the POSHA-S asks respondents about a variety of issues related to stuttering, such as: (1) their personal knowledge of stuttering, (2) how they would react during a conversation with a person who stutters, and (3) how people who stutter should select

their vocation, etc. The POSHA-S survey, the IPATHA initiative, (St. Louis, 2010) and other research have shown how different cultures perceive stuttering and individuals who stutter.

For example, studies have revealed that general global attitudes toward stuttering are more negative than average in Italy, the Middle East, and China, and slightly above average but still low in Poland, Germany, Ireland, England, and Bosnia & Herzegovina (Przepiorka et al., 2013; St. Louis et al., 2016). Public perception research completed across 11 nations has identified specific ways in which individuals who do not stutter communicate with and think about people who do stutter (St. Louis, 2005). For instance, the majority of individuals believe that people who stutter are nervous and shy. This was especially seen in Bulgaria and Brazil. In Bulgaria and Nepal, participants linked the stereotypical traits of shyness and nervousness of stuttering with decreased intelligence. Only a minority of respondents, specifically people in Denmark and fluency specialists in the United States, disagreed with this statement (St. Louis, 2005). Data on societal perceptions towards stuttering have not yet been collected in Australia, making it difficult to include Australia in this comparison of previously studied public attitudes on stuttering.

Further research has shown that teachers and students who do not stutter may not be receptive to students and peers who do stutter. In fact, some teachers share the same view about people who stutter as the general public - views that are more negative (Arnold et al., 2015). For instance, certain professors may categorize students who stutter with stereotypical personality traits, such as shyness and nervousness (Dorsey & Guenther, 2000). A similar study done in Kuwait found that 75% of the 471 participating teachers also believed that individuals who stutter are fearful and shy alongside other stereotypical perceptions of stuttering (Abdalla & St. Louis, 2012b). Analogous results were found in parts of the U.S., Canada, Belgium, Bulgaria, Brazil, Cameroon, China, Kuwait, Nepal, South Africa, and Turkey (Abdalla & St. Louis, 2012b).

Overall, a majority of people on a global scale stereotyped individuals who stutter to be shy or nervous. Additionally, data on this topic has not been collected from Australia.

Regarding the livelihood of individuals who stutter, the majority of participants agreed with the notion that people who stutter can live a normal life and have good communication skills. Even though these same respondents stated that people who stutter could have good communicative skills, they claimed that people who stutter should avoid jobs that require a lot of talking (Boyle, 2017; St. Louis, 2005). In contrast, people in Nepal rejected the idea that individuals who stutter could lead normal lives. Therefore, most respondents shared the negative perception that people who stutter should avoid situations that necessitate more speaking. No data from Australia are available to describe how the public perceives vocation and individuals who stutter.

When asked about having a conversation with a person who stutters, most of the respondents in the study of 11 nations stated that they would speak for people who stutter and that they would not allow them to finish their thought before continuing the conversation (St. Louis, 2005). People in Turkey, Nepal, and Poland stated that they would also finish speaking for a person who stutters, and people in Turkey and Bulgaria were identified to be more likely to make jokes about stuttering (St. Louis, 2005). Respondents from Poland further indicated that they would not feel comfortable during a conversation with a person who stutters (Przepiorka et al., 2013). Only people in Denmark and fluency specialists in the United States indicated that they would not tell the person who stutters to relax. Therefore, a majority of respondents held negative perceptions toward people who stutter. Specifically, most respondents would complete sentences for people who stutter and feel uncomfortable during conversations with people who stutter. Additionally, some respondents claimed to even make jokes about stuttering (St. Louis, 2005). As was

mentioned above, data from Australia about how stuttering is perceived by the public is not present, and thus it could not be included in this comparison.

Research has also shown that even some speech-language pathologists hold negative perceptions about stuttering. For example, it was found that speech-language therapists in Turkey did not believe that administering a treatment plan to children who stutter would be effective. In fact, the speech-language therapists in Turkey were not very willing to provide stuttering therapy (Maviş et al., 2013). Clinicians' unwillingness to provide speech services to a patient due to negative beliefs about stuttering contributes to the high rates of negative global perceptions toward stuttering.

Generally, most individuals worldwide hold negative attitudes about people who stutter, and this adversely impacts how they behave towards people who stutter. A significant amount of data has identified that public perceptions of stuttering are negative on a global scale. The majority of people, including some speech-language therapists, believe several stereotypes about individuals who stutter. Assuming that an individual who stutters is shy, cannot complete their own sentences, and should avoid situations that necessitate more talking are all aspects of public stigma that may lead to increased negative self-perceptions in people who stutter. Furthermore, it is important to highlight that public perception data has not been found for Australia. It remains unknown how society perceives individuals who stutter in this area and thus collecting data in this region is necessary.

#### IV. Conclusion

One potential explanation for why people who stutter develop such negative attitudes toward themselves and their stuttering may be found in the fact that societal attitudes toward stuttering are

also negative. If people who stutter live in a society that judges them and holds negative views about their speaking abilities, then this could have an effect on their development of self-stigma. To date, however, no prior studies have directly examined relationships between societal attitudes and individual attitudes toward stuttering.

In this study, we examined the relationships between public opinions about stuttering (as measured by the POSHA-S) and self-perceptions of the impact of stuttering (as measured by the OASES) in two English-speaking countries: The United States and Australia. Australia was chosen for this study as there is no prior POSHA-S data completed for this region. Such information was necessary for determining whether there was a connection between public perceptions of stuttering and the self-stigma and adverse impact in individuals who stutter. This provided a foundation for future public perception research in Australia. Furthermore, the U.S. and Australia share similar languages as well as cultural norms making them optimal for comparison. We also administered a survey asking people who stutter about how their culture perceives their stuttering. Our primary research question was: Is there a relationship between public perceptions of stuttering and self-perceptions in those who stutter? We hypothesize that people who live in a society with greater negative stigma will also experience greater negative impact and self-stigma as a result of stuttering. Such a finding would highlight the importance of public education campaigns to reduce societal stigma as an additional way to reduce negative experiences of people who stutter.

## Methods

### I. Participants

Two groups of adults, ages 18 and older, participated in this study. One group consisted of 24 people who stutter from the United States and 22 people who stutter from Australia, as well as 45 people who do not stutter from the United States and 48 people who do not stutter from Australia. These sample sizes were derived from two power analyses. The power analyses were used to determine the appropriate sample size necessary to detect the existence of an effect within the data. For the group of people who stutter, the power analysis was based on Yaruss & Quesal (2006), seeking a power of .8 and a medium effect size of .5. For the groups of people who do not stutter, the power analysis was based on St. Louis (2011), with the same power and effect size. Participants were recruited from across the United States and Australia by way of research registries from prior experiments, personal contacts, word of mouth, and international stuttering associations (i.e., the National Stuttering Association in the United States and the Australian Speak Easy Association). Individuals self-identified as people who stutter or people who do not stutter and participated in the appropriate surveys deemed for each group. All participants in groups completed an informed consent form prior to beginning the survey, and each group was provided with their appropriate survey links. The study was reviewed and exempt by the Institutional Review Board of Michigan State University prior to initiation.

#### a. Participants Who Stutter.

People who stutter with no co-occurring speech, language, and hearing deficits (other than stuttering) were recruited to participate in this study. Presence of stuttering was confirmed through self-report. Individuals who stutter completed three surveys which collectively measured the self-perceptions of individuals who stutter about their stuttering as well as their levels of self-stigma.

The surveys used were: (1) a demographic survey (2) the Overall Assessment of the Speaker's Experience of Stuttering for adults (OASES-A) and (3) the Self-Stigma of Stuttering Scale (4S).

**b. Participants Who Do Not Stutter.**

Participants who do not stutter with no prior experience as a speech language pathologist or fluency specialist and with a minimal or no relationship to individuals who stutter were recruited to respond to surveys to collect information on how people in society perceive stuttering. These participants completed two surveys: (1) a demographic survey and (2) the Public Opinion Survey of Human Attributes - Stuttering survey (POSHA-S).

Each survey and assessment were integrated and published onto Qualtrics (<https://www.qualtrics.com>). The demographic surveys were integrated into the OASES-A and the POSHA-S for ease of completion and to reduce attrition in survey completion.

**II. Measures**

**a. Demographic Surveys**

Two different demographic surveys were created for this study: one for individuals who stutter and another for individuals who do not stutter. The demographic survey for individuals who stutter contained questions regarding their country of origin (the United States or Australia), age, sex and/or gender, occupation, education level, language history, as well as additional questions regarding prior history with speech therapy services and support group involvement. The demographic survey for individuals who do not stutter asked similar questions about country of origin, age, gender, occupation, education level, and language history. It also contained questions regarding knowledge of other individuals who stutter, any previous experiences with speech



therapy services, any prior diagnoses of stuttering, as well as any involvement in work as a fluency specialist. Please see Appendix A for additional information on the demographic survey.

b. OASES-A

Adverse impact of stuttering was measured in individuals who stutter with the OASES-A assessment. The OASES-A assessment includes four main sections to test adverse impact of stuttering: (I) General Information, (II) Reactions to Stuttering, (III) Communication in Daily Situations, and (IV) Quality of Life. These four sections (Yaruss & Quesal, 2016) are further divided into subsections. Section I, titled “General Information,” is subdivided into sections:

- A. *General information about your speech.* This section contains items pertaining to use of one’s speech in daily situations, specifically asking about the respondent’s typical fluency in various events.
- B. *How knowledgeable are you about...?”* This section contains items pertaining to how familiar the respondent is with various factors of stuttering such as treatment and self-help/support groups.
- C. *Overall, how do you feel about...?”* This section contains items pertaining to how an individual who stutters reacts to their communicative abilities and how respondents feel towards services such as self-help/support groups and SLP treatment.

Section II, titled “Your [the participant’s] reactions to stuttering,” is subdivided into sections:

- A. *When you think about your stuttering, how often do you feel...?* This section contains items pertaining to specific emotions that one may feel regarding their stuttering.
- B. *How often do you...?* This section contains items pertaining to self-reactions of people who stutter during moments of stuttering.

- C. To what extent do you agree or disagree with the following statements?”* This section contains items asking respondents who stutter to consider their beliefs about their stuttering and what public perceptions are toward stuttering.

Section III, titled “Communication in Daily Situations,” is divided into subsections:

- A. How difficult is it for you to communicate in the following general situations?”* This section contains items pertaining to specific challenges that individuals who stutter face during communication events.
- B. How difficult is it for you to communicate in the following situations at work?”* This section contains items pertaining to how individuals who stutter are impacted by their stuttering in a vocational setting.
- C. How difficult is it for you to communicate in the following social situations?”* This section contains items pertaining to how individuals who stutter are impacted by their stuttering in social situations.
- D. How difficult is it for you to communicate in the following situations at home?”* This section contains items pertaining to how individuals who stutter are impacted by their stuttering when communicating in the home environment.

Section IV, titled “Quality of Life” is divided into subsections:

- A. How much is your overall quality of life negatively affected by...?”* This section contains items pertaining to how much an individual who stutters quality of life is adversely impacted by stuttering.

- B. Overall, how much does stuttering interfere with your satisfaction with communication...?”* This section contains items pertaining to how an individual who stutters personal perception of communication is impacted in various environments.
- C. Overall, how much does stuttering interfere with your...?”* This section contains items pertaining to how stuttering impacts the various relationships of an individual who stutters.
- D. Overall, how much does stuttering interfere with your...?”* This section contains items pertaining to how an individual’s stutter impacts their educational and vocational lives and opportunities.
- E. Overall, how much does stuttering interfere with your...?”* This section contains items pertaining to how an individual’s stutter affects self-perceptions.

Each item is scored on a 5-point Likert Scale, with higher scores always indicating greater negative impact. The sections and overall test can be scored to provide an Impact Score and an Impact Rating. These scores reflect the degree of adverse impact that stuttering has on the individual’s life. Impact ratings range from 1.00-5.00, where 1.00 indicates a mild adverse impact from stuttering on an individual’s daily life, and 5.00 demonstrates a severe adverse impact of stuttering on the life of a person who stutters. This provides measures for how stuttering influences the quality of life, thoughts, and feelings of an individual who stutters. The OASES-A assessment has gone through rigorous examination, and has shown to be a valid and reliable measure for identifying the impact that stuttering has on people who stutter (Yaruss & Quesal, 2006, 2016). Please see Appendix A for additional information on the OASES-A.

c. POSHA-S

Public perceptions toward stuttering were identified with the POSHA-S survey. The POSHA-S provided participants with specific questions related to stuttering. The POSHA-S survey collects

information by using 3- and 5-point Likert scales and produces a variety of scores including: (1) means of items that are converted to -100 to +100 scales, (2) components comprising clusters of items, (3) sub-scores comprising clusters of components, and (4) Overall Stuttering Scores comprising two sub-scores for stuttering (St. Louis, 2011). Examples of questions include: “I would want to be a person who is...”, “The amount I know about people who...”, “Following are people I have known who...”, and “If I were talking with a person who stutters, I would...” (St. Louis, K.O. (2019). *Public Opinion Survey of Human Attributes - Stuttering (POSHA-S)*. The POSHA-S has undergone many iterations of testing, and research shows it to be a valid, reliable, and internally consistent measure of public attitudes toward stuttering (St. Louis, 2013; St. Louis & Roberts, 2010). Please see Appendix A for additional information on the POSHA-S.

d. 4S

The 4S scale aimed to measure the degree of self-stigma, self-esteem, self-efficacy, and life satisfaction in individuals who stutter by focusing on how the internalization of public perceptions about stuttering affect the quality of life of a person who stutters (Boyle, 2013b). The primary basis of the 4S scale stems from a multidimensional model which focuses on “...awareness (e.g., “Most people in the general public believe that [people who stutter] are insecure”), agreement (“I believe that [people who stutter] are generally nervous”), and application... (“Because I stutter, I feel less sociable than people who do not stutter”) ...” (Boyle, 2015 p. 18). The 4S scale has been deemed as a valid and reliable measure to determine levels of self-stigma in individuals who stutter.

Statement 1 of the 4S asked respondents to complete the following: “Most people in the general public believe that people who stutter are...” People who stutter were to complete this statement with the following options:

- A. Insecure*
- B. Self-confident*
- C. Friendly*
- D. Capable*
- E. Outgoing*
- F. Mentally healthy*

Statement 2 indicated “When talking to a person who stutters, most people in the general public feel...” and participants were to answer with the following options:

- A. Patient*
- B. Annoyed*
- C. Comfortable*
- D. Anxious*
- E. Embarrassed*

Statement 3 is as follows: “Most people in the general public believe that people who stutter should...”. Participants were provided with the following options:

- A. Avoid speaking in front of groups of people*
- B. Have other people speak for them*
- C. Avoid jobs that require lots of talking*

Statement 4 posed “I believe that people who stutter are generally...,” where participants were expected to answer with the following options:

- A. Nervous*
- B. Self-confident*

- C. Capable*
- D. Incompetent*
- E. Insecure*
- F. Outgoing*
- G. Shy*

Statement 5 indicated “Because I stutter, I feel ...” where participants were expected to respond with the following options:

- A. More nervous than people who don’t stutter*
- B. Just as confident as people who don’t stutter*
- C. Less capable than people who don’t stutter*
- D. Less sociable than people who don’t stutter*
- E. Less assertive than people who don’t stutter*

Statement 6 stated “Because I stutter, I feel...”, and participants were expected to respond with the following options:

- A. Taking jobs that require lots of talking*
- B. Accepting promotions at work*
- C. Selecting the career that I really want*
- D. Going for higher education opportunities*
- E. Talking to people that I know well*
- F. Participating in social events*
- G. Taking part in discussions*

The intention of the above statements is to provide a scale that is psychometrically sound. Therefore, the 4S is created from the three specific factors of awareness, agreement, and self-concurrence (Boyle, 2013a). Please see Appendix A for additional information on the 4S.

### III. Data Analysis

Scores and information from the demographic survey, the OASES-A, the 4S, and the POSHA-S were collected from the United States and Australia. The OASES-A and the 4S were selected to collect data regarding self-perceptions and perceptions toward stuttering from individuals who stutter. The POSHA-S was selected to collect data regarding the perceptions toward people who stutter and stuttering from individuals who do not stutter. A descriptive analysis was completed, as well as two independent student's t-tests which determined (1) whether there is a significant difference in public perception toward stuttering between individuals in the United States and Australia and (2) whether there is a difference in the adverse impact of stuttering in people who stutter between the United States and Australia.

## Results

Results are presented in two parts. The first part discusses public perceptions of stuttering by describing the results of the POSHA-S survey. The second part discusses perceptions of people who stutter by describing the results of the OASES-S and the 4S.

### I. Public Perceptions

The following section will review results of the POSHA-S of people who do not stutter from participants in the United States and Australia.

Table 1 provides demographic information on the 45 respondents from the United States (column 2) and the 48 respondents from Australia (column 3). Columns 5 and 6 of Table 1 show percentiles indicating how the means from these participants from the United States and Australian compare to 208 other respondents from the United States and Australia as indicated in the current POSHA-S database (out of 16,603 respondents total) (St. Louis, 2005). POSHA-S questions asking about marriage, parentage, health status, abilities, and life priorities were not included in the table, as they did not pertain to this study. Data on participants' ages were lost due to a computer malfunction; however, all participants indicated that they were at least 18 years old when providing informed consent to participate in the study.

Upon comparing the current sample to the POSHA-S database, respondents from Australia were noted to have more total schooling than participants from the United States and the POSHA-S database. Regarding employment, a higher percentage of respondents from Australia were noted to be working when compared to respondents from the United States and the POSHA-S database. In terms of education, a higher percentage of respondents from Australia stated that they were students than respondents from the United States and the POSHA-S database.



Table 2 provides data about POSHA-S ratings (i.e., attitudes toward stuttering) from the 45 respondents in United States (column 2) and the 48 respondents in Australia (column 3). In keeping with scoring procedures for the POSHA-S and using a scoring template provided by the author of the POSHA (St. Louis), scores were first converted to a -100 to +100 range, with 0 indicating a neutral opinion on the topic. Scores approaching +100 are considered to be more positive or “better,” whereas scores approaching -100 are considered more negative, or “worse.” As with Table 1, columns 5 and 6 of Table 2 show percentiles for United States and Australian means when compared to 208 relevant respondents (out of 16,603 total respondents) from the current POSHA-S database. Independent samples t tests were used to compare samples from the current survey, using a Bonferroni-corrected significance level of ( $p \leq .05/12$  or .00417). Table 2 also includes percentiles reflecting how the scores from the present respondents in the United States and Australia compared to all previous POSHA-S samples. Overall, no significant differences were identified between public perceptions of stuttering when comparing results of respondents from the United States and Australia.

Table 3 shows data on the mean answers and standard deviations of respondents from the United States and Australia, as well as P-Values and the results of Chi-Square tests in relation to the survey topics in Table 2 which provides data on POSHA-S ratings. Chi Scores were completed on certain data due to the nature of the questions which were 3-point and categorical in nature. As the questions were not on a 5-point Likert scale and were not continuous, an independent t-test was unable to be completed, and thus a Chi-Score had to be obtained to determine significance. Table 5 presents the open-ended responses to the question “what characteristics in people who stutter lead you to provide the answers you provided?” from both respondents from the United States and Australia.

a. Demographic Information

In the current data set, 28.89% of respondents from the United States and 29.17% of respondents from Australia revealed that they themselves have a mental illness. This stands in stark contrast to the 0.79% of participants from previous POSHA-S samples who report having a mental illness. In contrast, 15.56% of respondents from the United States and 2.08% of respondents from Australia said that they did not know someone with a mental illness. In this sample, 55.56% of United States respondents and 18.75% of respondents from Australia reported that they were multilingual, compared to 54.84% of respondents from the POSHA-S database. When asked whether they know a person who stutters, 48.89% of respondents from the United States and 56.25% of respondents from Australia reported that they did not know a person who stutters. This is higher than the 28% of respondents from the overall POSHA-S database who reported that they did not know a person who stutters.

**Table 1. Demographic information: POSHA-S mean ratings of respondents from the United States and Australia (93 samples [45 from the United States; 48 from Australia] circa August 2020 reflecting first POSHA-S administrations), the median score from prior administrations of the POSHA-S (208 samples [16,603 respondents]), and sample percentiles of respondents from the United States and Australia relative to all previous POSHA-S samples.**

| <b>Demographic Variable.</b>        | <b>Respondents from the United States</b>                       | <b>Respondents from Australia</b>      | <b>from POSHA median</b> |
|-------------------------------------|---|--|--------------------------|
| Number in sample                    | 45  | 48                                     | 60                       |
| Gender                              | 75% Females<br>20% Males<br>2% Transgender Male<br>2% Nonbinary | 51% Females<br>47% Males<br>2% Demiboy |                          |
| Total schooling: Mean in Years (SD) | 14.87<br>(3.09)   | 14.25<br>(2.47)                        | 14.63                    |
| Working (%total)                    | 60.00%  | 70.83%                                 | 65.65%                   |
| Unemployed or Not Working (% total) | 22.22%  | 10.42%                                 | 1.96%                    |

**Table 1 (cont'd)**

|   |        |        |        |
|---|--------|--------|--------|
| Student (% total)                         | 22.22% | 22.92% | 14.33% |
| <b>Self-Identification (% responding)</b> |        |        |        |
| Stuttering                                | 0%     | 0%     | 0%     |
| Mentally ill                              | 28.89% | 29.17% | 0.79%  |
| Overweight/Obese                          | 6.67%  | 14.58% | 6%     |
| Left-handed                               | 13.33% | 10.42% | 8%     |
| Multilingual                              | 55.56% | 18.75% | 54.84% |
| Intelligent                               | 46.67% | 45.83% | 28%    |
| <b>No Known People</b>                    |        |        |        |
| Intelligent                               | 0%     | 0%     | 1.55%  |
| Left-Handed                               | 4.44%  | 2.08%  | 4.35%  |
| Obese                                     | 4.44%  | 10.42% | 9%     |
| Mentally Ill                              | 15.56% | 2.08%  | 23.90% |
| Stuttering                                | 48.89% | 56.25% | 28%    |

b. Beliefs About People Who Stutter

i. Traits & Personality

No significant differences were found between respondents from the United States and Australia (US: -8 on the -100 - +100 scale); (AUS: +11 on the -100 - +100 scale); ( $\chi^2$  (91) = 98.38;  $p = 0.28$ ) for the statement that people who stutter are shy and fearful. These apparent differences did not reach significance, indicating that there was no difference in the tendency for respondents in the United States and Australia to agree with the statement that people who stutter are shy and fearful.

ii. Help From

No significant differences were found between respondents from the United States and Australia for the statement that people who stutter should be helped by a speech-language pathologist than respondents in the United States (US: +98, AUS: +100); ( $\chi^2$  (91) = 0;  $p = 1$ ). No

significant differences were found between respondents from the United States and Australia for the statement that people who stutter should be helped by medical doctors (US: 40, AUS: -54); ( $\chi^2$  (91) = 89.65;  $p$  = 0.52).

### iii. Cause

No significant differences were found between respondents from the United States and Australia for the statement that stuttering is caused by ghosts, demons, or spirits (US: +91, AUS: +96); ( $\chi^2$  (91) = 0;  $p$  = 1). When asked if stuttering is caused by an act of God, respondents from the United States were more likely to agree with this statement than respondents from Australia (US: +70, AUS: +96); ( $\chi^2$  (91) = 118.99;  $p$  = .03).

Respondents from the United States were also more likely to agree with the statement that stuttering can be caused by a virus or disease (US: +38, AUS: +58); ( $\chi^2$  (91) = 97.39;  $p$  = .30). When asked if stuttering is caused by learning or habits, no significant differences were found between respondents from the United States and Australia (US: +2, AUS: -8); ( $\chi^2$  (91) = 89.70;  $p$  = .52).

### iv. Potential to Lead a Normal Life

No significant differences were found between respondents from the United States and Australia for the statement that people who stutter can lead normal lives than respondents from Australia (US: +100, AUS: +96); ( $\chi^2$  (91) = 0;  $p$  = 1). No significant differences were found between respondents from the United States and Australia for the statement that people who stutter can make friends (US & AUS: +100); ( $\chi^2$  (91) = 0;  $p$  = 1).

No significant differences were found between respondents from the United States and Australia for the statement that people who stutter can do any jobs they want than respondents

from Australia (US: +76, AUS: +70); ( $\chi^2$  (91) = 79.53;  $p$  = .80). When asked if people who stutter should have jobs requiring good judgment, no significant differences were found between respondents from the United States and Australia (US: +87, AUS: +68); ( $\chi^2$  (91) = 77.09;  $p$  = .85).

c. Self-Reactions of People Who Stutter

i. Accommodating/Helping

Respondents from the United States were more likely to agree with the idea of filling in the words of the person who stutters (US: +40, AUS: +72); ( $\chi^2$  (91) = 121.30;  $p$  = .02). Respondents from Australia were more likely to agree with the statement that they should tell a person who stutters to “slow down” or “relax” (US: +71, AUS: +47); ( $\chi^2$  (91) = 108.40;  $p$  = .10). No significant differences were found between respondents from the United States and Australia for the statement that people who stutter should try to hide their stuttering (US: +95, AUS: +79); ( $\chi^2$  (91) = 86.37;  $p$  = .62).

d. Social Distance/Sympathy

Respondents from Australia were more likely to agree with the statement that they would be concerned if they themselves were a person who stutters than respondents from the United States (US: +2, AUS: -27); ( $\chi^2$  (91) = 106.06;  $p$  = .13). Respondents were also asked if they would want to be people who stutter. No significant differences were found between respondents from the United States and Australia for this statement (US: -53, AUS: -68); ( $\chi^2$  (91) = 0;  $p$  = 1).

e. Knowledge/Experience

No significant differences were found between respondents from the United States and Australia for the statement that they have some knowledge about stuttering (US: -55, AUS: -53); ( $\chi^2$  (91) = 82.33;  $p$  = .73).

f. Knowledge Source

Respondents from the United States were more likely to learn about people who stutter and stuttering from TV, radio, films than respondents from Australia (US: +22, AUS: -2); ( $\chi^2$  (91) = 101.13;  $p$  = .22). Respondents from Australia were more likely to find their information from the Internet (US: +9, AUS: +25); ( $\chi^2$  (91) = 93.33;  $p$  = .41). Respondents from the United States were more likely to gain information on people who stutter and stuttering from magazines, newspapers, books than respondents from Australia (US: -27, AUS: -29); ( $\chi^2$  (91) = 75.72;  $p$  = .88). Additionally, no significant differences were found between respondents from the United States and Australia for the idea that respondents were more likely to learn about people who stutter and stuttering from doctors, nurses, other specialists (US: -34, AUS: -31); ( $\chi^2$  (91) = 78.77;  $p$  = .82).

g. Subscores

i. Overall Impression of People Who Stutter

No significant differences were found between respondents from the United States and Australia as to who had a more positive view toward people who stutter (US: -3, AUS: +9); ( $t$  (91) = 2;  $p$  = .07). No significant differences were found between respondents from the United States and Australia as to who had more positive views toward individuals with mental illnesses (US: -8, AUS: +4); ( $t$  (91) = 0;  $p$  = .76) and toward intelligence (US: +54, AUS: +59); ( $t$  (91) = 0;  $p$  =

.65). Respondents from the United States were more likely to have more positive outlooks on obesity (US: -18, AUS: -33); ( $t(91) = 1; p = .21$ ) and left-handedness (US: +29, AUS: +13); ( $t(91) = 2; p = .13$ ) than respondents from Australia.

#### ii. Would “Want to Be” a Person Who Stutters

No significant differences were found between respondents from the United States and Australia as to who would want to be a person who stutters (US: -53, AUS: -68); ( $t(91) = .64; p = .52$ ), or who would want to be a person who is obese (US: -79, AUS: 83); ( $t(91) = .04; p = 0.27$ ). No significant differences were found would want to be intelligent than respondents in Australia (US: +87, AUS: +81); ( $t(91) = .18; p = .86$ ). Respondents from Australia were more likely to want to be a person with a mental illness than respondents from the United States (US: -78, AUS: -71); ( $t(91) = 1.10; p = .27$ ).

#### iii. Amount Known About

Respondents from Australia were more likely to agree with the statement that they know some things about people who stutter and stuttering than respondents from the United States (US: -55, AUS: -53); ( $t(91) = 1.72; p = .09$ ). Respondents from the United States were more likely to identify that they knew more about intelligence than respondents from Australia (US: +44, AUS: +39); ( $t(91) = .71; p = .48$ ).

#### iv. Overall Stuttering Score

Respondents from Australia and respondents from the United States were given an Overall Stuttering Score that is a general rating revealing how each group perceives stuttering as a whole. Respondents from the United States received an overall score of 28, and respondents from Australia received an overall score of 29 ( $t(91) = 1.25; p = .22$ ). This shows that no significant

differences were found between the two participant groups regarding their overall perceptions about stuttering. For comparison, the mean Overall Stuttering Score for all previous POSHA-S samples was 20, suggesting that the participants in this study exhibited slightly more positive views about stuttering than other individuals from around the world who have completed the POSHA-S.

Figure 2 is a spider-web graph that is a standard graph form used and created by St. Louis when detailing POSHA-S data. This graph provides a summary of the overall scores for each POSHA-S category achieved by both respondents from the United States and from Australia in comparison to the lowest and highest scores of the entire POSHA-S data base, as well as the median overall scores for each category when compared to the entire POSHA-S data base utilizing the -100 to +100 scale (St. Louis, 2011).



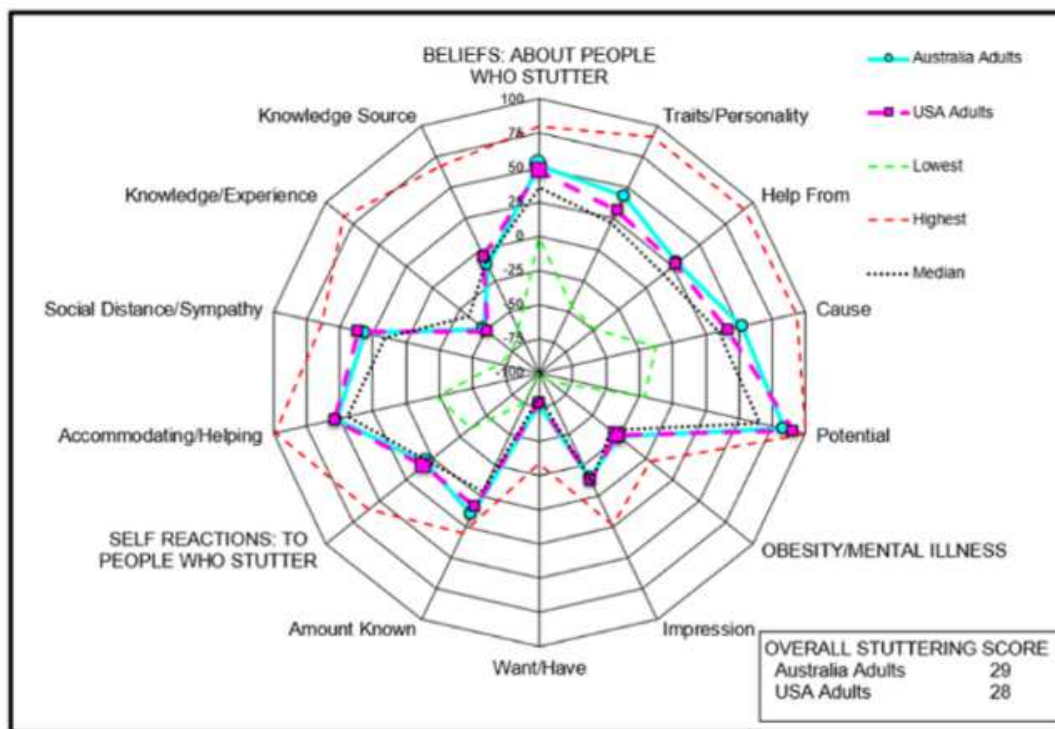


Figure 2. Summary POSHA-S Graph for the United States and Australian Samples

**Table 2. POSHA-S mean ratings of respondents from the United States and Australia (93 samples [45 from the United States; 48 from Australia] circa August 2020 reflecting first POSHA-S administrations), the median score from prior administrations of the POSHA-S (208 samples [16,603 respondents]), and sample percentiles of respondents from the United States and Australia relative to all previous POSHA-S samples.**

| <b>POSHA-S<br/>Variable</b>              | <b>Respondents from the<br/>United States</b> | <b>Respondents from<br/>Australia</b> | <b>POSHA-S<br/>Median</b> |
|--|---|---------------------------------------|---------------------------|
| <b>OVERALL<br/>STUTTERING<br/>SCORE</b>  |   |                                       |                           |
| <b>Beliefs About People Who Stutter</b>  |   |                                       |                           |
| <b>Traits/ Personality</b>               |   |                                       |                           |
| Have themselves to blame                 | 90  | 98                                    | 83                        |
| Nervous/excitable                        | 12  | 21                                    | 1                         |
| Shy or fearful                           | -8  | 11                                    | -17                       |
| <b>Stuttering Should Be Helped by...</b> |   |                                       |                           |
| Speech and language therapist            | 98  | 100                                   | 94                        |
| Other people who stutter                 | 24  | 42                                    | -2                        |
| Medical doctor                           | -40   | -54                                   | -35                       |
| <b>Stuttering is Caused by...</b>        |   |                                       |                           |
| Genetic inheritance                      | 42  | 33                                    | 18                        |
| Learning or habits                       | 2   | -8                                    | 23                        |
| A very frightening event                 | 4   | 40                                    | 0                         |
| An act of God                            | 70  | 96                                    | 67                        |
| A virus or disease                       | 38  | 58                                    | 40                        |
| Ghosts, demons, spirits                  | 91  | 96                                    | 90                        |
| <b>Potential</b>                         |   |                                       |                           |
| Can make friends                         | 100   | 100                                   | 94                        |
| Can lead normal lives                    | 100   | 96                                    | 92                        |

**Table 2 (cont'd)**

|   |   |                                   |                       |
|---|---|-----------------------------------|-----------------------|
| Can do any job they want                                    | 76  | 70                                | 55                    |
| Should have jobs requiring good judgment                    | 87  | 68                                | 42                    |
| <b>Self-Reactions of People Who Stutter</b>                 | <b>Respondents from the United States</b> | <b>Respondents from Australia</b> | <b>POSHA-S Median</b> |
| <b>Accommodating/Helping</b>                                |   |                                   |                       |
| Try to act like the person was talking normally             | 84  | 89                                | 82                    |
| I should help   | -64                                       | -67                               | -26                   |
| Fill in the person's word                                   | 40  | 72                                | 35                    |
| Say "slow down/Relax"                                       | 71  | 47                                | 10                    |
| Make joke about stuttering                                  | 98  | 94                                | 91                    |
| Should try to hide their stuttering*                        | 95  | 79                                | 78                    |
| <b>Social Distance/Sympathy</b>                             |   |                                   |                       |
| Feel comfortable or relaxed                                 | 51  | 49                                | 37                    |
| Feel pity   | 24  | 19                                | 20                    |
| Feel impatient (not want to wait while the person stutters) | 51  | 57                                | 65                    |
| Concern about my doctor                                     | 84  | 73                                | 44                    |
| Concern about my neighbor                                   | 96  | 96                                | 77                    |
| Concern about my sibling                                    | 73  | 69                                | -1                    |
| Concern about me  | 2   | -27                               | 35                    |
| Impression  | -3  | 9                                 | 5                     |
| Want to stutter   | -53                                       | -68                               | -68                   |
| <b>Knowledge/Experience</b>                                 |   |                                   |                       |
| Amount known about stuttering                               | -55                                       | -53                               | -29                   |

**Table 2 (cont'd)**

|  |   |                                   |                       |
|--|---|-----------------------------------|-----------------------|
| People who stutter known                     | -92                                       | -92                               | -86                   |
| Personal experience (me, my family, friends) | -7  | 0                                 | 16                    |
| <b>Knowledge Source</b>                      |   |                                   |                       |
| Television, radio, films                     | 22  | -2                                | 13                    |
| Magazines, newspapers, books                 | -27                                       | -29                               | -13                   |
| Internet                                     | 9   | 25                                | -18                   |
| School                                       | 0   | -25                               | 0                     |
| Doctors, nurses, other specialists           | -34                                       | -31                               | -33                   |
| <b>Subscores</b>                             | <b>Respondents from the United States</b> | <b>Respondents from Australia</b> | <b>POSHA-S Median</b> |
| <b>Overall Impression (-100 to +100)</b>     |   |                                   |                       |
| Intelligent                                  | 54  | 59                                | 57                    |
| Left-Handed                                  | 29  | 13                                | 24                    |
| Obese  | -18                                       | -33                               | -18                   |
| Mentally Ill                                 | -8  | 4                                 | -6                    |
| Stuttering                                   | -3  | 9                                 | 5                     |
| <b>Want to be (-100 to +100)</b>             |   |                                   |                       |
| Intelligent                                  | 87  | 81                                | 74                    |
| Left-Handed                                  | 2   | 2                                 | -2                    |
| Obese  | -79                                       | -83                               | -83                   |
| Mentally Ill                                 | -78                                       | -71                               | -82                   |
| Stuttering                                   | -53                                       | -68                               | -68                   |
| <b>Amount known about</b>                    |   |                                   |                       |
| Intelligent                                  | 44  | 39                                | 30                    |
| Left-Handed                                  | 1   | 6                                 | -2                    |
| Obese  | 9   | 12                                | 5                     |
| Mentally Ill                                 | 8   | 18                                | -14                   |
| Stuttering                                   | -55                                       | -53                               | -29                   |
| <b>Overall Stuttering Score</b>              | <b>Respondents from the United States</b> | <b>Respondents from Australia</b> | <b>POSHA-S Median</b> |
|  | 28  | 29                                | 20                    |

**Table 3. POSHA-S percentages of respondents from the United States and Australia who responded ‘Yes’ for POSHA-S variables, as well as p-values and Chi Scores for categorical data (93 samples [45 from the United States; 48 from Australia]).**

| <b>POSHA-S Variable</b>                         | <b>% of ‘Yes’ Answers United States</b> | <b>% of ‘Yes’ Answers Australia</b> | <b>Chi Score</b> | <b>p-value</b> |
|---|---|-------------------------------------|------------------|----------------|
| <b>Beliefs About People Who Stutter</b>         |   |                                     |                  |                |
| <b>Traits/ Personality</b>                      |   |                                     |                  |                |
| Have themselves to blame                        | 0%                                      | 0%                                  | 0                | 1              |
| Nervous/excitable                               | 41.38%                                  | 30.77%                              | 93.28            | 0.41           |
| Shy or fearful                                  | 55.17%                                  | 40.74%                              | 98.38            | 0.28           |
| <b>Stuttering Should Be Helped by...</b>        |   |                                     |                  |                |
| Speech and language therapist                   | 100%                                    | 100%                                | 0                | 1              |
| Other people who stutter                        | 70.37%                                  | 85.71%                              | 103.86           | 0.17           |
| Medical doctor                                  | 23.53%                                  | 17.50%                              | 89.65            | 0.52           |
| <b>Stuttering is Caused by...</b>               |   |                                     |                  |                |
| Genetic inheritance                             | 88%                                     | 80.77%                              | 91.08            | 0.48           |
| Learning or habits                              | 51.72%                                  | 43.33%                              | 89.70            | 0.52           |
| An act of God*                                  | 10.26%                                  | 0%                                  | 118.99           | 0.03           |
| A virus or disease                              | 22.58%                                  | 13.16%                              | 97.39            | 0.30           |
| Ghosts, demons, spirits                         | 0%                                      | 0%                                  | 0                | 1              |
| <b>Potential</b>                                |   |                                     |                  |                |
| Can make friends                                | 100%                                    | 100%                                | 0                | 1              |
| Can lead normal lives                           | 100%                                    | 100%                                | 0                | 1              |
| Can do any job they want                        | 91.89%                                  | 90.24%                              | 79.53            | 0.80           |
| Should have jobs requiring good judgment        | 93.33%                                  | 94.44%                              | 77.09            | 0.85           |
| <b>Self-Reactions of People Who Stutter</b>     |   |                                     |                  |                |
| <b>Accommodating/Helping</b>                    |   |                                     |                  |                |
| Try to act like the person was talking normally | 95.24%                                  | 95.65%                              | 72.29            | 0.93           |
| I should help                                   | 87.18%                                  | 86.36%                              | 73.29            | 0.91           |
| Fill in the person’s word                       | 27.50%                                  | 7.50%                               | 121.30           | 0.02           |

**Table 3 (cont'd)**

|   |        |        |        |      |
|---|--------|--------|--------|------|
| Say “slow down/Relax”                                       | 7.89%  | 21.05% | 108.40 | 0.10 |
| Make joke about stuttering                                  | 0%     | 2.17%  | 96.55  | 0.33 |
| Should try to hide their stuttering                         | 2.70%  | 4.88%  | 86.37  | 0.62 |
| <b>Social Distance/<br/>Sympathy</b>                        |        |        |        |      |
| Feel comfortable or relaxed                                 | 81.10% | 79.50% | 93.73  | 0.40 |
| Feel pity   | 35.14% | 37.84% | 79.09  | 0.81 |
| Feel impatient (not want to wait while the person stutters) | 21.95% | 17.07% | 87.74  | 0.58 |
| Concern about my doctor                                     | 6.82%  | 7.32%  | 72.06  | 0.93 |
| Concern about my neighbor                                   | 2.22%  | 0%     | 97.19  | 0.31 |
| Concern about my sibling                                    | 11.63% | 11.63% | 0      | 1    |
| Concern about me  | 48.72% | 65.12% | 106.06 | 0.13 |
| Want to stutter   | 0%     | 0%     | 0      | 1    |
| <b>Knowledge/<br/>Experience</b>                            |        |        |        |      |
| Personal experience (me, my family, friends)                | 26.34% | 50%    | 82.33  | 0.73 |
| <b>Knowledge Source</b>                                     |        |        |        |      |
| Television, radio, films                                    | 61.90% | 48.94% | 101.13 | 0.22 |
| Magazines, newspapers, books                                | 36.36% | 34.78% | 75.72  | 0.88 |
| Internet  | 54.55% | 63.04% | 93.33  | 0.41 |
| School  | 50%    | 36.96% | 79.20  | 0.81 |
| Doctors, nurses, other specialists                          | 31.71% | 34.04% | 78.77  | 0.82 |

*\*Significant P-Values indicated with an asterisk*

**Table 4. t statistics and p-values for POSHA-S variables for continuous data that did not necessitate a Chi Square test, including responses from the United States and Australia (93 samples [45 from the United States; 48 from Australia]).**

| <b>POSHA-S Variable</b>   | <b>t statistic</b> | <b>p-value</b> |
|---------------------------|--------------------|----------------|
| <b>Overall Impression</b> |                    |                |
| Intelligent               | 0                  | 0.65           |
| Left-Handed               | 2                  | 0.13           |
| Obese                     | 1                  | 0.21           |
| Mentally Ill              | 0                  | 0.76           |
| Stuttering                | 2                  | 0.07           |
| <b>Want to be</b>         |                    |                |
| Intelligent               | 0.18               | 0.86           |

**Table 4 (cont'd)**

|                           |      |      |
|---------------------------|------|------|
| Left-Handed               | 0.05 | 0.96 |
| Obese                     | 0.04 | 0.96 |
| Mentally Ill              | 1.10 | 0.27 |
| Stuttering                | 0.64 | 0.52 |
| <b>Amount known about</b> |      |      |
| Intelligent               | 0.71 | 0.48 |
| Left-Handed               | 0.34 | 0.73 |
| Obese                     | 0.11 | 0.91 |
| Mentally Ill              | 0.92 | 0.36 |
| Stuttering                | 1.72 | 0.09 |
| <b>Stuttering Score</b>   |      |      |
| Overall Stuttering Score  | 1.25 | 0.22 |

*\*Significant P-Values indicated with an asterisk*

An additional open-ended response question was posed to participants who do not do not stutter to collect more information on their beliefs toward stuttering and people who stutter. The question is as follows: “What characteristics in people who stutter lead you to provide the answers you provided?”

**Table 5. Open-ended responses from the United States and Australia answering the question, “What characteristics in people who stutter lead you to provide the answers you provided?” (Transcripts were edited for typographical errors).**

***What characteristics in people who stutter lead you to provide the answers you provided?***

“Usually, I want to get the conversation over with, so I try to make it go faster.” S6

“Characteristics that are similar to me—they deserve everything I deserve!” S7

“The people I know who have stuttered and they were as diverse and different as those who don’t stutter.” S9

“All people who stutter I met are intelligent and live successful lives. They have lots of friends and appear to be happy.” S12

“I guess they can’t help it or else they would’ve tried to fix it to “fit in”, so I try my best to not care. They can do whatever they want.” S26

“It seems to me that it requires quite a bit of patience with other people who may be rude and inconsiderate; and courage to put yourself in a position if communicating with strangers.” S31

“As with all speech disorders, the intelligence and the ability to express oneself are not necessarily correlated, aside from that I’m not certain all people who stutter share characteristics inherently.” S35

“People who don’t stutter do when they’re excited or nervous which is normal. People who stutter throughout the day can still complete any job, doesn’t make them incapable.” S44

**Table 5 (cont'd)**

“I've seen people who stutter improve significantly through therapy and compassion, but those who don't have those resources do seem quite shy/anxious.” S47

“I don't know anyone who stutters I have just seen movies, but I can't base my answers off of a movie.” S70

“When they start to stutter to me it seems like they are very aware they are stuttering and it makes them nervous/worried that I will judge them for it, which makes them sometimes stutter a little more, but then some just take their time.” S89

“stuttering is fine. There is no need to punish someone for a speech impediment. As someone dyslexic I understand struggling with words and being able to communicate. Each person deserves our empathy and support on their journey.” S96

“They are regular people that just have a stutter.” S109

“High symptoms of anxiety and restlessness.” S121

“Their stutter is the only thing that led me to my answers - other characteristics have nothing to do with it, you can't generalize personality (such as shy/nervous in one of your questions) based solely on the fact that a person stutters.” S132

“They tend to think they're a nuisance because they can't speak quickly and try to hide their stutter. I've noticed family members with a stutter are more relaxed around people they've known for a while, just like people who don't have stutters. Everyone is nervous when they meet new people but if you have a stutter, you probably feel like you'll be hated because of it.” S144

#### IV. Perceptions of People who Stutter

The following section reviews results of the OASES-A and the 4S from people who stutter from the United States and Australia.

Table 6 provides demographic information on the 24 respondents from Australia (column 2) and the 22 respondents from the United States (column 3). This table contains further information on participant's gender, total schooling, employment, and student status. Data on participants' ages were lost due to a computer malfunction; however, all participants indicated that they were at least 18 years old when providing informed consent to participate in the study.



a. Demographic Information

In the current data set, the sample size for respondents from Australia included 25% female participants and 75% male participants. From the sample of respondents from the United States, 31% of respondents were female, 62% were male, and 7% were nonbinary. Regarding total schooling, 38% of respondents from Australia stated that they completed a 4-year degree, 23% completed high school, 15% completed trade school, 15% completed their masters, and 7.6% completed a 2-year degree.

For participants from the United States, 36% of respondents stated that they completed a 4-year degree, 36% completed high school, 14% completed their masters, 7% completed a 2-year degree, and 7% completed their doctorate. 46% of respondents from Australia stated that they are employed compared to 64% of respondents from the United States. Twenty-three percent of respondents from Australia stated that they were currently students at the time of taking this survey compared to 28.5% of participants from the United States.

**Table 6. OASES and 4S demographic information of respondents from the United States and Australia (46 samples [22 from the United States; 24 from Australia]).**

| <b>Demographic Variable</b>         | <b>Respondents from the United States</b>                                | <b>Respondents from Australia</b>   |
|-------------------------------------|--|---|
| Number in sample                    | 22   | 24  |
| Gender                              | 62% Male<br>31% Female<br>7% Nonbinary                                   | 25% Female<br>75% Male  |
| Total schooling: Mean (year)        | 36% High School<br>7% 2 year<br>36% 4 year<br>14% Masters<br>7% Doctoral | 23% High School<br>15% Trade School<br>7.6% 2 year<br>38% 4 year<br>15% Masters |
| Working (%total)                    | 64%  | 46%   |
| Unemployed or Not Working (% total) | 28.5%  | 54%   |
| Student (% total)                   | 28.5%  | 23%   |

b. Section I: General Information

Analysis of responses from OASES Section IA, which asked respondents for general information about their speech, revealed no significant differences between respondents from the United States and Australia for this section with an average section score of 3.03 from respondents from the United States and 2.58 from respondents from Australia ( $t(39) = 2.03, p = 0.05$ ).

Analysis of responses from OASES Section IB, which asked respondents about their knowledge toward stuttering, revealed no significant differences between respondents from the United States and Australia for this section. Respondents from the United States achieved a section average of 2.73, and respondents from Australia received a section average of 2.26 ( $t(39) = 1.65, p = 0.11$ ).

Analysis of responses from OASES Section IC, which asked respondents for their overall feelings about their speech, found that in all instances, respondents from Australia reported more positive feelings, with a section average of 2.47. This compared to respondents from the United States who indicated a section average of 3.14 ( $t(39) = 2.42, p = 0.02$ ). Apparent differences were noted with speaking ability, techniques for speaking fluently, the speech therapy program they attended most recently, and variations in speech fluency. In all cases, respondents from Australia reported feeling more positively than respondents from the United States, although these did not reach statistical significance.

c. Section II: Your Reactions to Stuttering

Analysis of responses from OASES Section IIA, which asked respondents about their feelings toward their stuttering, revealed no significant differences between respondents from the United States and Australia for this section, with a section score for respondents from the United States of 2.97 and 2.53 from Australia ( $t(39) = 1.52, p = 0.14$ ).

Analysis of responses from OASES Section IIB, which asked respondents for what they experience during a stuttering event, indicated that respondents from Australia had a more positive outlook on each question except for experiencing physical tension when stuttering, receiving an average section score of 2.76. Participants from the United States were found to experience less physical tension when stuttering receiving an average section score of 3.30 ( $t(39) = 2.15, p = 0.04$ ).

Analysis of responses from OASES Section IIC, which asked respondents to agree or disagree with statements regarding their feelings toward their stuttering and public perceptions of their stuttering, revealed no significant differences between respondents from the United States and Australia for this section with an overall section score of 2.83 for respondents from the United States and 2.69 for respondents from Australia ( $t(39) = 0.46, p = 0.64$ ).

#### d. Section III: Communication in Daily Situations

Analysis of responses from OASES Section IIIA, which asked respondents about difficulties in communication in specific situations, revealed that respondents from Australia were seen to answer more positively to the above statements with a section average of 2.31 when compared to respondents in the United States who received a section average of 2.88 ( $t(39) = 2.19, p = 0.03$ ). Significant differences were noted with talking when someone is in a hurry or under time pressure, talking on the telephone outside of work, and introducing oneself, where respondents from Australia indicated responses that were significantly more positive than respondents from the United States.

Analysis of responses from OASES Section IIIB, which asked respondents about difficulties with communication in vocational settings, revealed no significant differences between respondents from the United States and Australia for this section. Respondents from Australia

reached a section average of 2.31 when compared to participants in the United States with a section average of 2.79 ( $t(39) = 1.44, p = 0.16$ ).

Analysis of responses from OASES Section IIIC, which asked respondents about difficulties with communication in social settings found no significant differences between respondents from the United States and Australia for this section. Respondents from the United States achieved a section score of 2.78 compared to respondent from Australia with a section average of 2.34 ( $t(39) = 1.54, p = 0.13$ ).

Analysis of responses from OASES Section IIID, which asked respondents about difficulties with communication in a home environment, revealed that respondents from Australia were noted to have more positive experiences with a section average of 1.64 than respondents from the United States with a section average of 2.13 ( $t(39) = 2.17, p = 0.04$ ). Significant differences were noted in talking with other family members and taking part in family discussions where respondents in the United States were seen to have more negative responses than compared to respondents from Australia.

#### e. Section IV: Quality of Life

Analysis of responses from OASES Section IVA, which asked respondents about how much their quality of life is impacted by stuttering, revealed no significant differences between respondents from the United States and Australia for this section. Respondents from the United States received a section score of 2.76 compared to respondents from Australia with a section average of 2.42 ( $t(39) = 0.91, p = 0.37$ ).

Analysis of responses from OASES Section IVB, which asked respondents about how much stuttering affects one's satisfaction in their communication, found no significant differences

between respondents from the United States and Australia for this section. Respondents from the United States indicated an overall section score of 2.86 and respondents from Australia received an overall section score of 2.27 ( $t(39) = 1.72, p = 0.09$ ). A significant difference was seen in that respondents from the United States felt that their communication in general was significantly more impacted than respondents from Australia.

Analysis of responses from OASES Section IVC, which asked respondents about how much does stuttering impact their relationships, found no significant differences between respondents from the United States and Australia for this section, with the United States reaching a section score of 2.06 compared to respondents from Australia who achieved an overall section score of 1.90 ( $t(39) = 0.51, p = 0.61$ ).

Analysis of responses from OASES Section IVD, which asked respondents about how much their stuttering impacts their ability to succeed in daily life, found no significant differences between respondents from the United States and Australia for this section. Respondents from the United States indicated a section score of 2.15 and for respondents from Australia the average section score was 2.33 ( $t(39) = 0.51, p = 0.61$ ).

Analysis of responses from OASES Section IVE, which asked respondents about how stuttering impacts their overall well-being, found no significant differences between respondents from the United States and Australia for this section. Respondents from the United States received a section score of 2.40 in comparison to respondents from Australia with a section score of 1.91 ( $t(39) = 1.46, (p = 0.15)$ ).

Table 7 provides data about Sections I-IV of the OASES from the 22 respondents in United States (column 2) and the 24 respondents in Australia (column 3). Table 7 additionally includes the results of a t-test (with p-value) comparing the US and Australian for each question.

**Table 7. OASES means (and SDs) for Sections I-IV for respondents from the United States and Australia with p-value and t-statistic additionally indicated.**

| <b>Section I: General Information</b>           | <b>Average for the United States</b> | <b>Average for Australia</b> | <b>t statistic</b> | <b>p-value</b> |
|---|--------------------------------------|------------------------------|--------------------|----------------|
| <b>A. General information about your speech</b> | <b>Section 3.03</b>                  | <b>Section 2.58</b>          | <b>2.03</b>        | <b>0.05</b>    |
| 1   | 2.92<br>(0.78)                       | 2.59<br>(1.05)               | 1.18               | 0.24           |
| 2   | 2.83<br>(0.96)                       | 2.32<br>(0.99)               | 1.78               | 0.08           |
| 3   | 3.04<br>(0.91)                       | 2.60<br>(1.01)               | 1.59               | 0.12           |
| 4   | 3.53<br>(1.12)                       | 2.90<br>(1.25)               | 1.64               | 0.11           |
| 5   | 2.96<br>(0.95)                       | 2.55<br>(1.30)               | 1.22               | 0.23           |
| <b>B. How knowledgeable are you about...?</b>   | <b>Section 2.73</b>                  | <b>Section 2.26</b>          | <b>1.65</b>        | <b>0.11</b>    |
| 6   | 2.46<br>(0.72)                       | 2.19<br>(1.03)               | 0.99               | 0.33           |
| 7   | 2.17<br>(0.76)                       | 2.29<br>(1.10)               | 0.41               | 0.68           |
| 8   | 2.58<br>(1.25)                       | 2.24<br>(1.14)               | 0.97               | 0.34           |
| 9*  | 3.04<br>(1.20)                       | 2.24<br>(1.09)               | 2.35               | 0.02           |
| 10*   | 3.38<br>(1.47)                       | 2.33<br>(1.20)               | 2.61               | 0.01           |
| <b>C. Overall, how do you feel about...?</b>    | <b>Section 3.14</b>                  | <b>Section 2.47</b>          | <b>2.42</b>        | <b>0.02</b>    |
| *   |                                      |                              |                    |                |
| 11*   | 3.25<br>(1.36)                       | 2.45<br>(1.10)               | 2.18               | 0.03           |

**Table 7 (cont'd)**

|   |                               |                               |             |             |
|---|-------------------------------|-------------------------------|-------------|-------------|
| 12  | 2.71<br>(1.33)                | 2.36<br>(1.26)                | 0.90        | 0.37        |
| 13  | 3.25<br>(1.19)                | 2.91<br>(1.34)                | 0.91        | 0.37        |
| 14*   | 2.95<br>(1.13)                | 1.90<br>(1.02)                | 3.15        | 0.003       |
| 15  | 2.88<br>(0.99)                | 2.32<br>(1.16)                | 1.57        | 0.12        |
| 16*   | 3.13<br>(1.41)                | 1.74<br>(0.93)                | 3.13        | 0.003       |
| 17  | 3.33<br>(1.24)                | 2.82<br>(1.47)                | 1.28        | 0.21        |
| 18  | 3.41<br>(1.22)                | 2.82<br>(1.56)                | 1.39        | 0.17        |
| 19*   | 3.92<br>(1.06)                | 3.14<br>(1.39)                | 2.12        | 0.04        |
| 20  | 1.94<br>(0.87)                | 1.67<br>(0.86)                | 1.00        | 0.32        |
| <b>Section II:<br/>Your<br/>Reactions to<br/>Stuttering</b>               |                               |                               |             |             |
| <b>A. When you think about your stuttering, how often do you feel...?</b> | <b>Section Average = 2.97</b> | <b>Section Average = 2.53</b> | <b>1.52</b> | <b>0.14</b> |
| 21  | 3.08<br>(1.10)                | 2.64<br>(1.29)                | 1.26        | 0.22        |
| 22  | 2.79<br>(1.32)                | 2.45<br>(1.14)                | 0.93        | 0.36        |
| 23  | 3.25<br>(1.39)                | 2.45<br>(1.37)                | 1.95        | 0.06        |
| 24  | 2.75<br>(1.29)                | 2.10<br>(1.30)                | 1.69        | 0.10        |
| 25  | 3.54<br>(0.78)                | 3.05<br>(1.13)                | 1.71        | 0.09        |
| 26  | 2.46<br>(0.88)                | 2.05<br>(1.36)                | 1.20        | 0.24        |
| 27  | 2.25<br>(1.07)                | 2.43<br>(1.16)                | 0.53        | 0.60        |
| 28  | 3.38<br>(1.31)                | 2.95<br>(1.43)                | 1.03        | 0.31        |

**Table 7 (cont'd)**

|  |                         |                           |             |             |
|--|-------------------------|---------------------------|-------------|-------------|
| 29   | 2.29<br>(1.23)          | 1.91<br>(1.15)            | 1.09        | 0.28        |
| 30*  | 3.88<br>(1.03)          | 3.18<br>(1.30)            | 1.99        | 0.05        |
| <b>B. How often<br/>do you...? *</b>   | <b>Section<br/>3.30</b> | <b>Average =<br/>2.76</b> | <b>2.15</b> | <b>0.04</b> |
| 31   | 3.88<br>(0.80)          | 3.36<br>(1.14)            | 1.74        | 0.09        |
| 32   | 2.04<br>(1.12)          | 2.32<br>(1.13)            | 0.83        | 0.41        |
| 33   | 3.25<br>(1.19)          | 3.14<br>(1.25)            | 0.34        | 0.75        |
| 34*  | 4.00<br>(0.72)          | 3.18<br>(1.26)            | 2.63        | 0.01        |
| 35   | 3.33<br>(1.05)          | 3.05<br>(1.40)            | 0.78        | 0.44        |
| 36   | 2.79<br>(1.10)          | 2.32<br>(1.36)            | 1.28        | 0.20        |
| 37*  | 3.58<br>(1.28)          | 2.45<br>(1.41)            | 2.83        | 0.007       |
| 38*  | 3.96<br>(1.08)          | 2.86<br>(1.25)            | 3.15        | 0.003       |
| 39*  | 3.75<br>(0.90)          | 2.95<br>(1.36)            | 2.30        | 0.03        |
| 40   | 2.46<br>(1.32)          | 1.95<br>(0.90)            | 1.52        | 0.13        |
| <b>C. How much<br/>do you agree<br/>or disagree<br/>with the<br/>following<br/>statements?</b> | <b>Section<br/>2.83</b> | <b>Average =<br/>2.69</b> | <b>0.46</b> | <b>0.64</b> |
| 41   | 3.29<br>(1.40)          | 2.68<br>(1.62)            | 1.36        | 0.18        |
| 42   | 2.52<br>(1.27)          | 2.50<br>(1.44)            | 0.053       | 0.96        |
| 43   | 3.50<br>(1.44)          | 2.91<br>(1.48)            | 1.37        | 0.18        |
| 44   | 3.13<br>(1.30)          | 2.45<br>(1.60)            | 1.55        | 0.13        |
| 45   | 2.92<br>(1.10)          | 2.68<br>(1.43)            | 0.62        | 0.54        |
| 46   | 2.46<br>(1.22)          | 2.73<br>(1.49)            | 0.67        | 0.51        |



**Table 7 (cont'd)**

|  |                         |                           |             |             |
|--|-------------------------|---------------------------|-------------|-------------|
| 47   | 1.83<br>(0.92)          | 2.24<br>(1.30)            | 1.19        | 0.24        |
| 48   | 3.83<br>(1.31)          | 3.23<br>(1.60)            | 1.40        | 0.17        |
| 49   | 1.92<br>(0.88)          | 2.45<br>(1.47)            | 1.48        | 0.15        |
| 50   | 2.88<br>(1.45)          | 2.95<br>(1.50)            | 0.18        | 0.86        |
| <b>Section III:<br/>Communication in Daily<br/>Situations</b>          |                         |                           |             |             |
| <b>A. In general,<br/>how difficult<br/>is it for you<br/>to...? *</b> | <b>Section<br/>2.88</b> | <b>Average =<br/>2.31</b> | <b>2.19</b> | <b>0.03</b> |
| 51   | 2.21<br>(0.93)          | 1.71<br>(1.01)            | 1.70        | 0.10        |
| 52*  | 3.54<br>(0.93)          | 2.71<br>(1.38)            | 2.29        | 0.03        |
| 53   | 2.67<br>(0.82)          | 2.14<br>(1.08)            | 1.86        | 0.07        |
| 54   | 3.42<br>(1.18)          | 3.14<br>(1.52)            | 0.69        | 0.49        |
| 55   | 1.83<br>(0.70)          | 1.50<br>(0.74)            | 1.56        | 0.13        |
| 56   | 2.96<br>(1.00)          | 2.27<br>(1.32)            | 1.97        | 0.06        |
| 57*  | 3.13<br>(0.99)          | 2.36<br>(1.29)            | 2.21        | 0.03        |
| 58*  | 3.25<br>(1.33)          | 2.50<br>(1.19)            | 2.02        | 0.05        |
| 59   | 2.88<br>(0.95)          | 2.32<br>(1.17)            | 1.76        | 0.09        |
| 60   | 2.92<br>(1.21)          | 2.45<br>(1.50)            | 1.14        | 0.26        |
| <b>B. At work,<br/>how difficult<br/>is it for you<br/>to...?</b>      | <b>Section<br/>2.79</b> | <b>Average =<br/>2.31</b> | <b>1.44</b> | <b>0.16</b> |
| 61   | 3.00<br>(1.21)          | 2.61<br>(1.33)            | 0.96        | 0.34        |
| 62   | 3.17<br>(1.19)          | 2.83<br>(1.34)            | 0.84        | 0.40        |

**Table 7 (cont'd)**

|  |                               |                               |             |             |
|--|-------------------------------|-------------------------------|-------------|-------------|
| 63   | 2.33<br>(1.24)                | 1.79<br>(1.03)                | 1.57        | 0.12        |
| 64   | 2.64<br>(1.33)                | 2.17<br>(1.29)                | 1.12        | 0.27        |
| 65   | 2.88<br>(1.15)                | 2.33<br>(1.33)                | 1.37        | 0.18        |
| <b>C. In social situations, how difficult is it for you to...?</b> | <b>Section Average = 2.78</b> | <b>Section Average = 2.34</b> | <b>1.54</b> | <b>0.13</b> |
| 66   | 2.50<br>(1.10)                | 2.29<br>(1.15)                | 0.64        | 0.53        |
| 67   | 3.04<br>(1.12)                | 3.05<br>(1.24)                | 0.02        | 0.99        |
| 68   | 2.54<br>(1.32)                | 2.14<br>(1.17)                | 1.11        | 0.27        |
| 69*  | 2.63<br>(1.31)                | 1.82<br>(0.91)                | 2.43        | 0.02        |
| 70   | 3.13<br>(1.18)                | 2.36<br>(1.43)                | 1.95        | 0.06        |
| <b>D. At home, how hard is it for you to...?</b><br>*              | <b>Section Average = 2.13</b> | <b>Section Average = 1.64</b> | <b>2.17</b> | <b>0.04</b> |
| 71   | 2.63<br>(1.28)                | 2.14<br>(1.04)                | 1.43        | 0.16        |
| 72   | 1.47<br>(0.72)                | 1.41<br>(0.62)                | 0.26        | 0.80        |
| 73   | 1.50<br>(0.53)                | 1.33<br>(0.49)                | 0.79        | 0.44        |
| 74*  | 2.13<br>(0.99)                | 1.50<br>(0.74)                | 2.43        | 0.02        |
| 75*  | 2.17<br>(1.01)                | 1.45<br>(0.67)                | 2.82        | 0.01        |
| <b>Section IV: Quality of Life</b>                                 |                               |                               |             |             |

**Table 7 (cont'd)**

|  |                     |                  |                     |                  |             |             |
|--|---------------------|------------------|---------------------|------------------|-------------|-------------|
| <b>A. How much is your overall quality of life negatively affected by...?</b>              | <b>Section 2.76</b> | <b>Average =</b> | <b>Section 2.42</b> | <b>Average =</b> | <b>0.91</b> | <b>0.37</b> |
| 76   | 2.75<br>(1.29)      |                  | 2.36<br>(1.43)      |                  | 0.96        | 0.34        |
| 77   | 2.83<br>(1.23)      |                  | 2.59<br>(1.53)      |                  | 0.57        | 0.57        |
| 78   | 2.71<br>(1.12)      |                  | 2.32<br>(1.21)      |                  | 1.13        | 0.26        |
| <b>B. How much does stuttering interfere with your satisfaction with communication...?</b> | <b>Section 2.86</b> | <b>Average =</b> | <b>Section 2.27</b> | <b>Average =</b> | <b>1.72</b> | <b>0.09</b> |
| 79*  | 3.21<br>(1.14)      |                  | 2.36<br>(1.40)      |                  | 2.22        | 0.03        |
| 80   | 3.09<br>(1.24)      |                  | 2.63<br>(1.64)      |                  | 0.99        | 0.33        |
| 81   | 3.08<br>(1.10)      |                  | 2.55<br>(1.44)      |                  | 1.41        | 0.16        |
| 82   | 2.04<br>(1.12)      |                  | 1.67<br>(0.97)      |                  | 1.20        | 0.23        |
| <b>C. How much does stuttering interfere with...?</b>                                      | <b>Section 2.06</b> | <b>Average =</b> | <b>Section 1.90</b> | <b>Average =</b> | <b>0.51</b> | <b>0.61</b> |
| 83   | 1.63<br>(1.06)      |                  | 1.55<br>(0.86)      |                  | 0.28        | 0.78        |
| 84   | 1.92<br>(1.06)      |                  | 1.73<br>(0.98)      |                  | 0.63        | 0.53        |
| 85   | 2.67<br>(1.20)      |                  | 2.09<br>(1.23)      |                  | 1.60        | 0.12        |
| 86   | 1.55<br>(0.83)      |                  | 1.95<br>(1.56)      |                  | 1.03        | 0.31        |

**Table 7 (cont'd)**

|   |                         |                |          |                         |                |          |             |             |
|---|-------------------------|----------------|----------|-------------------------|----------------|----------|-------------|-------------|
| 87  | 2.38<br>(1.21)          |                |          | 2.23<br>(1.31)          |                |          | 0.40        | 0.69        |
| <b>D. How much<br/>does<br/>stuttering<br/>interfere<br/>with...?</b> | <b>Section<br/>2.15</b> | <b>Average</b> | <b>=</b> | <b>Section<br/>2.33</b> | <b>Average</b> | <b>=</b> | <b>0.51</b> | <b>0.61</b> |
| 88  | 2.00<br>(1.00)          |                |          | 2.37<br>(1.42)          |                |          | 0.93        | 0.36        |
| 89  | 1.95<br>(1.02)          |                |          | 2.11<br>(1.33)          |                |          | 0.40        | 0.69        |
| 90  | 2.35<br>(1.23)          |                |          | 2.89<br>(1.49)          |                |          | 1.24        | 0.22        |
| 91  | 1.86<br>(1.23)          |                |          | 1.85<br>(1.14)          |                |          | 0.07        | 0.94        |
| 92  | 2.16<br>(1.34)          |                |          | 2.32<br>(1.57)          |                |          | 0.33        | 0.74        |
| <b>E. How much<br/>does<br/>stuttering<br/>interfere<br/>with...?</b> | <b>Section<br/>2.40</b> | <b>Average</b> | <b>=</b> | <b>Section<br/>1.91</b> | <b>Average</b> | <b>=</b> | <b>1.46</b> | <b>0.15</b> |
| 93  | 2.96<br>(1.40)          |                |          | 2.23<br>(1.38)          |                |          | 1.76        | 0.09        |
| 94  | 2.58<br>(1.28)          |                |          | 1.91<br>(1.23)          |                |          | 1.82        | 0.08        |
| 95  | 3.13<br>(1.48)          |                |          | 2.50<br>(1.44)          |                |          | 1.45        | 0.15        |
| 96  | 2.08<br>(1.14)          |                |          | 1.82<br>(1.37)          |                |          | 0.71        | 0.48        |
| 97  | 1.75<br>(1.07)          |                |          | 1.64<br>(1.18)          |                |          | 0.34        | 0.73        |
| 98  | 1.96<br>(1.16)          |                |          | 1.68<br>(1.09)          |                |          | 0.83        | 0.41        |
| 99  | 2.58<br>(1.28)          |                |          | 1.95<br>(1.17)          |                |          | 1.73        | 0.09        |
| 100   | 2.09<br>(1.24)          |                |          | 1.62<br>(1.16)          |                |          | 1.29        | 0.20        |

*\*Significant P-Values indicated with an asterisk*

Table 8 displays open-ended responses of both participants from the United States and participants from Australia to the question: “Based on your perception of self-stigma, what does

that lead you to do in your own life?” Table 9 includes information on how many participants in both the United States and Australia have or are currently participating in SLP services for stuttering.

**Table 8. Open-ended responses from respondents from the United States and Australia answering the question, “Based on your perception of self-stigma, what does that lead you to do in your own life?” (Transcripts were edited for typographical errors).**

| <i>Based on your perception of self-stigma, what does that lead you to do in your own life?</i>   |  |
|---|--|
| “I like to introspect. If it happened in the past, I try to analyze the situation to know when/where I stuttered and how I overcame it. If I am thinking about an upcoming meeting/presentation, I try to play the scenario in my mind and plan out my actions so that I feel comfortable and calm during the real time.” S18 |  |
| “I just do my best to carry on with life. I have no choice.” S21  |  |
| “I am very outgoing and use my stutter to push me to do things outside of my comfort zone.” S24   |  |
| “I have less confidence as a result, which makes me put myself lower than the people around me, and I don’t take big risks or put myself out there.” S45  |  |
| “Nothing - I lead a normal life. I am a professional speaker and conference keynote speaker and I speak for my living. So, no self-stigma, just pride, and confidence as I speak professionally for my living, with my stutter.” S45  |  |
| “I don’t change how I want to be and always try and educate others to rectify the various misconceptions about stuttering in the public eye.” S53   |  |
| “I am often nervous when I have to start speaking to someone if I think about it too much. However, if I do not worry about it, I am usually 100% fine. I also have become extremely resilient when it comes to my speech, if I stutter, I usually just smile and try again if needed.” S75                                   |  |
| “Being bullied thru out my childhood for stuttering and felt ashamed most of my life, now I am not embarrassed, and I want to tell everyone that I stutter, and this is what I am.” S104  |  |
| “For many of my high school years, I stayed in my house instead of socializing.” S118   |  |
| “Hide who I am.” S138   |  |

**Table 9. Number of participants from the United States and Australia who did vs. did not receive speech and language services for stuttering.**

| <i>Did you receive SLP services for stuttering?</i> |            |
|---|------------|
| United States                                       | Australia  |
| Yes: 9/15   | Yes: 20/22 |
| No: 6/15  | No: 2/22   |

f. The Stuttering Perceptions Scale

Comparisons between respondents from the U.S. and Australia revealed no significant differences for any of the statements about self-stigma included in the 4S.

Analysis of responses from the 4S statement 1, which asked respondents about what the general public believes about people who stutter in terms of personality traits (i.e., insecure, friendly) found no significant differences between respondents from the United States and Australia for this statement, with the United States reaching an average section score of 2.58 compared to respondents from Australia who achieved an overall section score of 2.61 ( $t(39) > 0.23, p > 0.82$ ).

Analysis of responses from the 4S statement 2, which asked respondents about what the general public perceives about people who stutter when having a conversation with a person who stutters, found no significant differences between respondents from the United States and Australia for this statement, with the United States reaching an average section score of 3.00 compared to respondents from Australia who achieved an overall section score of 2.93 ( $t(39) > 0.55, p > 0.59$ ).

Analysis of responses from the 4S statement 3, which asked respondents about what the general public believes people who stutter should do regarding their vocation and public speaking, found that respondents from the United States had a higher rate of self-stigma for this category when compared to participants from Australia, with the United States reaching an average section score of 3.90 compared to respondents from Australia who achieved an overall section score of 3.33 ( $t(39) > 2.12, p > 0.04$ ).

Analysis of responses from the 4S statement 4, which asked respondents about what the general public believes about the behavior of people who stutter, found no significant differences between respondents from the United States and Australia for this statement, with the United States

reaching an average section score of 3.11 compared to respondents from Australia who achieved an overall section score of 3.06 ( $t(39) > 0.57, p > 0.58$ ).

Analysis of responses from the 4S statement 5, which asked respondents about what one's stuttering makes them feel, found no significant differences between respondents from the United States and Australia for this statement, with the United States reaching an average section score of 3.20 compared to respondents from Australia who achieved an overall section score of 2.76 ( $t(39) > 1.73, p > 0.09$ ).

Analysis of responses from the 4S statement 6, which asked respondents about if and how one's stuttering keeps one from doing or achieving certain things in life (i.e. accepting promotions at work), found no significant differences between respondents from the United States and Australia for this statement, with the United States reaching an average section score of 2.84 compared to respondents from Australia who achieved an overall section score of 2.85 ( $t(39) > 0.05, p > 0.96$ ).

**Table 10. Means (and SDs) for respondents from the United States and Australia with p-values and t statistics for the 4S.**

| Question  | Average from the United States | Average from Australia | t statistic | p-value     |
|---|--------------------------------|------------------------|-------------|-------------|
| <b>Most people in the general public believe that people who stutter are...</b> | <b>2.58 (0.35)</b>             | <b>2.61 (0.56)</b>     | <b>0.23</b> | <b>0.82</b> |
| Insecure  | 4.00 (0.82)                    | 3.32 (1.32)            | 2.00        | 0.05        |
| Self-confident  | 2.05 (0.71)                    | 2.09 (0.87)            | 0.16        | 0.88        |
| Friendly  | 3.05 (1.03)                    | 3.00 (0.84)            | 0.18        | 0.86        |
| Capable   | 2.21 (0.79)                    | 2.68 (1.04)            | 1.64        | 0.11        |

**Table 10 (cont'd)**

|   |                        |                        |             |             |
|---|------------------------|------------------------|-------------|-------------|
| Outgoing  | 1.89<br>(0.81)         | 1.95<br>(0.72)         | 0.25        | 0.81        |
| Mentally healthy  | 2.26<br>(0.73)         | 2.64<br>(1.05)         | 1.33        | 0.19        |
| <b>When talking to a person who stutters, most people in the general public feel...</b> | <b>3.00<br/>(0.35)</b> | <b>2.93<br/>(0.49)</b> | <b>0.55</b> | <b>0.59</b> |
| Patient   | 2.47<br>(1.02)         | 2.59<br>(1.14)         | 0.35        | 0.73        |
| Annoyed   | 3.68<br>(0.82)         | 3.36<br>(1.05)         | 1.10        | 0.28        |
| Comfortable   | 1.95<br>(0.91)         | 2.24<br>(1.04)         | 0.94        | 0.35        |
| Anxious   | 3.26<br>(0.93)         | 3.14<br>(1.13)         | 0.39        | 0.70        |
| Embarrassed   | 3.63<br>(0.90)         | 3.29<br>(1.15)         | 1.07        | 0.29        |
| <b>Most people in the general public believe that people who stutter should...*</b>     | <b>3.90<br/>(0.61)</b> | <b>3.33<br/>(1.05)</b> | <b>2.12</b> | <b>0.04</b> |
| Avoid speaking in front of groups of people   | 3.89<br>(0.94)         | 3.18<br>(1.33)         | 2.00        | 0.053       |
| Have other people speak for them  | 3.63<br>(0.96)         | 3.05<br>(1.40)         | 1.58        | 0.12        |
| Avoid jobs that require lots of talking   | 4.16<br>(0.90)         | 3.77<br>(0.87)         | 1.39        | 0.17        |
| <b>I believe that people who stutter are generally:</b>                                 | <b>3.11<br/>(0.23)</b> | <b>3.06<br/>(0.38)</b> | <b>0.57</b> | <b>0.58</b> |
| Nervous   | 3.32<br>(1.16)         | 3.50<br>(1.34)         | 0.47        | 0.64        |
| Self-confident  | 2.79<br>(0.85)         | 2.41<br>(0.73)         | 1.51        | 0.14        |
| Capable   | 4.37<br>(0.76)         | 3.86<br>(0.94)         | 1.90        | 0.07        |
| Incompetent   | 1.32<br>(0.67)         | 2.00<br>(1.27)         | 2.17        | 0.04        |



**Table 10 (cont'd)**

|   |                        |                        |             |             |
|---|------------------------|------------------------|-------------|-------------|
| Insecure  | 3.58<br>(0.90)         | 3.18<br>(1.14)         | 1.24        | 0.22        |
| Outgoing  | 2.79<br>(0.71)         | 2.59<br>(1.01)         | 0.73        | 0.47        |
| Shy   | 3.63<br>(0.60)         | 3.86<br>(0.94)         | 0.95        | 0.35        |
| <b>Because I stutter, I feel...</b>             | <b>3.20<br/>(0.82)</b> | <b>2.76<br/>(0.80)</b> | <b>1.73</b> | <b>0.09</b> |
| More nervous than people who don't stutter      | 4.00<br>(1.25)         | 3.59<br>(1.30)         | 1.03        | 0.31        |
| Just as confident as people who don't stutter   | 2.58<br>(1.35)         | 2.50<br>(1.34)         | 0.19        | 0.85        |
| Less capable than people who don't stutter      | 2.58<br>(1.43)         | 2.48<br>(1.50)         | 0.22        | 0.83        |
| Less sociable than people who don't stutter     | 3.47<br>(1.43)         | 2.64<br>(1.50)         | 1.83        | 0.07        |
| Less assertive than people who don't stutter    | 3.37<br>(1.61)         | 2.52<br>(1.36)         | 1.78        | 0.08        |
| <b>Because I stutter, I stop myself from...</b> | <b>2.84<br/>(0.92)</b> | <b>2.85<br/>(0.63)</b> | <b>0.05</b> | <b>0.96</b> |
| Taking jobs that require lots of talking        | 3.26<br>(1.56)         | 2.86<br>(1.42)         | 0.85        | 0.40        |
| Accepting promotions at work                    | 2.21<br>(1.13)         | 2.32<br>(1.32)         | 0.28        | 0.78        |
| Selecting the career that I really want         | 2.17<br>(1.38)         | 2.73<br>(1.58)         | 1.19        | 0.24        |
| Going for higher education opportunities        | 1.89<br>(1.29)         | 2.00<br>(1.23)         | 0.27        | 0.79        |
| Talking to people that I know well              | 3.47<br>(1.35)         | 3.73<br>(1.39)         | 0.59        | 0.56        |
| Participating in social events                  | 3.63<br>(1.46)         | 3.86<br>(1.17)         | 0.56        | 0.58        |
| Taking part in discussions                      | 3.16<br>(1.50)         | 2.45<br>(1.44)         | 1.52        | 0.14        |

*\*Significant P-Values indicated with an asterisk*

## Discussion

The primary goals of this study were to identify if public perceptions of stuttering are related to self-perceptions of people who stutter and to determine if this relationship, if any, was different across countries and cultures. The specific countries examined in this study were the United States and Australia. The hypothesis of the current study was that people who live in a society with greater negative stigma toward stuttering would also experience greater negative impact and self-stigma as a result of stuttering in their own lives.

### I. Summary of Findings: Public Perceptions of Stuttering

This investigation identified few significant differences in public perceptions of stuttering between respondents from the United States and Australia. Both groups of respondents held slightly more positive views toward stuttering than the other respondents within the POSHA-S database. Participants from Australia were noted to have slightly more positive views on stuttering than participants from the United States; however, these findings were inconsistent across topics and items on the POSHA, and very few of the comparisons reached statistical significance.

A higher number of respondents from Australia stated that they would be more likely to fill in words for a person who stutters compared to participants in the United States. On the other hand, respondents from the United States were more likely to agree with the idea that stuttering was caused by an act of God. (Note that the meaning of the question is open to interpretation, as it might not necessarily be considered a negative viewpoint, depend upon one's beliefs.) Otherwise, no major differences in public perceptions of stuttering between the United States and Australia were identified, and most respondents held a generally positive outlook on stuttering when compared to other respondents in the POSHA-S database.

## II. Summary of Findings: Adverse Impact and Self-Stigma

Data regarding self-perception and self-stigma of individuals who stutter revealed no significant differences in how respondents in Australia and in the United States regard their own stuttering and public perceptions of stuttering. Overall, respondents from Australia were seen to have a slightly more positive outlook on their stuttering when compared to respondents from the United States. However, a greater majority of respondents in Australia have had or were currently participating in SLP services for stuttering. This could have been a confounding factor in the results, making the samples less comparable. Individuals that partook in services for stuttering may have benefitted from the strategies provided from such services. This in turn, can lead to an individual who stutters having a more positive outlook towards being a person who stutters and their stuttering, resulting in participants answering more positively. To support this notion, some participants who stutter also indicated in the open-ended responses that they felt more confident communicating in their daily lives, and that they have a better understanding of their stuttering.

## III. Overall Summary

Taken together, analyses revealed no support for the study's hypotheses. No differences were found in public perception between the United States and Australian groups of respondents to the POSHA-S, and no differences were found in ratings of adverse impact or self-stigma between the United States and Australian groups of people who stutter. Although minimal to no significant differences were identified within the current study, there was not enough support to entirely reject the null hypothesis. The null hypothesis was unable to be fully rejected, as several p-values were above the indicated significance level of 0.05. Future studies may identify different results if given the opportunity to more effectively control for the confounding variables that were present in this study that could have impacted the results to indicate no differences between groups of

respondents. Confounding variables include a limited sample size, individuals who stutter who received or are currently receiving SLP services, and certain ambiguities in survey questions which are discussed below.

#### IV. Limitations

Several challenges presented themselves during the course of this study. Primary difficulties were noted in recruiting individuals who stutter. The researchers of this study were required to reach out to personal connections who have participated in SLP services or are currently participating in SLP services for stuttering. This also impacted the number of respondents that were recruited for the study. The goal was 32 respondents who stutter from Australia and 32 respondents from the United States. As this was difficult to achieve, both groups involved fewer than 25 respondents each. Therefore, in the context of this research there was a limited sample size, and this would have directly affected the power of the statistical analyses. This is so, because a power analysis provides the smallest sample size that is required to detect an effect of the statistical measures utilized in this study. Since the study did not meet the minimum required sample size, a difference was much more difficult to detect.

As previously mentioned, a majority of participants who stutter from Australia had received or were currently receiving services for their stuttering. This was due to the fact that recruitment was conducted through colleagues of the researchers. These colleagues were more likely to locate individuals who had already come to terms with stuttering through treatment or support, particularly given the researchers' and colleagues' background and involvement in the field of speech-language pathology.

Another key point and potential limitation of this study was the idea that because a person lives in one country does not mean they live the same culture of that country. For instance, someone may live in the United States, but they may have immigrated from another country or they may have been raised with the values of another culture in the United States. Some participants in this study had immigrated from other countries such as Poland, to the United States. Although this concept was not explored deeply in this study, it is an important consideration for future research as it could have impacted the results. Furthermore, there was a distinct gender difference in both groups of people who stutter and people who do not stutter that could have created a discrepancy in the findings given that the sample was not completely balanced between genders. Respondents who were individuals who stutter were seen to be mostly male, whereas respondents who do not stutter were mostly female. This is expected as previous research indicates that stuttering is more common in males than in females (Bloodstein & Ratner, 2008; Drayna et al., 1999; Nang et al., 2018).

## V. Future Directions

Although no evidence was found to support the idea that public perceptions of stuttering could be related to self-perceptions of stuttering, this topic is worth continuing to pursue with the same cultural backgrounds that were used in this study and different cultural backgrounds. For instance, the cultures of the United States and Australia may have been too similar to note any significant differences. Future studies could consider comparing countries with more sociolinguistic differences or comparing the views of individuals who live in the same country but come from different cultural backgrounds.

## VI. Conclusion

This study explored the public perceptions of stuttering from 45 respondents from the United States and 48 respondents from Australia, in addition to researching the self-perceptions of stuttering from 22 participants from the United States and 24 participants from Australia. To gather this information, the POSHA-S was utilized to determine public perceptions of stuttering and the OASES as well as the 4S were used to investigate self-perceptions of individuals who stutter toward being a person who stutters and their stuttering. The hypothesis of this study was not met, as no significant differences were noted between people who stutter as well as people who do not stutter. Some between-group differences were noted, however: findings from the OASES revealed that respondents who stutter from Australia had a more positive outlook on being a person who stutters and stuttering. However, a majority of these respondents had previously or were presently receiving speech therapy services or participating self-help/support groups for stuttering, and this may have affected their experience of negative reactions related to stuttering. Overall, the conclusions do not provide support that public perceptions of stuttering impact self-perceptions of stuttering, although there was not enough evidence to fully reject the hypothesis.

## APPENDICES

## APPENDIX A: Surveys

### *Demographic Questions*

| <b>Dates:</b>    | <b>Month</b><br><b>(e.g., January)</b> | <b>Day (e.g., 23)</b> | <b>Year (e.g., 2017)</b> |
|------------------|--|-----------------------|--------------------------|
| Today's date is: |  |                       |                          |

**My age is:** \_\_\_\_\_

| <b>Residence and<br/>Citizenship</b> | <b>Country</b> | <b>State (or Province)</b> | <b>City (or Town,<br/>Village, Region)</b> |
|--------------------------------------|----------------|----------------------------|--|
| I now live in:                       |                |                            |  |
| I was born in:                       |                |                            |  |
| I grew up in:                        |                |                            |  |

**My gender identity is (type N/A if you do not wish to respond):**

\_\_\_\_\_

**For respondents in the U.S.**

**My race is (According to the National Institutes of Health):**

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White
- ☐ Prefer not to respond

**My ethnicity is (According to the National Institutes of Health):**

- ☐ Hispanic or Latino
- ☐ Not Hispanic or Latino
- ☐ Prefer not to respond

**For respondents in Australia**

**My ethnicity is (According to the Australian Statistical Standard for Classifying Cultural and Ethnic Groups):**



- € **Oceanian**
- € **North-West European**
- € **Southern and Eastern European**
- € **North African and Middle Eastern**
- € **South-East Asian**
- € **North-East Asian**
- € **Southern and Central Asian**
- € **People of the Americas**
- € **Sub-Saharan African**
- € **Prefer not to respond**

**Please indicate the highest level of schooling that you have completed (select one):**

|  |   |
|--|---|
| <input type="checkbox"/> Primary (elementary) school (5-6 years total) | <input type="checkbox"/> 2-year university degree (about 14 years total)  |
| <input type="checkbox"/> Middle (junior high) school (7-9 years total) | <input type="checkbox"/> 4-year university degree (about 16 years total)  |
| <input type="checkbox"/> High school (11-13 years total)               | <input type="checkbox"/> Masters or similar degree (about 18 years total) |
| <input type="checkbox"/> Trade/military/technical/other school         | <input type="checkbox"/> Doctoral/professional degree (>18 years total)   |

**My job or work situation now is... (select all that apply):**

|  |  |
|--|--|
| <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. _____ |
|----------|----------|----------|

**Circle the number (or?) beside each characteristic or check [✓] the boxes that apply.**

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

### **Therapy and Self-Help History**

**Have you ever received speech therapy services for stuttering?**

☐ Yes

☐ No

**At what age did you begin to receive speech therapy services for stuttering?**

---

**What was the nature of the therapy you received? (e.g., group setting, individual, what was discussed, etc.)**

---

**How long did you receive speech therapy services for stuttering? (please indicate in days, months, years)**

---

**Have you ever participated in a support group for people who stutter?**

☐ Yes

☐ No

**If yes, at what age did you participate in the support group?**

---

**What was the nature of the support group (e.g., what was discussed, what occurred, etc.)**

---

**If yes, how long did you participate in the support group?**

---

**Have you had any other diagnoses that you are willing to share?**

---

## ***Overall Assessment of the Speaker's Experience of Stuttering (OASES-A)***

### **Section I: General Information**

The following pages will ask you about your experiences of speaking and stuttering. For each item in this section, check the box that applies to you. Please think about how you are **currently** feeling or speaking when answering each question. If a question does not apply to you, please check the box and move on to the next question.

#### **A. General information about your speech**

|  | Always | Frequently | Sometimes | Rarely | Never | Not Applicable |
|--|--------|------------|-----------|--------|-------|----------------|
| How often are you able to speak fluently (without stuttering)?                                 |        |            |           |        |       |                |
| How often does your speech sound "natural" to you (that is, like the speech of other people)?  |        |            |           |        |       |                |
| How consistently are you able to maintain fluency from day to day?                             |        |            |           |        |       |                |
| How often do you use techniques or strategies you learned in speech therapy?                   |        |            |           |        |       |                |
| How often do you say <i>exactly</i> what you want to say, even if you think you might stutter? |        |            |           |        |       |                |

#### **B. How knowledgeable are you about...?**

|   | Extremely | Very | Somewhat | A Little | Not at All | Not Applicable |
|---|-----------|------|----------|----------|------------|----------------|
| stuttering in general                                     |           |      |          |          |            |                |
| factors that make people stutter more often or less often |           |      |          |          |            |                |
| what happens with your speech when you stutter            |           |      |          |          |            |                |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| treatment options for people who stutter           |  |  |  |  |  |  |
| self-help or support groups for people who stutter |  |  |  |  |  |  |

**C. Overall, how do you feel about...?**

|   | Very positively | Somewhat Positively | Neutral | Somewhat Negatively | Very Negatively | Not Applicable |
|---|-----------------|---------------------|---------|---------------------|-----------------|----------------|
| your speaking ability   |                 |                     |         |                     |                 |                |
| your ability to communicate (that is, to get your message across regardless of whether you stutter) |                 |                     |         |                     |                 |                |
| the way you sound when you speak  |                 |                     |         |                     |                 |                |
| techniques for speaking fluently (such as techniques you learned in therapy)                        |                 |                     |         |                     |                 |                |
| your ability to <i>use</i> techniques you learned in speech therapy                                 |                 |                     |         |                     |                 |                |
| the speech therapy program you attended most recently   |                 |                     |         |                     |                 |                |
| being a person who stutters   |                 |                     |         |                     |                 |                |
| being identified by other people as a person who stutters   |                 |                     |         |                     |                 |                |
| variations in your speech fluency in different situations   |                 |                     |         |                     |                 |                |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| self-help or support groups for people who stutter |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

## **Section II: Your Reactions to Stuttering**

**For each item in this section, check the box that applies to you. Please think about how you are currently feeling or speaking when answering each question. If a question does not apply to you, please check the box, and move on to the next question.**

### **A. When you think about your stuttering, how often do you feel...?**

|             | Never | Rarely | Sometimes | Often | Always | Not Applicable |
|-------------|-------|--------|-----------|-------|--------|----------------|
| Helpless    |       |        |           |       |        |                |
| Angry       |       |        |           |       |        |                |
| Ashamed     |       |        |           |       |        |                |
| Lonely      |       |        |           |       |        |                |
| Anxious     |       |        |           |       |        |                |
| Depressed   |       |        |           |       |        |                |
| Defensive   |       |        |           |       |        |                |
| Embarrassed |       |        |           |       |        |                |
| Guilty      |       |        |           |       |        |                |
| Frustrated  |       |        |           |       |        |                |

### **B. How often do you...?**

|   | Never | Rarely | Sometimes | Often | Always | Not Applicable |
|---|-------|--------|-----------|-------|--------|----------------|
| experience physical tension when stuttering                                   |       |        |           |       |        |                |
| experience physical tension when speaking fluently                            |       |        |           |       |        |                |
| exhibit eye blinks, facial grimaces, arm movements, etc. when stuttering      |       |        |           |       |        |                |
| break eye contact or avoid looking your listener                              |       |        |           |       |        |                |
| avoid speaking in certain situations or to certain people                     |       |        |           |       |        |                |
| leave a situation because you think you might stutter                         |       |        |           |       |        |                |
| not say what you want to say because you might stutter (for example, avoid or |       |        |           |       |        |                |

|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| substitute words, refuse to answer questions, or ordering something you do not want because it is easier to say)  |  |  |  |  |  |  |
| use filler or starter words like "um" or "uh" or clear your throat or change something about your speech (such as an accent) to be more fluent (Does not refer to techniques learned in therapy). |  |  |  |  |  |  |
| experience a period of increased stuttering just after you stutter on a word  |  |  |  |  |  |  |
| let other people talk for you   |  |  |  |  |  |  |

**C. How much do you agree or disagree with the following statements?**

|   | Strongly Disagree | Somewhat Disagree | Neither Disagree nor Agree | Somewhat Agree | Strongly Agree | Not Applicable |
|---|-------------------|-------------------|----------------------------|----------------|----------------|----------------|
| "I think about my stuttering nearly all the time."                          |                   |                   |                            |                |                |                |
| "Other people's opinions about me are based primarily on how I speak."      |                   |                   |                            |                |                |                |
| "If I did not stutter, I would be better able to achieve my goals in life." |                   |                   |                            |                |                |                |
| "I do not want people to know that I stutter."                              |                   |                   |                            |                |                |                |
| "When I stutter, there is nothing I can do to change it."                   |                   |                   |                            |                |                |                |
| "People should do everything they can to keep themselves                    |                   |                   |                            |                |                |                |

|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| from stuttering."   |  |  |  |  |  |  |
| "People who stutter should not take jobs that require a lot of speaking." |  |  |  |  |  |  |
| "I do not speak as well as other people."                                 |  |  |  |  |  |  |
| "I cannot accept the fact that I stutter."                                |  |  |  |  |  |  |
| "I do not have confidence in my abilities as a speaker."                  |  |  |  |  |  |  |

### **Section III: Communication in Daily Situations**

**For each item in this section, indicate how hard these situations are for you, not how much you stutter or how fluent you are. Unless otherwise indicated, all questions refer to talking to other people in person, or "face-to-face." If a question does not apply to you, please check the box and move on to the next question.**

#### **A. In general, how difficult is it for you to...?**

|  | Not at all<br>Difficult | Not very<br>Difficult | Somewhat<br>Difficult | Very<br>Difficult | Extremely<br>Difficult | Not<br>Applicable |
|--|-------------------------|-----------------------|-----------------------|-------------------|------------------------|-------------------|
| talk with another person one-on-one                |                         |                       |                       |                   |                        |                   |
| talk when you are a hurry or under time pressure   |                         |                       |                       |                   |                        |                   |
| talk to a small group of people                    |                         |                       |                       |                   |                        |                   |
| talk to a large group of people                    |                         |                       |                       |                   |                        |                   |
| talk with friends or people you know well          |                         |                       |                       |                   |                        |                   |
| talk with strangers or people you do not know well |                         |                       |                       |                   |                        |                   |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| talk on the telephone outside of work  |  |  |  |  |  |  |
| introduce yourself   |  |  |  |  |  |  |
| continue to speak regardless of how your listener responds                                       |  |  |  |  |  |  |
| stand up for yourself verbally (defend an opinion or challenge someone who cuts in front of you) |  |  |  |  |  |  |

**B. At work, how difficult is it for you to...?**

|                                   | Not at all difficult | Not Very Difficult | Somewhat Difficult | Very Difficult | Extremely Difficult | Not Applicable |
|-----------------------------------|----------------------|--------------------|--------------------|----------------|---------------------|----------------|
| use the telephone                 |                      |                    |                    |                |                     |                |
| give oral presentations           |                      |                    |                    |                |                     |                |
| talk with co-workers              |                      |                    |                    |                |                     |                |
| talk with customers or clients    |                      |                    |                    |                |                     |                |
| talk with your supervisor or boss |                      |                    |                    |                |                     |                |

**C. In social situations, how difficult is it for you to...?**

|  | Not at all Difficult | Not Very Difficult | Somewhat Difficult | Very Difficult | Extremely Difficult | Not Applicable |
|--|----------------------|--------------------|--------------------|----------------|---------------------|----------------|
| participate in social events (for example, make "small talk" at parties) |                      |                    |                    |                |                     |                |
| tell jokes or stories  |                      |                    |                    |                |                     |                |
| ask for information (such as directions)                                 |                      |                    |                    |                |                     |                |



|                                |  |  |  |  |  |  |
|--------------------------------|--|--|--|--|--|--|
| order food in a restaurant     |  |  |  |  |  |  |
| order food at a drive-thru (5) |  |  |  |  |  |  |

**D. At home, how hard is it for you to...?**

|  | Not at all<br>Difficult | Not Very<br>Difficult | Somewhat<br>Difficult | Very<br>Difficult | Extremely<br>Difficult | Not<br>Applicable |
|--|-------------------------|-----------------------|-----------------------|-------------------|------------------------|-------------------|
| use the telephone                        |                         |                       |                       |                   |                        |                   |
| talk with your spouse/significant other  |                         |                       |                       |                   |                        |                   |
| talk with your children or grandchildren |                         |                       |                       |                   |                        |                   |
| talk with other family members           |                         |                       |                       |                   |                        |                   |
| take part in family discussions          |                         |                       |                       |                   |                        |                   |

**Section IV: Quality of Life**

For each item in this section, indicate the box that applies to you. Please think about how you are *currently* feeling or speaking when answering each question. If a question does not apply to you, please check the box and move to the next question.

**A. How much is your overall quality of life negatively affected by...?**

|   | Not at all | A Little | Some | A Lot | Completely | Not<br>Applicable |
|---|------------|----------|------|-------|------------|-------------------|
| your stuttering                             |            |          |      |       |            |                   |
| your reactions to your stuttering           |            |          |      |       |            |                   |
| other people's reactions to your stuttering |            |          |      |       |            |                   |

**B. How much does stuttering *interfere* with your satisfaction with communication...?**

|                      | Not at all | A Little | Some | A Lot | Completely | Not<br>Applicable |
|----------------------|------------|----------|------|-------|------------|-------------------|
| in general           |            |          |      |       |            |                   |
| at work              |            |          |      |       |            |                   |
| in social situations |            |          |      |       |            |                   |

|         |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|
| at home |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|

**C. How much does stuttering *interfere* with...?**

|   | Not at all | A Little | Some | A Lot | Completely | Not Applicable |
|---|------------|----------|------|-------|------------|----------------|
| your relationships with your family     |            |          |      |       |            |                |
| your relationships with your friends    |            |          |      |       |            |                |
| your relationships with other people    |            |          |      |       |            |                |
| your intimate or romantic relationships |            |          |      |       |            |                |
| your ability to function in society     |            |          |      |       |            |                |

**D. How much does stuttering *interfere* with...?**

|   | Not at all | A Little | Some | A Lot | Completely | Not Applicable |
|---|------------|----------|------|-------|------------|----------------|
| your ability to do your job                         |            |          |      |       |            |                |
| your satisfaction with your job                     |            |          |      |       |            |                |
| your ability to advance in your career              |            |          |      |       |            |                |
| your educational opportunities                      |            |          |      |       |            |                |
| your ability to earn as much as you feel you should |            |          |      |       |            |                |

**E. How much does stuttering *interfere* with...?**

|   | Not at all | A Little | Some | A Lot | Completely | Not Applicable |
|---|------------|----------|------|-------|------------|----------------|
| your sense of self-worth or self-esteem |            |          |      |       |            |                |
| your outlook on life                    |            |          |      |       |            |                |
| your confidence in yourself             |            |          |      |       |            |                |
| your enthusiasm for life                |            |          |      |       |            |                |

|                                      |  |  |  |  |  |  |
|--------------------------------------|--|--|--|--|--|--|
| your health and physical well-being  |  |  |  |  |  |  |
| your stamina or energy level         |  |  |  |  |  |  |
| your sense of control over your life |  |  |  |  |  |  |
| your spiritual well-being            |  |  |  |  |  |  |

### **Follow-up Questions**

**Based on your perception of self-stigma, what does that lead you to do in your own life?**

---

**To what extent are your experiences determined by the reactions of those around you?**

- € Not at all
- € A little
- € Some
- € A lot
- € Completely

**Do you go into a situation feeling as though you will be criticized for your stuttering?**

- € Yes
- € No

### ***The Stuttering Perceptions Scale (4S)***

**Please indicate what you believe most people in the general public think about people who stutter (when comparing with people who don't stutter) by marking the appropriate option to complete this statement:**

**1. Most people in the general public believe that people who stutter are...**

|                  | Strongly Disagree | Somewhat Disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|------------------|-------------------|-------------------|----------------------------|----------------|----------------|
| Insecure         |                   |                   |                            |                |                |
| Self-confident   |                   |                   |                            |                |                |
| Friendly         |                   |                   |                            |                |                |
| Capable          |                   |                   |                            |                |                |
| Outgoing         |                   |                   |                            |                |                |
| Mentally healthy |                   |                   |                            |                |                |

**2. When talking to a person who stutters, most people in the general public feel...**

|             | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|-------------|-------------------|-------------------|----------------------------|----------------|----------------|
| Patient     |                   |                   |                            |                |                |
| Annoyed     |                   |                   |                            |                |                |
| Comfortable |                   |                   |                            |                |                |
| Anxious     |                   |                   |                            |                |                |
| Embarrassed |                   |                   |                            |                |                |

**3. Most people in the general public believe that people who stutter should...**

|   | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|-------------------|-------------------|----------------------------|----------------|----------------|
| Avoid speaking in front of groups of people |                   |                   |                            |                |                |
| Have other people speak for them            |                   |                   |                            |                |                |
| Avoid jobs that require lots of talking     |                   |                   |                            |                |                |

**In this section, answer what you believe about people who stutter in general by indicating your response to complete this statement:**

**4. I believe that people who stutter are generally:**

|                | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|----------------|-------------------|-------------------|----------------------------|----------------|----------------|
| Nervous        |                   |                   |                            |                |                |
| Self-confident |                   |                   |                            |                |                |
| Capable        |                   |                   |                            |                |                |
| Incompetent    |                   |                   |                            |                |                |
| Insecure       |                   |                   |                            |                |                |
| Outgoing       |                   |                   |                            |                |                |
| Shy            |                   |                   |                            |                |                |

**In this section, indicate your beliefs about yourself compared to people who don't stutter by completing the sentences:**

**5. Because I stutter, I feel...**

|  | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|--|-------------------|-------------------|----------------------------|----------------|----------------|
|  |                   |                   |                            |                |                |

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| More nervous than people who don't stutter    |  |  |  |  |  |
| Just as confident as people who don't stutter |  |  |  |  |  |
| Less capable than people who don't stutter    |  |  |  |  |  |
| Less sociable than people who don't stutter   |  |  |  |  |  |
| Less assertive than people who don't stutter  |  |  |  |  |  |

#### 6. Because I stutter, I stop myself from...

|  | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|--|-------------------|-------------------|----------------------------|----------------|----------------|
| Taking jobs that require lots of talking |                   |                   |                            |                |                |
| Accepting promotions at work             |                   |                   |                            |                |                |
| Selecting the career that I really want  |                   |                   |                            |                |                |
| Going for higher education opportunities |                   |                   |                            |                |                |
| Talking to people that I know well       |                   |                   |                            |                |                |
| Participating in social events           |                   |                   |                            |                |                |
| Taking part in discussions               |                   |                   |                            |                |                |

#### *Public Opinion Survey of Human Attributes–Stuttering (POSHA–S)*

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

| My overall impression 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 <u>would want to be</u> 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...<br>(Check [✓] all that apply) | Nobody                   | Acquaintance             | Close Friend             | Relative                 | Me                       | Other                    |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| are obese (much overweight)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| are left-handed  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| have a stuttering disorder   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| are mentally ill   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| are intelligent  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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 | ? |
|--------------------------|-----|----|---|

|  |          |    |   |
|--|----------|----|---|
| If the following people stuttered, <u>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 | ? |

**What characteristics in people who stutter lead you to provide the answers you provided?**  
**You have finished! Thank you very much.**

**How long did it take you to fill out the survey? \_\_\_\_\_ minutes**

## APPENDIX B: Open-Ended Responses

**Table 11: Open-ended responses from respondents from the United States and Australia answering the question, “Based on your perception of self-stigma, what does that lead you to do in your own life?” (Transcripts were edited for typographical errors).**

|   |
|---|
| <i>Based on your perception of self-stigma, what does that lead you to do in your own life?</i>   |
| “All people who stutter I met are intelligent and live successful lives. They have lots of friends and appear to be happy.” S12   |
| “I like to introspect. If it happened in the past, I try to analyze the situation to know when/where I stuttered and how I overcame it. If I am thinking about an upcoming meeting/presentation, I try to play the scenario in my mind and plan out my actions so that I feel comfortable and calm during the real time.” S18   |
| I chose to work as a counselor, one on one and small groups. S20  |
| “I just do my best to carry on with life. I have no choice.” S21  |
| It leads me to try and avoid any embarrassing situations related to my stutter or avoid speaking to prevent public harassment from strangers. S2  |
| “I am very outgoing and use my stutter to push me to do things outside of my comfort zone.” S24   |
| Make decisions I wouldn't normally make, whether that be in conversation, jokes, a job, a speech, an argument, etc. S29   |
| The first HOUR of my speech Therapy- I was told to create a hierarchy of difficult speech situations for the hardest down to the easiest. Last year, 31 years after starting my Smooth speech therapy, I ticked off the Number 1 most difficult item. An Item I thought I would never have the chance to do in my lifetime. I have not thought of myself as a stutterer for a long time now, since my kids were born. My kids and my newer friends have no idea I was ever a stutterer. I am one of the many Smooth Speech Success stories. S44 |
| “I have less confidence as a result, which makes me put myself lower than the people around me, and I don't take big risks or put myself out there.” S45  |
| “Nothing - I lead a normal life. I am a professional speaker and conference keynote speaker and I speak for my living. So, no self-stigma, just pride, and confidence as I speak professionally for my living, with my stutter.” S46  |
| “I don't change how I want to be and always try and educate others to rectify the various misconceptions about stuttering in the public eye.” S53   |
| Speak less than if I did not stutter. S60   |
| Not take on positions in organizations that I belong to for fear of speech problems. I have been a retiree for 15 years now. S62  |
| Avoid situations where I will be judged or assessed by others. S73  |
| “I am often nervous when I have to start speaking to someone if I think about it too much. However, if I do not worry about it, I am usually 100% fine. I also have become extremely resilient when it comes to my speech, if I stutter, I usually just smile and try again if needed.” S75   |
| Not choose to speak up on occasions. S76  |
| Avoid verbal communication as much as I can in the public and lost chances of career goals. S102  |
| Trying to avoid stuttering if possible so the focus isn't on that S103  |



**Table 11 (cont'd)**

|  |
|--|
| "Being bullied thru out my childhood for stuttering and felt ashamed most of my life, now I am not embarrassed, and I want to tell everyone that I stutter, and this is what I am." S104 |
| Work hard S105   |
| Avoid other people as much as possible throughout my day. Every day. S110  |
| "For many of my high school years, I stayed in my house instead of socializing." S118  |
| "Hide who I am." S138  |

**Table 12: Open-ended responses from the United States and Australia answering the question, "What characteristics in people who stutter lead you to provide the answers you provided?" (Transcripts were edited for typographical errors).**

***What characteristics in people who stutter lead you to provide the answers you provided?***

|   |
|---|
| "Usually, I want to get the conversation over with, so I try to make it go faster." S6  |
| "Characteristics that are similar to me—they deserve everything I deserve!" S7  |
| "People who stutter are not a monolith, so there aren't really many common characteristics among them." S8  |
| "The people I know who have stuttered and they were as diverse and different as those who don't stutter." S9  |
| "Much of the time, stuttering is just a tic, not something controllable but also not something particularly detrimental. In circumstances where a person has to communicate information to a listening audience quickly and with very high fidelity, stuttering could be detrimental, but it's not a moral problem." S11  |
| "Most of my frame of reference for people who stutter come from movies, as I've never known anyone who seriously stutters to the point where it's noticeable or obtrusive. In movies, they always make fun of those people, which is sad and disheartening. But I believe that it does not affect a person's intelligence or ability to reason, so if others can get over being assholes to people with disorders, stutterers can live normal healthy lives doing whatever they want to do. I do believe that most of how we treat people with disorders is brought by media, which is not positive towards those types of people. I have many negative thoughts and ignorance towards my own mental disorder because of that, so I would hate to project that on another that can't control their visible symptoms." S25 |
| "I guess they can't help it or else they would've tried to fix it to "fit in", so I try my best to not care. They can do whatever they want." S26   |
| "in the case of my ex, he was a very intelligent person that had a problem with stuttering when he got nervous. I tried my best to be sympathetic, but I know that I made a mistake when I told him to "spit it out" as a joke. For him it was more a nervous tick." S28  |
| "Genuine nature" S29  |
| "From what I've seen in TV shows and movies, those that have a noticeable stutter are often shy and unsure of themselves. When I myself stutter, I am often attempting to find the correct word but when I am unable to, I become aware that I am stuttering. This awareness makes me more anxious than usual in that situation" S30  |
| "It seems to me that it requires quite a bit of patience with other people who may be rude and inconsiderate; and courage to put yourself in a position if communicating with strangers." S31   |
| "No specific characteristics, just how they interact I guess." S33  |

**Table 12 (cont'd)**

|  |
|--|
| "As with all speech disorders, the intelligence and the ability to express oneself are not necessarily correlated, aside from that I'm not certain all people who stutter share characteristics inherently." S35   |
| "I have no negative views on people who stutter" S37   |
| "They seem not confident in their communicative abilities, seem stressed or cautious about proceeding with communication" S38  |
| "They are people, just like those who do not have a stutter! I'm not very well versed on what causes a stutter, but I don't believe that their personality characteristics are determined by it or vice versa." S42  |
| "Ambition, resilience, normalcy" S43   |
| "People who don't stutter do when they're excited or nervous which is normal. People who stutter throughout the day can still complete any job, doesn't make them incapable." S44  |
| "I've seen people who stutter improve significantly through therapy and compassion, but those who don't have those resources do seem quite shy/anxious." S47   |
| "Not sure, my stuttering classmate was very shy but very smart and that is about the extent of my experience with people who stutter." S48   |
| "My friend whenever he feels strong emotions whether it be excitement, nervous, or anger then he stutters more. It does not bother me. Sometimes he tends to get stuck at his words, so I will fill in the word. He will be positive about it and just say, "yes that". He is overall a positive and happy guy." S50 |
| "My interactions with people who stutter have been positive, it only requires some patience to sit and have a conversation with them." S53   |
| "I don't think that people who stutter are characteristically different from people who do not stutter." S56   |
| "The experience I have is very limited so I'm probably pretty ignorant, but from what I've seen is that their brains are working fine but there's just a trip somewhere between the brain and mouth, so I don't see any reason to judge their competency in anything" S57  |
| "Stress, scare" S67  |
| "They're determined" S68   |
| "I had friends that stutter and they did what they liked. They were friendly and very Intelligent" S69   |
| "I don't know anyone who stutters I have just seen movies, but I can't base my answers off of a movie." S70  |
| "Normal" S71   |
| "My sons stutter is most prevalent when he is anxious or nervous." S72   |
| "I feel people who stutter are highly capable and should not be treated differently. They are strong and intelligent" S73  |
| "Normal people just like anyone else" S84  |
| "I've never met anyone with a stutter, but I imagine they will be strong willed and show an ability to overcome circumstances." S88  |

---

“When they start to stutter to me it seems like they are very aware they are stuttering and it makes them nervous/worried that I will judge them for it, which makes them sometimes stutter a little more, but then some just take their time.” S89

---

**Table 12 (cont’d)**

---

“I really haven't come across anyone, even held a conversation with someone who stutters. From what I've read on the internet it can be quite frustrating for them and best thing to do is great them as a normal person (which they are of course) and let them speak without interruption and finishing their sentences” S90

---

“It's a genetic disorder that can't be helped. I believe some cases can be treated, picked up early as a child that can improve or teach manageable ways. I believe the Australian Public Health systems in States and Territories has programs that are free and accessible under Medicare even for adults.” S92

---

“My cousin leads a normal life and can take a joke about his stutter. He's been seeing a speech therapist since he was young.” S93

---

“A friend of mine has a chronic stutter And I have spoken to them about it leading to further research. Also, a mutual friend's mother was a speech pathologist and explained what she knew when I was younger. My friend is an incredibly intelligent and personable individual whose stutter is worsened during times of stress such as job interviews but also lessened to virtually nonexistent when they are drinking with friends. As far as I'm concerned, they are just a person like everyone else but with some extra obstacles. As a friend I feel worried about other people's ignorance toward them.” S94

---

“I've only spoken to a couple of people who stutter so it's hard to say. My assumption that it's a medical thing which can happen to anyone informs my answers.” S95

---

“Stuttering is fine. There is no need to punish someone for a speech impediment. As someone dyslexic I understand struggling with words and being able to communicate. Each person deserves our empathy and support on their journey.” S96

---

“I don't feel that people who stutter are any different to anyone else. I try and be patient, and even try to reassure the person that they don't have to rush what they're saying. I'll be happy to hear what they have to say” S99

---

“Stuttering is not a detriment to a person's character. And can be helped through professional speech therapy” S102

---

“I don't personally know anyone who stutters. I am merely extrapolating from how I perceive I would feel/behave under such circumstances.” S103

---

“People who stutter are individuals who can be just as intelligent and capable as a person who does not stutter, but have a greater difficulty translating their thoughts into speech.” S104

---

“My cousins the most optimistic warm person I have ever met” S105

---

“They seem to be trying not to stutter or not let it affect their speaking too much, and on the occasion, they keep getting stuck on a word they get flustered.” S106

---

“Speech impediments do not impact an individual's intelligence or self-worth. Supporting them may help reduce secondary behaviors.” S107

---

“They're just normal people” S108

---

“They are regular people that just have a stutter.” S109

---

|   |
|---|
| “They are just regular people with a speech impediment. If the stuttering was severe, I would be more concerned/impatient.” S110  |
| “I think people who stutter are just like normal people, except they may have trouble getting their words out. It doesn’t make them any better or worse, or smarter or dumber” S111 |

**Table 12 (cont’d)**

|  |
|--|
| “I see it as a physical issue like a limp or sight/hearing issues, not a mental health or emotional issue. I don't know if this is appropriate or even accurate. I don't know that much about stuttering.” S112  |
| “Media exposure alongside the few interactions I've had with those who stutter” S113   |
| “No specific characteristic led me to my answers they were based on my experience in person and in media” S114   |
| “Genuine normal people who just happen to have a stutter.” S119  |
| “I see stuttering as no different to someone speaking in an accent. Having worked in an industry with high amounts of immigrants who have thick accents, it has no bearing on my assumption of that person.” S120  |
| “High symptoms of anxiety and restlessness.” S121  |
| “They're just regular people who trip up on words” S126  |
| “I think they can become shy or fearful from experience. I think most people can mostly overcome their stutter through therapy if they have access.” S127  |
| “Have only spoken to a handful of people who stuttered while taking phone calls for families and parenting line of Centrelink. These people just need to sort things out same as anyone else. Tried my best to help them quickly and unmemorably.” S129  |
| “I don't see how a stutter would make a person any different to someone who doesn't.” S130   |
| “I can feel sympathy for the person in the situation and try to make them feel as comfortable as possible without seeming patronizing” S131  |
| “Their stutter is the only thing that led me to my answers - other characteristics have nothing to do with it, you can't generalize personality (such as shy/nervous in one of your questions) based solely on the fact that a person stutters.” S132  |
| “While I have come across people who stutter I don't have a personal relationship with someone with that issue. I was surprised that you didn't have anything that suggest it was related to neurological or psychological conditions such as OCD that can be lessened using cognitive behavioral therapy. While I wouldn't like to stutter, I also wouldn't like to have a sore arm. I don't think it should be used to limit a person in what they can and can't do and I certainly wouldn't consider it a reason not to associate with a person. I think in the end it's more of a concern to the person with the issue and would be frustrating to not be able to communicate as clearly as they would like.” S133 |
| “People who stutter are just like everyone else” S135  |
| “They tend to think they're a nuisance because they can't speak quickly and try to hide their stutter. I've noticed family members with a stutter are more relaxed around people they've known for a while, just like people who don't have stutters. Everyone is nervous when they meet new people but if you have a stutter, you probably feel like you'll be hated because of it.” S144   |

## BIBLIOGRAPHY

## BIBLIOGRAPHY

- Abdalla, F. A., & St. Louis, K. O. (2012a). Arab school teachers' knowledge, beliefs and reactions regarding stuttering. *Journal of Fluency Disorders*.  
<https://doi.org/10.1016/j.jfludis.2011.11.007>
- Abdalla, F. A., & St. Louis, K. O. (2012b). Arab school teachers' knowledge, beliefs and reactions regarding stuttering. *Journal of Fluency Disorders*, 37(1), 54–69.  
<https://doi.org/10.1016/j.jfludis.2011.11.007>
- Adriaenssens, S., Beyers, W., & Struyf, E. (2015). Impact of stuttering severity on adolescents' domain-specific and general self-esteem through cognitive and emotional mediating processes. *Journal of Communication Disorders*.  
<https://doi.org/10.1016/j.jcomdis.2015.10.003>
- Arnold, H. S., Li, J., & Goltl, K. (2015). Beliefs of teachers versus non-teachers about people who stutter. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2014.12.001>
- Bathje, G. J., & Marston, H. N. (2014). Self-Stigmatization. *Encyclopedia of Critical Psychology*. [https://doi.org/https://doi.org/10.1007/978-1-4614-5583-7\\_395](https://doi.org/https://doi.org/10.1007/978-1-4614-5583-7_395)
- Beilby, J. (2014). Psychosocial impact of living with a stuttering disorder: Knowing is not enough. *Seminars in Speech and Language*, 35(2), 132–143. <https://doi.org/10.1055/s-0034-1371756>
- Beilby, J. M., Byrnes, M. L., Meagher, E. L., & Yaruss, J. S. (2013). The impact of stuttering on adults who stutter and their partners. *Journal of Fluency Disorders*.  
<https://doi.org/10.1016/j.jfludis.2012.12.001>
- Beilby, J. M., Byrnes, M. L., & Yaruss, J. S. (2012). The Impact of a Stuttering Disorder on Western Australian Children and Adolescents. *Perspectives on Fluency and Fluency Disorders*, 22(2), 51. <https://doi.org/10.1044/ffd22.2.51>
- Blood, G. W., Blood, I. M., Tellis, G., & Gabel, R. (2001). Communication apprehension and self-perceived communication competence in adolescents who stutter. *Journal of Fluency Disorders*. [https://doi.org/10.1016/S0094-730X\(01\)00097-3](https://doi.org/10.1016/S0094-730X(01)00097-3)
- Bloodstein, O., & Ratner, N. B. (2008). *A Handbook on Stuttering* (6th ed.). Thomson Delmar Learning.
- Boyle, M. P. (2013a). Psychological characteristics and perceptions of stuttering of adults who stutter with and without support group experience. *Journal of Fluency Disorders*.  
<https://doi.org/10.1016/j.jfludis.2013.09.001>
- Boyle, M. P. (2013b). Assessment of Stigma Associated With Stuttering: Development and Evaluation of the Self-Stigma of Stuttering Scale (4S). *Journal of Speech, Language, and*

- Hearing Research*, 56(5), 1517–1529. [https://doi.org/10.1044/1092-4388\(2013/12-0280\)](https://doi.org/10.1044/1092-4388(2013/12-0280))
- Boyle, M. P. (2015a). Identifying correlates of self-stigma in adults who stutter: Further establishing the construct validity of the self-stigma of stuttering scale (4S). *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2014.12.002>
- Boyle, M. P. (2015b). Relationships between psychosocial factors and quality of life for adults who stutter. *American Journal of Speech-Language Pathology*, 24(1), 1–12. [https://doi.org/10.1044/2014\\_AJSLP-14-0089](https://doi.org/10.1044/2014_AJSLP-14-0089)
- Boyle, M. P. (2017). Personal perceptions and perceived public opinion about stuttering in the United States: Implications for anti-stigma campaigns. *American Journal of Speech-Language Pathology*, 26(3), 921–938. [https://doi.org/10.1044/2017\\_AJSLP-16-0191](https://doi.org/10.1044/2017_AJSLP-16-0191)
- Boyle, M. P., & Fearon, A. N. (2018). Self-stigma and its associations with stress, physical health, and health care satisfaction in adults who stutter. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2017.10.002>
- Carter, A., Breen, L., Yaruss, J. S., & Beilby, J. (2017). Self-efficacy and quality of life in adults who stutter. *Journal of Fluency Disorders*, 54(June), 14–23. <https://doi.org/10.1016/j.jfludis.2017.09.004>
- Carter, A. K., Breen, L. J., & Beilby, J. M. (2019). Self-efficacy beliefs: Experiences of adults who stutter. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2019.03.002>
- Craig, A., & Tran, Y. (2006). Chronic and social anxiety in people who stutter. *Advances in Psychiatric Treatment*, 12, 63–68.
- Dorsey, M., & Guenther, K. R. (2000). *Attitudes of Professors and Students Toward College Students Who Stutter*.
- Drayna, D., Kilshaw, J., & Kelly, J. (1999). The Sex Ratio in Familial Persistent Stuttering. *American Journal of Human Genetics*, 65, 1457–1459. <https://doi.org/10.1577/1548-8446-3-2>
- International Stuttering Association. (2020). *International Stuttering Association*. <http://www.isastutter.org/>
- Iverach, L., Rapee, R. M., Wong, Q. J. J., & Lowe, R. (2017). Maintenance of social anxiety in stuttering: A cognitive-behavioral model. In *American Journal of Speech-Language Pathology* (Vol. 26, Issue 2, pp. 540–556). American Speech-Language-Hearing Association. [https://doi.org/10.1044/2016\\_AJSLP-16-0033](https://doi.org/10.1044/2016_AJSLP-16-0033)
- Klein, J. F., & Hood, S. B. (2004). The impact of stuttering on employment opportunities and job performance. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2004.08.001>
- Logan, K. J., & O'Connor, E. M. (2012). Factors affecting occupational advice for speakers who do and do not stutter. *Journal of Fluency Disorders*.

- <https://doi.org/10.1016/j.jfludis.2011.11.005>
- Maviş, I., St. Louis, K. O., Özdemir, S., & Toğram, B. (2013). Attitudes of Turkish speech and language therapists toward stuttering. *Journal of Fluency Disorders*.  
<https://doi.org/10.1016/j.jfludis.2013.03.002>
- Messenger, M., Onslow, M., Packman, A., & Menzies, R. (2004). Social anxiety in stuttering: Measuring negative social expectancies. *Journal of Fluency Disorders*.  
<https://doi.org/10.1016/j.jfludis.2004.06.002>
- Nang, C., Hersh, D., Milton, K., & Lau, S. R. (2018). The impact of stuttering on development of self-identity, relationships, and quality of life in women who stutter. *American Journal of Speech-Language Pathology*, 27(3S), 1244–1258. [https://doi.org/10.1044/2018\\_AJSLP-ODC11-17-0201](https://doi.org/10.1044/2018_AJSLP-ODC11-17-0201)
- Przepiorka, A. M., Blachnio, A., St. Louis, K. O., & Wozniak, T. (2013). Public attitudes toward stuttering in Poland. *International Journal of Language and Communication Disorders*, 48(6), 703–714. <https://doi.org/10.1111/1460-6984.12041>
- St. Louis, K. O. (2005). A Global Project to Measure Public Attitudes About Stuttering. *The ASHA Leader*, 10(14), 12–23. <https://doi.org/10.1044/leader.wb10.10142005.12>
- St. Louis, K. O. (2010). *International project on attitudes toward human attributes (IPATHA)*.  
<http://www.stutteringattitudes.com>
- St. Louis, K. O. (2011). The Public Opinion Survey of Human Attributes-Stuttering (POSHA-S): Summary framework and empirical comparisons. *Journal of Fluency Disorders*.  
<https://doi.org/10.1016/j.jfludis.2011.02.003>
- St. Louis, K. O. (2013). *POSHA-S Overview*.  
[http://www.stutteringattitudes.com/top\\_poshas/overview.html](http://www.stutteringattitudes.com/top_poshas/overview.html)
- St. Louis, K. O., & Roberts, P. M. (2010). Measuring attitudes toward stuttering: English-to-French translations in Canada and Cameroon. *Journal of Communication Disorders*.  
<https://doi.org/10.1016/j.jcomdis.2010.04.008>
- St. Louis, K. O., Sønsterud, H., Junuzović-Žunić, L., Tomaiuolo, D., Del Gado, F., Caparelli, E., Theiling, M., Flobakk, C., Helmen, L. N., Heitmann, R. R., Kvenseth, H., Nilsson, S., Wetterling, T., Lundström, C., Daly, C., Leahy, M., Tyrrell, L., Ward, D., & Wesierska, M. (2016). Public attitudes toward stuttering in Europe: Within-country and between-country comparisons. *Journal of Communication Disorders*.  
<https://doi.org/10.1016/j.jcomdis.2016.05.010>
- Tichenor, S. E., & Yaruss, J. S. (2019). Stuttering as defined by adults who stutter. *Journal of Speech, Language, and Hearing Research*, 62(12), 4356–4369.  
[https://doi.org/10.1044/2019\\_JSLHR-19-00137](https://doi.org/10.1044/2019_JSLHR-19-00137)
- Tichenor, S., & Yaruss, J. S. (2018). A phenomenological analysis of the experience of



- stuttering. *American Journal of Speech-Language Pathology*, 27(3S), 1180–1194.  
[https://doi.org/10.1044/2018\\_AJSLP-ODC11-17-0192](https://doi.org/10.1044/2018_AJSLP-ODC11-17-0192)
- Valente, A. R. S., St. Louis, K. O., Leahy, M., Hall, A., & Jesus, L. M. T. (2017). A country-wide probability sample of public attitudes toward stuttering in Portugal. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2017.03.001>
- WHO. (2001). *WHO | International Classification of Functioning, Disability and Health (ICF)*.  
<https://www.who.int/classifications/icf/en/>
- Yaruss, J. S. (2007a). Application of the ICF in Fluency Disorders. *Seminars in Speech and Language*. <https://doi.org/10.1055/s-2007-986528>
- Yaruss, J. S. (2007b). Application of the ICF in fluency disorders. *Seminars in Speech and Language*, 28(4), 312–322. <https://doi.org/10.1055/s-2007-986528>
- Yaruss, J. S. (2010). Assessing quality of life in stuttering treatment outcomes research. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2010.05.010>
- Yaruss, J. S., & Quesal, R. W. (2004). Stuttering and the International Classification of Functioning, Disability, and Health (ICF): An update. *Journal of Communication Disorders*. [https://doi.org/10.1016/S0021-9924\(03\)00052-2](https://doi.org/10.1016/S0021-9924(03)00052-2)
- Yaruss, J. S., & Quesal, R. W. (2006). Overall Assessment of the Speaker's Experience of Stuttering (OASES): Documenting multiple outcomes in stuttering treatment. *Journal of Fluency Disorders*. <https://doi.org/10.1016/j.jfludis.2006.02.002>
- Yaruss, J. S., & Quesal, R. W. (2016). *OASES: Overall Assessment of the Speaker's Experience of Stuttering*.