

**The Role of Personality in Career Preference of Speech-Language Pathology Students**

by

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## Abstract

The purpose of this study was to obtain a personality profile, as measured by the Multidimensional Personality Questionnaire (Tellegan, 2003), of undergraduate and graduate speech-language pathology (SLP) students and to examine the role of personality in student indicated age and facility preferences. Career preferences were obtained using a custom demographic questionnaire that was administered along with the MPQ in an electronic survey. The responses on the MPQ were scored and MANOVAs were conducted to evaluate the effects of the 11 primary personality traits on the two dependent variables, age and setting preference. A general personality profile of the 231 speech-language pathology students was obtained, but a degree of variance in the responses may indicate that a variety of personality types can thrive within the field. Personality traits were not found to significantly contribute to student age or facility preference.

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## Table of Contents

Abstract.....	ii
Acknowledgements .....	iii
List of Tables .....	vi
Introduction .....	1
Literature Review .....	2
Personality Research .....	2
The Five Factor Model and the “Big Five” .....	3
Evolution of the FFM.....	4
Assessment of Personality Traits.....	8
The Multidimensional Personality Questionnaire.....	10
Description of the MPQ.....	11
Validity of the MPQ.....	15
Personality and Vocational Choice.....	18
Holland’s Theory of Vocational Personalities in Work Environments.....	18
Personality and General Career Choice.....	22
Personality and the Career of Speech-Language Pathology.....	23
Career Choices within the Field of Speech-Language Pathology.....	25
Personality and Medical Specialty.....	26
Summary.....	29
Justification.....	31

Method.....	33
Survey Development.....	33
Demographic Questionnaire .....	33
Preferred Patient Age Preference and Career Setting.....	33
School Setting.....	35
Health Care Setting.....	36
The Multidimensional Personality Questionnaire.....	38
Procedure.....	39
Results.....	41
Participant Demographics.....	41
Background Information.....	44
Participant Career Preferences.....	45
Age Preference.....	45
Setting Preference .....	46
Personality Profile of Speech-Language Pathology Students.....	48
Personality and Career Choice.....	50
Personality and Age Preference.....	50
Personality and Facility Choice.....	51
Discussion.....	54
Limitations.....	63
Future Research.....	65
References.....	66
Appendix A: Email to Department Heads.....	74

Appendix B: Recruitment Questionnaire..... 75

Appendix C: Information Letter..... 76

Appendix D: Demographic Questionnaire..... 78

## List of Tables

Table 1	Patient Age Preferences and Corresponding Facility Choices Provided on the Demographic Questionnaire.....	34
Table 2	Mean Raw Scores and Standard Deviations for MPQ Primary Scales Based on Age and Facility Degree of Decidedness.....	43
Table 3	Summary of Participant Demographics.....	45
Table 4	Student Indicated Age Preferences.....	46
Table 5	Student Indicated Facility Preferences.....	47
Table 6	Mean Raw Scores, Standard Deviations, Minimums, Maximums, and Ranges for MPQ Primary Scales for All Participants.....	49
Table 7	Mean Raw Scores and Standard Deviations for MPQ Primary Scales for Age Preference.....	51
Table 8	Mean Raw Scores and Standard Deviations for MPQ Primary Scales for Facility Preference.....	52
Table 9	Mean Raw Scores and Standard Deviations for MPQ Primary Scales when Facility Preference is divided into Two Broad Categories; Healthcare and School.....	53

## **Introduction**

The field of Speech-Language Pathology is broad with many different career paths to choose from. Upon completion of a graduate program, students are left with the task of deciding their career path. Two questions must be answered: 1) What is the preferred patient population and 2) What clinical setting is most appealing. A student graduating with a master's degree could find themselves working in a variety of settings: hospitals, schools, nursing homes, skilled nursing facilities, and rehabilitation clinics. They could also find themselves working with a variety of age groups: early intervention, primary school age, secondary school age, adults, and the elderly. How does a student choose? What leads one student to work in a hospital setting with children over working at an early education preschool? Professionals educating these students, professors and other graduate faculty, often serve as career counselors, a difficult task to undertake. They provide guidance, but advice is given based on subjective variables, such as observation of skill and interactions with the students. There is a lack of knowledge in the field on what type of student thrives in different settings or different populations. Differences in people, and types of students, can be described by personality traits, such as kind, outgoing, ambitious, and organized. Are there personality differences between students that make one more apt to work in a certain setting or with a certain patient than another? If there are these differences, how are they described?

Currently there is a lack of knowledge and current research on the subject of specialty choice in Speech-Language Pathologists. The present study was undertaken to create an overall personality profile of SLP students and discover possible personality differences in these students based on their predicted specialty choice.



## **Literature Review**

This chapter describes literature relevant to the research purposes of this thesis. It is organized into the following sections: A) Personality Research b) The Five Factor Model and the “Big Five” c) Assessment of Personality Traits d) The Multidimensional Personality Questionnaire (MPQ) and e) Personality and Vocational Choice.

### **Personality Research**

Human personality is composed of many factors, or personality traits. Personality traits can be described as the cognitive, affective, or overt behaviors that distinguish one individual from another (Pytlik Zillig, Hemenover, & Dienstbier, 2002). The vast number of traits found in human personality are difficult if not impossible to measure in their entirety. Historically, this topic has produced a wealth of information and a variety of theories that attempt to explain and capture the construct of personality, and each theory contributed in some way to the overall understanding of people, specifically what drives human behavior. Unfortunately, early researchers made few to no attempts at creating cohesion between the similar or disparate theories (John & Srivastava, 1999). This diversity within the field made the comparison of personality research difficult, as the field lacked a common language or assessment tool to integrate them. Researchers needed this common language to unite the field and strengthen empirical evidence in personality research.

In the past decade, personality research has made progress towards reaching a consensus, focusing on a system of three to seven major personality traits used to sufficiently describe personality (Pytlik Zillig, Hemenover, & Dienstbier, 2002). Specifically, the Five Factor Model

(FFM) has risen to prominence and become the most widely used comprehensive framework for describing and organizing the structure of human personality, allowing for the accumulation of research using a standard language to describe personality (John & Strivasta, 1990). The Big Five broad traits are also represented in many widely used personality assessment tools, further uniting the field (Borges & Savickas, 2002). As a result of this collaboration, the Big Five currently informs our understanding of personality, and it serves as the basis of current research on personality.

### **The Five Factor Model and the “Big Five”**

The Five Factor Model (FFM) is the theory that only five broad, all-encompassing factors are needed to adequately describe human personality. The FFM is a taxonomy, or classification system, of personality traits under which all lexical descriptors of personality fall (Goldberg, 1993). Lexical descriptors of personality are the terms used in the English language to describe personality, such as social, ambitious, or angry (John & Srivastava, 1999). All of the terms used to describe personality, according to the Five Factor Model, can be organized into only five broad traits, and these five factors are known as the Big Five. The Big Five are typically labeled: Extraversion, Openness, Neuroticism, Conscientiousness, and Agreeableness (John & Srivastava, 1999). The discovery of the Big Five is not the result of a single theorist or theory alone, but instead resulted from a culmination of numerous studies for half a century regarding the structure of personality (Digman, 1990; Widiger & Trull, 1997). Though disagreement over the five terms continues, each of the five factors mentioned above are used most frequently. Although the model simplifies personality into these 5 broad structures, each is complex and is

comprised of many variables (Digman, 1990). Discussed below are 1) the evolution of the FFM and 2) a description of each of the five factors used to describe human personality.

**Evolution of the FFM.** Several authors have provided a comprehensive historical review of the development of the Five Factor Model (FFM: Digman, 1990; Goldberg, 1993; John, 1981; John & Srivastava, 1999; McCrae, 1990; McCrae & John, 1992). The FFM does not seek to describe the development of personality, or what influences the expression of given personality traits, rather the model describes inherent personality qualities in the form of traits. That is, the 5 factors are trait-descriptors, or words that describe the broad characteristics of human personality. Therefore, the “Five Factors” are five classifications that have many constructs that fit within them, which can be used to effectively describe personality. This statement poses the question, “Where did these five traits come from?” The main pathway to the development of the Big Five was The Lexical Hypothesis.

The Lexical Hypothesis was first recognized by Sir Francis Galton in 1884 (Goldberg, 1993). It is founded on the assumption that the most important differences in human interaction can be found by close examination of the words used in language to describe the self and others (Goldberg, 1993). The Lexical Hypothesis is also based on Human Rationalism, or the idea that people understand the personality of themselves and others and, therefore, use terms to describe these traits in everyday language (Costa, McCrae, & Holland, 1984). Klages (1926), Baumgarten (1933), Thurstone (1934), and Allport and Odbert (1936) were the first to study the lexical hypothesis and investigate whether a careful analysis of language would assist in the understanding of personality (John & Strivasta, 1999). Therefore, the language that we use to describe ourselves and others was the basis of the FFM and was used in initial factor analyses in discovering the trait-names used to describe personality.

The lexical approach produced an abundance of terms to describe personality, but Thurstone (1934) was one of the first to suggest that a smaller number of factors could be used. In 1934, Thurstone conducted a study where a list of 60 adjectives commonly used when describing the personality of others was given to 1300 raters who were asked to underline the adjectives they would use to describe someone they know well (Thurstone, 1934). Thurstone found, through factor analysis that “five factors are sufficient enough” to account for the descriptions of people (1934, pg. 12).

Allport and Odbert (1936) also made efforts to reduce the number of terms used to describe personality. They examined the unabridged English dictionary as a starting place to find and classify traits used in the English Language to describe human personality. They identified an overwhelming 18,000 terms that could be used to describe and discriminate between different human behaviors. Allport and Odbert (1936) categorized these terms into four different categories of trait descriptors in order to improve the usefulness of the list: Personal Traits, Temporary States, Social Evaluations, and Metaphorical and Doubtful Traits (Allport & Odbert, 1936). Category one, Personal Traits, are the “real traits of personality” (Allport & Odbert, 1936, p.26). The 4,504 words found in this category represent consistent, permanent tendencies in individuals that are exhibited when one adjusts to his or her environment. Examples include, “aggressive, introverted, and sociable” (Allport & Odbert, 1936, p. 26). In category two, are words that describe temporary states such as mood, emotions, or present activity. Examples include sad, frantic, and excited. Category three is the longest list and describes evaluations of a person’s character. Examples include patience, worthy, kindheartedness. Category four is a miscellaneous category that includes words that explain a certain behavior, physical quality, or talent. Examples include pampered, blonde, and gifted.

Allport and Odbert (1936) claim that the words found in category one are the most useful and realistic traits to be used in counseling, career counseling, and other psychological practices.

While Allport and Odbert (1936) pioneered efforts to develop a taxonomic structure for classifying personality, their list of personality descriptors was too extensive and not of practical value. Their work did, however, spark the research of Cattell (1943), Fiske (1949), and Tupes and Cristal (1961).

Cattell (1943), hoped to provide a framework for organizing and classifying the individual differences in people. He used Allport and Odbert's (1936) list as a starting place to develop his model of personality classification (John & Srivastava, 1999). When examining the list, he realized the number of traits was too overwhelming for research purposes. He sought to simplify the list by examining the 4500 primary traits found by Allport and Odbert (1936), and dividing them into synonym clusters (McCrae & John, 1992). Cattell (1943) reduced the list from 4,500 to 171 personality traits, with each of the terms able to fit a multitude of adjectives within them (Cattell, 1943; Goldberg 1993). Cattell further condensed this list into 60 clusters, and eventually, through factor analysis, into just 35 trait names that fit within 12 distinct personality factors (Cattell, Eber, & Tatsuoka, 1970). The efficacy of Cattell's 12 personality factors were later questioned (John and Srivastava, 1999), but nonetheless, his simplification of 4500 words to just 35 sparked other researchers to follow suit in simplifying the number of trait descriptors and developing a more simplified means of classifying human behavior; efforts which eventually led to the discovery of the Big Five dimensions.

Following Cattell (1943), several investigators contributed to the discovery of the Big Five (Fiske, 1949; Tupes & Christal, 1961). In 1949, Fiske obtained self-ratings and peer-ratings of personality in individuals using 22 of Cattell's scales. Factor analyses revealed five recurring

personality factors: Social Adaptability, Emotional Control, Conformity, Inquiring Intellect, and Confident Self Expression. These five recurring factors resemble the factors that would be later known as the Big Five (John & Srivastava 1999). Tupes and Christal (1961) also simplified the 35 variables to five when conducting correlational matrices from self and peer ratings of a diverse set of participants. From their analyses, they found that, “Five fairly strong and recurrent factors emerged...labeled as: (1) Surgency, (2) Agreeableness, (3) Dependability, (4) Emotional Stability, and (5) Culture” (Tupes & Christal, 1961, p.ii). These five factors, though sometimes described with synonym trait descriptors, were found to be present in a variety of research that followed Tupes and Christal. According to John and Srivatsava (1991), subsequent studies conducted by Norman (1963), Borgata (1964), and Digman and Takemoto-Chock (1981) have replicated this five factor structure. Goldberg (1981) eventually labeled the traits originally described by Tupes and Christal (1961) as “The Big Five” in order to convey the broad, all-encompassing nature of the traits. Thus, the “Big Five” was born, from the continued presence of the above 5 reoccurring traits in multiple studies based on factor analysis. There is still some disagreement on the big five terms, but for now, the Big 5 provides a comprehensive framework for continuing personality research. John and Srivastava (1990) provide the following current description of the big 5:

1. Extraversion or Surgency (i.e. talkative, assertive, energetic)
2. Agreeableness (i.e. cooperative, trusting, good-natured)
3. Conscientiousness (i.e. orderly, dependable, responsible)
4. Neuroticism vs. Emotional Stability (i.e. easily upset, not calm)
5. Openness or Intellect (i.e. imaginative, open minded)

## **Assessment of Personality Traits**

Personality assessments, in general, seek to uncover qualitative descriptions of inherent personality traits. They do not focus on what drives the emergence of these traits, but only on what traits inherently exist within the individual. There are many personality assessment instruments available, each used to uncover constructs and subsequently predict associated behaviors and life outcomes (Grucza & Goldberg, 2007). Grucza and Goldberg (2007) recently compared the validity of 11 personality inventories, including the most frequently used measures; The Revised NEO Inventory (NEO-PI-R: Costa & McCrae, 2008), The Temperament and Character Inventory (TCI: Cloninger, Przybeck, Svrakic, & Wetzel, 1994), The Multidimensional Personality Questionnaire (MPQ: Tellegan, 2003), The Six Factor Personality Questionnaire (6FPQ: Jackson, Paunonen, & Tremblay, 2000), and the Sixteen Personality Factor Questionnaire (16PF: Cattell, Eber, & Tatsuoka, (1988). These inventories differ in many ways; including the number and nature of their test items and dimensions of personality they measure (Grucza & Goldberg, 2007). The number of assessments available allows for researchers to choose the one best suited for investigative purposes, but also contributes to a lack of uniformity in empirical research. Due to the multitude of assessments available and distinct differences between them, there must be some way to compare them. It is, therefore, necessary for personality assessments used in empirical study to: 1) Provide a valid representation of the individual's personality and 2) Reflect or fit within the Big Five structure.

It is essential that the personality assessment provide an accurate, holistic, and valid representation of human personality. In order for an assessment tool to be reliable, adequate psychometric properties must be shown. Psychometric properties, such as construct validity and test-retest reliability should be examined when choosing a personality assessment for empirical

study. Investigators must also examine other validity variables of personality assessment, specifically self-report bias. Most personality assessments used to uncover innate personality traits are self-report measures. In self-reports, the participant provides insight into his or her own personality by answering a series of questions. It is important to note that many self-report measures may not be completely reliable, despite extensive investigation of psychometric properties. When answering assessment items, participants may not answer questions honestly, whether intentionally or unintentionally. Respondents may choose answers based on social desirability (Tellegan & Waller, 2008). In other words, they provide the answer they believe is the most socially acceptable instead of conveying their own thoughts. Inconsistent responses may also occur, resulting social desirability or other factors such as fatigue of testing (Tellegan & Waller, 2008). It is crucial that the chosen personality assessment accounts for these variables in order to provide valid results.

Assessments should also reflect the Big Five structure, in order to ensure the continuity within the field by making the findings comparable to past and future research. Before the 1980s, only two of the Big Five were found consistently in different personality questionnaires (John & Srivastava, 1991); Neuroticism (Emotional Stability) and Extraversion. This exclusion of the other factors changed upon the creation of the NEO personality inventory by McRae and Costa (2008). The original NEO measured three dimensions: Extroversion, Openness, and Neuroticism; but in 1992, the NEO-PI-Revised was created to include the Agreeableness and Conscientiousness scales. Many personality scales have since been modified to include the Big Five and subsequently compared to the Big Five structure. Gruzca and Goldberg (2007) compared 11 commonly used personality inventories and found that the distinct personality scales measured within each one could be correlated with at least one of the Big Five factors.



With the creation of the Big Five, personality assessment and categorization made strides toward creating a universal language for personality description. For the purposes of this study, we have chosen the Multidimensional Personality Questionnaire to assess student personality. It meets the requirements outlined above as it provides a valid representation of personality and reflects the big five structure.

### **The Multidimensional Personality Questionnaire (MPQ)**

The Multidimensional Personality Questionnaire (MPQ) is a standardized, self-report personality assessment that is composed of 18 total scales and 276 binary, mostly true/false questions, with remaining questions requiring a choice between two conditions. Described below are the development of the scales and the structure of the current version (Tellegan, 2003) of the MPQ.

The inventory was developed over a 10 year period (Tellegan & Waller, 2008). Tellegan's intent was not to create a personality inventory, but instead, he hoped to further explain and clarify personality dimensions in the current focus of personality literature. Seven sequentially expanded questionnaires were administered to uncover the 11 primary scales, or personality constructs, examined by the MPQ (Tellegan & Waller, 2008). With each sequential questionnaire, some items were added and removed until only 276 of the initial 1082 test items remained, and factor analysis was used to investigate the need for further editing of the test items (Tellegan & Waller, 2008). In the original questionnaire, three major dimensions were identified: Neuroticism, Extraversion, and Absorption (Tellegan & Waller, 2008). Questionnaire two sparked the division of Extraversion into three different dimensions; Social Potency, Wellbeing, and Achievement, as well as the creation of the Alienation scale. The assessment

consisted of only 6 total scales following questionnaire two. With questionnaire three and four, four more scales were added: Traditionalism, Harmavoidance, Achievement, and Aggression. Questionnaire five sought to evaluate the assessments ability to generate a complete and adequate representation of personality, which revealed an absence of a trait opposite to Stress Reaction. The eleventh and final scale, Wellbeing, filled this void. These 11 resulting scales, or constructs, are thought to adequately describe personality. Upon the completion of the 11 MPQ primary scales, a comprehensive content analysis of each individual scale was undertaken and psychometric properties were examined. These 11 primary scales can also be correlated to form three higher order factors: Positive Emotionality, Negative Emotionality, and Constraint.

**Description of the MPQ.** The MPQ was developed and normed for adults 18 and older. The normative data was gathered from 1,350 men and women in Minnesota who were between the ages of 20-60. To complete the assessment, the examinee must have a 6<sup>th</sup> grade reading level. Completing the assessment normally takes about 30-40 minutes. Currently, the MPQ consists of 18 total scales. Of the 18 scales, three assess the validity of the participant's self-report; 11 primary scales measure specific personality traits or dimensions, and three scales measure broad personality traits (Church, 1994; Tellegan, 2011; Tellegan & Waller, 2008). The three validity scales are Unlikely Virtues, True Response Inconsistency, and Variable Response Inconsistency. These scales indicate whether or not the examinee's test results are reliable by accounting for response bias, social desirability, and inconsistent responses (Tellegan, 2003).

The 11 primary scales measured by the MPQ are Wellbeing, Social Potency, Achievement, Social Closeness, Stress Reaction, Aggression, Alienation, Control, Harmavoidance, Traditionalism, and Absorption. Tellegan and Waller (2008) & Tellegan (n.da) describe the primary traits in the following manner:

1. *Wellbeing*. High scorers describe themselves as naturally cheerful, happy, optimistic, and self-confident. These individuals generally feel good about themselves, enjoy their experiences, and are confident in their futures. Low scorers describe themselves as being prone to unhappiness. These individuals lack enjoyment and fun in their experiences and would not consider themselves naturally happy individuals.
2. *Social Potency*. High scoring individuals enjoy taking a leadership role, calling attention to themselves, and being forceful and assertive. These individuals are highly persuasive in nature and enjoy managing others. Low scoring individuals would rather follow than take charge in leadership roles and usually avoid attention from their peers.
3. *Achievement*. High scorers describe themselves as driven, persistent, hardworking, and ambitious. They set high standards for themselves and consider themselves perfectionists. Low scoring individuals do not enjoy working harder than what is required. They avoid situations and projects that require arduous work and do not consider themselves overly ambitious or detail oriented.
4. *Social Closeness*. High scorers are described as sociable, outgoing, warm, and inviting. They enjoy creating close relationships and surrounding themselves with others. They also turn to others in time of distress. Low scorers would rather work alone and do not actively seek ties with their peers. They do not take comfort in others during times of distress and usually choose to confront their problems alone.
5. *Stress Reaction*. Individuals with high scores on this scale describe themselves as sensitive and emotional. They are easily upset and experience changes in mood frequently. Their thoughts are occupied with guilt and worry, sometimes without reason.

Low scorers easily cope with their fears and worries and are able to quickly recover from emotionally unsettling situations.

6. *Aggression*. Individuals scoring high in Aggression describe themselves as violent and aggressive. These individuals enjoy violent movies, upsetting their peers, seeking revenge, and even degrade others to elevate their own feelings of superiority. Low scorers do not characterize themselves as violent. They usually ignore confrontational situations instead of seeking retaliation, and they tend to feel distressed when witnessing physical aggression and violence.
7. *Alienation*. Individuals with high scores believe they are victimized or betrayed by others they associate with. They feel as though others push them around, slander them, and intend to bring them harm. Low scorers feel that they are treated justly by their peers and would not characterize themselves as victims.
8. *Control vs. Impulsivity*. High scoring individuals describe themselves as sensible, rational, and detail oriented. They are less likely to take risks and approach experiences with caution. Low scorers consider themselves spontaneous, but lack the ability to make detailed plans. They are adventurous and sometimes irresponsible.
9. *Harmavoidance*. High scorers avoid high risk situations. They abstain from activities and situations that could possibly bring them harm. Low scorers are thrill seekers. They enjoy participating in dangerous and risky activities and situations and find safe situations unexciting.
10. *Traditionalism*. Those who score high in Traditionalism describe themselves as religious and moral. They value strict authority, high moral standards, religious values, and a good reputation. Low scores are not concerned with morality, traditional values, or strict

authority. They enjoy rebellion and expressing themselves, and they are not dismayed by rejection from society.

11. *Absorption*. High scorers are described as artistic, reflective, and thoughtful. They enjoy beautiful sights, stimulating music, and using their senses to make life more compelling. They are able to lose themselves in their imagination and vividly recall events from the past. Low scores are more realistic than artistic. They are not concerned with artistry and imagination, but instead value sensibility and rationality. The absorption scale has 2 subtests; Sentient and Prone to Imaginative and Altered States.

The MPQ also measures three broad traits, namely Positive Emotionality (PEM), Negative Emotionality (NEM), and Constraint (CON). Tellegan (n.d.a) and Tellegan and Waller (2008) describe the broad traits in the following manner.

1. *Positive Emotionality (PEM)*. PEM is associated with four of the 11 primary personality trait measures: Wellbeing, Social Potency, Achievement, and Social Closeness. It is also somewhat related to Absorption. Individuals with high positive emotionality experience joy from social engagement. They present themselves as active, in both social and vocational environments, and are prone to experience positive emotions from these engagements. In contrast, individuals with low PEM have a higher threshold for experiencing positive emotion and are characterized by a loss of pleasure, loss of interest, and disengagement in social and work environments.
2. *Negative Emotionality (NEM)*. NEM describes the examinee's response to anger and anxiety. NEM is associated with three of the 11 primary traits: Stress Reaction, Alienation, and Aggression. Individuals with high scores on NEM are prone to experiencing intense anger and anxiety compared to those with low NEM. Individuals

with low NEM are calm and relaxed as opposed to high stress. PEM and NEM are indicative of the individual's emotional responses and temperament.

3. *Constraint (CON)*. CON describes the individual's willingness to take risks. Those who score high in CON tend to abstain from impulses and risky situations, whereas those who score low tend to ignore risks and act on impulses. Harmavoidance, Control, and Traditionalism are linked to CON scores. Social Potency and Aggression are inversely related to CON.

According to Tellegan (2003), the MPQ also supports a four factor higher order pattern. In this model Positive Emotionality (PEM) and Negative Emotionality (NEM) are separated into two divisions. PEM is separated into two divisions, Agentic Positive Emotionality (PEM-AG) and Communal Positive Emotionality (PEM-CO). PEM-AG strongly depends on the individual's high scores on Achievement, but low Social Closeness. PEM-CO depends on the reverse, strong Social Closeness but low Achievement. In other words, PEM-AG combines positive affect with being effective or successful within the environment and PEM-CO combines positive affect with a feeling of being socially and interpersonally connected to the community. Agentic Negative Emotionality (NEM-AG) and Alienated Negative Emotionality (NEM-AL) were developed to compliment the divisions of Positive Emotionality. Both are strongly related to Stress Reaction. NEM-AG is associated with the Aggression scale, but not with Alienation. It is associated with victimizing, not being victimized. NEM-AL, the opposite of NEM-AG, is associated with Alienation, but not aggression. It is associated with being victimized, rather than victimizing.

**Validity of the MPQ.** The MPQ measurement has been shown to be a valid measure of personality, generating a complete and adequate representation of personality. The MPQ has been demonstrated to have strong psychometric properties including test-retest reliability,

internal consistency, and construct validity (Tellegan & Waller, 2008). Regarding internal consistency and reliability, Alpha coefficients were computed by Tellegan and Waller (2008) for four separate samples. Based on their report, none of the alpha coefficients in any of the samples fell below 0.75. Using step-down Spearman Brown correction, mean inter-item correlations ( $r$ ) were also estimated across each scale. The median  $r$  value was 0.18. Test-retest correlations were obtained over the course of one month, which yielded a median value of 0.89. The MPQ has also been shown to define similar aspects of personality and correlate strongly with other personality measures, including the NEO-PI-R and the Sixteen Personality Factor Questionnaire (Tellegan & Waller, 2008). All of the above psychometric properties are comparable to other existing personality inventories (Tellegan & Waller, 2008).

The MPQ was further shown to be a strong personality assessment when compared to 11 other personality inventories (Grucza & Goldberg, 2007). Specifically, the comparative validity and the predictability of each scale to its corresponding personality trait and behaviors have been evaluated. When comparing the cross-validity coefficients for each inventory, the means ranged from 0.37 to 0.45. The MPQ, the NEO, and the TCI had the highest coefficient of 0.45. The researchers did note, however, that the mean validities, or average of the cross validity coefficients, fall within a small range (0.42-0.45) when the outliers are removed. These findings indicate that between the 11 inventories assessed, there is no significant difference in regards to validity when the inventories are examined under a broad range of criteria and further suggests that the inventories only differ slightly when validity is examined.

The MPQ and the Big Five have also been shown to be closely related (Church, 1994). Tellegan and Waller (2008) expected the MPQ and the Big 5 would overlap upon creating the MPQ. They evaluated the relationship between the Big Five and the MPQ using 1,015 adults

from the Minnesota Twin Registry (Tellegan & Waller, 2008). The MPQ and a Big 5 Questionnaire were distributed to the participants, and the results indicated that the Big 5 correlated with and fit well within the MPQ structure (Tellegan & Waller, 2008). Four of the Big 5 factors correlated with at least one of the 11 MPQ primary scales with a correlation coefficient of 0.50 or greater. The Big Five factors are Extroversion, Agreeability, Neuroticism, Conscientiousness, and Openness. When the MPQ and the Big Five were compared, Extroversion correlated with the MPQ primary scale Social Closeness (correlation coefficient of 0.61). Extroversion also correlated weakly with Social Potency (0.43) and Wellbeing (0.31). Agreeability negatively correlated with Aggression (-0.50). Neuroticism correlated strongly with Stress Reaction (0.73) and had a slight negative correlation with Wellbeing (-0.39). Conscientiousness correlated with Control (0.52) and with Achievement (0.42). There was also a correlation coefficient of 0.40 between the 5<sup>th</sup> big five descriptor Openness and the MPQ scale Absorption. Based on the correlation coefficients, each of the Big Five is represented in Tellegan's 11 primary traits of the MPQ.

The findings of this study also suggest that the MPQ provides a more specific description of personality than what the Big 5 provides alone, which is to be expected due to the vast nature of the Big Five. For example, the MPQ primary scale Stress Reaction, as explained above, is highly correlated with Neuroticism. The broad MPQ scale Negative Emotionality contains Stress Reaction as well as Aggression and Alienation. Therefore, the broad MPQ scale Negative Emotionality encompasses more than the Big Five factor Neuroticism does alone, and further depicts the constructs that would be characterized within Neuroticism. Extroversion correlates with the MPQ primary scales Wellbeing, Social Potency, and Social Closeness. The MPQ, therefore, provides a more specific description of Extroversion by dividing it into three separate



categories, or MPQ primary scales. Based on the information given above, the MPQ generates a differentiated personality description that encompasses the Big 5, and outlines a broader representation of personality. The specific nature of the MPQ will provide greater insight into distinct personality traits as well as discrete differences compared to what the Big Five can provide alone.

All of these factors described above indicate that the MPQ is valid measure of personality that is comparable to other existing personality inventories. The MPQ has been shown to have adequate psychometric properties and relate strongly to the Big Five.

### **Personality and Vocational Choice**

Historically, the notion that personality directly relates to career choice has been frequently investigated in vocational psychology and dates back 50 years (Borges & Savickas, 2002; Costa, McRae & Holland, 1984; Holland, 1959; Hogan & Blake, 1999; Memhood, Khan, Walsh, & Broleffs, 2013; Rovezzi-Carroll & Leavitt; 1984; Tokar, Fisher, & Subich, 1998). The idea that personality factors can differentiate one occupational group from another has been empirically evaluated through the use of personality assessment. As a result, personality factors have been shown to significantly relate to and predict career choice (Tokay, Fisher, and Subich, 1998).

**Holland's Theory of Vocational Personalities in Work Environments.** According to Holland's Theory of Vocational Personalities in Work Environments, the choice of occupation or college major is a direct expression of personality. Holland (1959) proposes that a person develops personality traits, or characteristic methods for which he or she reacts to the environment based on a variety of variables, such as interactions of genetic factors and past

interactions with the environment (i.e. interactions with peers and parents). For example, a person who is “kind” reacts to environmental stimuli with “kindness.” These expressed personality traits, according to Holland (1959), are also associated with different environments and with different abilities. Holland’s theory posits that people are interested in and choose a vocation with an environment that allows their personality traits to thrive. For example, a person who is kind possesses specific skills associated with the trait, such as the ability to use compassion or have patience. According to Holland’s theory, this person would seek a career that will satisfy his or her personality, such as working as a teacher or in healthcare. According to this theory, vocational choice is merely an expression of personality.

Holland (1959) originally proposed six dimensions of career preference, or six major classes of environments: The Motoric Environment (e.g. laborers, farmers, and mechanics), The Intellectual Environment (e.g. chemists, mathematicians, and biologists), The Supportive Environment (e.g. teachers, counselors, or therapists), The Conforming Environment (e.g. assistants, librarians, or bank tellers), The Persuasive Environment (e.g. politicians, salesmen, and businessmen), and The Esthetic Environment (e.g. musicians, artists, or singers). Each of the classes represented a person’s lifestyle, how they react to and deal with others, and preferences for responding in a certain way to environmental stimuli. The six dimensions were later altered and renamed Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC) (Mount, Scullen, and Rounds, 2005). Mount, Scullen, and Rounds (2005) provide the following description of RIASEC:

*Realistic*: interest in the manipulation of machinery and tools

*Investigative*: Tendency to enjoy précises, analytical, curious work

*Artistic*: interest in the arts, such as music or dance

*Social*: preference and interest in working with or helping others

*Enterprising*: interest in influencing others, such as sales or business.

*Conventional*: interest in the manipulation of data

The FFM, or the “Big Five,” has frequently been compared with Holland’s RIASEC interest variables using correlation analysis and exploratory factor analysis to determine if Holland’s themes do in fact reflect personality (Costa, McCrae & Holland, 1984; De Fruyt & Mervielde, 1997; Tokar, Fischer, & Subich, 1998). The results indicate that all Big Five factors are significantly related to at least one or more of Holland’s RIASEC Types, though some of the results are conflicting. Three studies (Costa, McCrae & Holland, 1984; De Fruyt & Mervielde, 1997; Gottfredson, Jones, & Holland, 1993) found that Holland’s Social and Enterprising interests, the category describing helping professional, is related to Extraversion. They also agree that Holland’s variable Artistic interests is strongly related to the Big Five trait Openness. Gottfredson and colleagues (1993) and Costa, McCrae, and Holland (1984) related Openness to Investigative interests as well, but De Fruyt & Mervielde (1997) specified that only “openness to ideas” correlated with the Investigative interest scale, and that Investigative interests do not significantly relate to any of the Big Five factors. Two studies showed that neither Realistic nor Conventional interests were represented in the Big Five, but De Fruyt & Mervielde (1997) found that Conventional interests were negatively correlated to Openness. Finally, Gottfredson and colleagues (1993) found that Neuroticism was negatively correlated with all six of Holland’s interest types, but Costa, McCrae, and Holland (1984) found that none of Holland’s RIASEC types correlated with Neuroticism. As described above, there is considerable overlap between both the Big Five and Hollands’ models, but they contain some unique variables. According to

Holland's model and its correspondence with the Big Five, occupational choice could be a direct expression of personality.

Vocational psychologists have also investigated the relationship between personality and other vocational variables, such as job retention and satisfaction. Both have also been shown to depend on the extent the occupational environment complements personality (Mount et. al, 2005) and have been related to specific personality traits in general (Judge, Mount, & Heller, 2002). According to Mount (2005), if an employee's personality thrives within a chosen vocational environment, then the employee will be more satisfied with his/her current position and, therefore, remain in the occupation for a longer period of time. These findings support Holland's theory that an occupation is chosen based on the opportunity for the individual's personality traits to be maximally expressed within the chosen occupation (1956).

Regarding the specific personality factors associated with job satisfaction, Judge, Mount, and Heller (2002) studied the relationship between the Big Five and job satisfaction. They found that Conscientiousness (0.26) and Extraversion (0.25) were the 2 factors positively correlated with Job Satisfaction, while Neuroticism was negatively correlated (-0.25). Ilies and Judge (2002) further discovered that mood is affected by personality and also contributes to job satisfaction. Specifically, they found a link between Neuroticism and decreased job satisfaction.

Although there is no existing research investigating the relationship between personality and job satisfaction in the field of speech-language pathology, the American Speech-Language-Hearing Association conducted a survey of its members to uncover the factors that have the most influence on job satisfaction and retention. They found that flexibility to balance occupation with life, salary, and meaningfulness of job were the top three factors for all healthcare settings (SLP's prioritization of Job Satisfaction factors, n.d.).

**Personality and general career choice.** The relationship between vocational choice and personality has been examined. Eley, Eley, Bartello, and Rogers-Clark (2012) studied the relationship between personality and the reasons for entering a career in nursing. Their main goal was to gain a better understanding of why nurses join the profession in hopes of eventually improving job satisfaction and retention. They, through use of an interview and the Temperament and Character Inventory (TCI), found that the need and enjoyment of caring for others was the principle reason for entering the profession, and this trait could be found in the participants included in the study. It is important to note that the “enjoyment of caring” would also be a prevalent trait in all helping professionals, including SLPs. This need to care for others in a vocational environment corresponds well with Holland’s theory described earlier. Based on Holland’s Model (1959), those who have personality traits and interests that correspond with a helping profession would choose a vocation falling in Holland’s category of a Supportive Environment. He describes those who seek this type of profession as:

...prefer[ing] teaching or therapeutic roles, which may reflect a desire for attention and socialization in a structured and safe setting. They possess verbal and interpersonal skills. They are also characterized as responsible, socially oriented, and accepting of feminine impulses and roles...They are threatened by and avoid situations requiring intellectual problem solving, physical skills, or highly ordered activities since they prefer to deal with problems through feelings and interpersonal manipulations of others (Holland, 1959, p. 37).

According to this description, those who seek to work in a helping profession, in general, may seek to care for and help others, and in turn score highly on the following MPQ scales: Wellbeing, Social Potency, Harmavoidance, and Social Closeness. This description also

indicates that helping professionals may also obtain low scores in the MPQ primary trait Achievement.

Larson, Wu, Bailey, Gasser, Bonitz, and Borgen (2010) examined the relationship between a student's selected college major and their personality using the Multidimensional Personality (MPQ) scales. Nine different majors were examined: Engineering, Sport and Exercise Physiology, Physical and Biological Sciences, Architecture, Humanities, Social Science, Elementary Education, Business, and Computer Science. They uncovered personality traits distinctly related to education, an occupation examined that closely relates to Speech-Language Pathology. They found that Social Closeness, the MPQ primary trait scale that coincides with personality trait descriptions like sociable, warm, and inviting, was able to separate elementary education majors from the other majors examined.

**Personality and the career of speech-language pathology.** The personalities of speech-language pathology students have previously been examined empirically. The majority of personality research within our field has utilized the Myers Briggs Type Indicator (MBTI), a personality assessment based on Jungian personality theory, to assess and describe personality.

Craig and Sleight (1990) sought to uncover the personality relationship between SLP supervisors and students and the implication of this relationship on the supervisory process. They assessed the personality of both groups using the Myers-Briggs Type Indicator (MBTI) and found a significant difference between the generated MBTI personality types of supervisors and students. They were able to uncover the personality types that occurred most frequently, ENTJ, INTK and ESTK for supervisors, but they did not report the personality types that occurred most frequently in students. All but one of the 16 possible MBTI personality types were represented in the sample of supervisors. This indicates variability in personality types within the given sample

of speech-language pathologists. Baggs (2013) also evaluated the personality of speech-language pathology students using a Jungian personality theory assessment similar to the MBTI; the Keirsey Temperament Sorter II. Three hundred and twenty graduate students participated in the personality assessment, and over 50% generated the personality types ESFJ (Extroversion, Sensing, Feeling, and Judging) or ISFJ (Introversion Sensing, Feeling, and Judging). Therefore, a majority of the participants showed a Sensing-Judging (SJ) temperament. Individuals who generate this temperament are described as rational, practical, and traditional. They are perceptive to the needs of others and find enjoyment in helping others. Additionally, Baggs (2013) indicated that SLP students are Feeling (F) rather than Thinking (T), in that they make decisions based on affective components rather than logical reasoning. MBTI type outcomes were also compared to the expected frequency of MBTI types within the US population, and significant differences were uncovered between the observed frequencies of each of the personality types and expected frequencies within in the US population. Specifically, Thinking and Perceiving types were achieved much less than expected in the general population. Again, all 16 personality types were represented within the sample, and Baggs (2013) could not determine a type that best represents SLP students.

Research examining the personality of SLP students using the MPQ could not be found, despite the frequent use of the MPQ in vocational psychology. Because of the stark differences between the MPQ and the MBTI, it is difficult to compare them or determine what MPQ primary scales correspond with the MBTI traits. Although the MBTI has been previously used to study the personalities of SLP students, personality researchers have criticized the assessment based on a lack of support for Jungian theory and a lack of construct validity (McCrae & Costa, 1989).

The MPQ may provide a more specific description of the personality traits inherent to SLP students or reveal different aspects of personality than what those obtained by the MBTI.

**Career choices within the field of speech-language pathology.** No research articles could be found describing the relationship between personality and specialty/career choice within the field of Speech- Language Pathology. The American Speech and Hearing Association (ASHA) describe three primary job industry divisions: healthcare, private practice and education/schools (Determining Salary, n.d). ASHA further divides the healthcare industry into home care, hospital, outpatient facilities, and skilled nursing (Recruitment and Retention, n.d.). ASHA also divides schools into preschool, elementary, secondary, and day/residential schools (American Speech-Language-Hearing Association, 2012). The Bureau of Labor Statistics also outlines the job industries in which to practice speech-language pathology. The Industries with the highest level of employment as reported by the Bureau of Labor Statistics include; Elementary and Secondary Schools, Offices of Other Health Practitioners, General Medical and Surgical Hospitals, Nursing Care Facilities/Skilled Nursing Facilities, and Home Health Care Services (Occupational Employment and Wages 29-1127 Speech-Language Pathologists, 2013). In 2012, approximately 134,000 SLPs held jobs, 41% in schools, 17% in offices of health practitioners, 13% in hospitals, and 5% in nursing care/skilled nursing facilities (Speech-Language Pathologists, 2012). An SLP may also choose a specialty in terms of patient population. Many of the aforementioned facilities provide services to a single age grouping. For example, schools provide services solely to children whereas skilled nursing facilities tend to provide services solely to adults. Facility choice, therefore, may be a direct expression of age preference; children vs. adults. As of January 2014, SLPs are able to receive clinical specialty certification for four specialties; Child Language and Language Disorders, Fluency and Fluency



Disorders, Swallowing and Swallowing Disorders, and Intraoperative Monitoring (Clinical Specialty Certification, n.d.). SLPs can become a certified board specialist in any of these areas contingent on ASHA certification, meeting requirements for clinical experience and continuing education in the specialty area, and following an assessment of SLP knowledge and skills (Clinical Specialty Certification, n.d.). For the purposes of this study, we will focus on age preference and facility preference as the primary career choices/specialties within the field.

**Personality and medical specialty.** Due to the aforementioned lack of research specific to speech-language pathologists, there is no empirical evidence suggesting which personality traits are found consistently within the different facets of the profession. Research has, however, been conducted investigating the relationship between personality and medical specialty.

Rovenzzi-Carroll and Leavitt (1984) examined the relationship between the personality of physical therapy students and their career choices using the Myers-Briggs Type Indicator personality assessment. They compared the personalities of physical therapy students who wanted to specialize and those who wanted to become a general clinician and uncovered significant differences. They found that specialists were more curious and enjoyed problem solving while generalist clinicians prefer order and routine. Mehmood, Khan, Walsh, and Borleffs (2013), evaluated whether there was a significant relationship between the personality profiles of medical students according to their specialty choice. Specialty choices examined included hospital based/procedure oriented, surgical, non-primary care, and primary care/people oriented. Five divisions of personality were evaluated: impulsivity, neuroticism, aggression, sociability, and activity. They found only one specialty with a significant association between personality and choice. Impulsivity, aggression, and sociability scales were found in those who specialize in surgery (Mehmood et. al., 2013).

Hojat and Zuckerman (2008) also examined the effects of personality on specialty interest for the same five personality factors. They hypothesized that those who chose a hospital-based specialty would score lower on Sociability when compared to the primary care/people oriented specialties. Results supported the aforementioned hypothesis. Conclusions of the studies mentioned above suggest that personality does have an effect on medical student's choice of specialty, and the exploration and use of these findings can enhance the ability of educators to counsel their students in decision making for their future careers.

However, not all research findings suggest a significant relationship between specialty choice and personality. Borges and Savakis (2002) conducted a literature review that explored the relationship between different medical specialties (anesthesiologists, family practitioners, internists, gynecologists, pediatricians, physiatrists, psychiatrists, surgeons, and support specialists) and the distinct personality traits of the professionals who concentrate in them. Of the specialties examined, family practitioners and pediatricians are the two specialties most similar to the field of speech-language pathology. Results indicated a significant relationship between family practitioners and the big five traits Agreeableness, Conscientiousness, and Openness to Experience. Only two articles in the review explored the relationship between pediatrics specialists and their personalities (Myers & Davis, 1976; Friedman & Slatt, 1988). Those who specialized in pediatrics displayed three reoccurring Big Five traits, Extroversion, Neuroticism, and Agreeableness, but they did not display Conscientiousness as a prominent trait.

Regarding personality and medical specialty in general, Borges and Savakis (2002) found that professionals in all of the specialties examined did not have a consistent personality profile and stereotypical personalities thought to be present in certain specialties could not be supported empirically. For example, medical professionals who chose to practice family medicine, though

commonly considered people-oriented, were not described as “Extroverted.” The results suggested instead that medical professions and specialties allow professionals with many different personality types to succeed within them. Despite finding some evidence that there are no clear personality profiles within professionals of different medical specialties, the researchers do state, however, that there is a slight relationship between personality and specialty choice. Borges and Savakis (2002) indicated that students should consider their own personality when choosing a specialty. In a commentary article, David Powis (2009) remarked on this statement. He explained that some suggest that personality should not be taken into account when choosing medical students because personality traits and behaviors needed to succeed within different specialties can be taught. Powis (2009) comments, “It is true that some skills in the interpersonal domain may be taught...it must be acknowledged that an individual’s basic personality and value system must have an important bearing on the success of such educational interventions” (p. 1045). To summarize, Powis (2009) explained that some interpersonal skills may be taught by professors or supervisors, but the personality and values of the student determine whether or not the student can or cannot learn and apply these skills in their future careers, further suggesting the importance of personality in specialty choice.

As previously mentioned, there is a lack of research regarding personality and specialty choice in Speech-Language Pathology, and no indications on which personality traits would differentiate across different age and setting preferences could be uncovered; however, some of the existing research investigating personality and career choice in general has uncovered personality traits that are associated with specialists, such as general medicine specialists, pediatric specialists, and geriatric specialists (Eley et al., 2012; Friedman & Slatt, 1988; Holland, 1959; Larson et al., 2010; Mehmood, Khan, Walsh, & Borleffs, 2013; Myers & Davis, 1976;

Rovenzzi-Carroll & Leavitt, 1984), though the results are conflicting. Based on their findings, the SLP students may score highly on the following MPQ traits: Wellbeing, Social Potency, Harmavoidance, Achievement, and Social Closeness. Family practitioners and Pediatricians could have similar personality traits to SLPs who choose to work specifically with children and their families. SLP specializing with children, therefore, may score highly in Social Closeness, Wellbeing, Stress Reaction, and Absorption, as well as scoring low in Aggression.

## **Summary**

Historically, the field of personality has produced a wealth of theories and models to explain personality, but in the past century, a consensus has been reached in the form of the Five Factor Model (FFM: John & Strivasta, 1990; Pytlik Zillig et al., 2002). The FFM is the theory that five broad traits, or the Big Five, can be used to adequately describe the diverse dimensions of human personality. Following a century of repeated factor analysis, (Allport and Odbert, 1936; Baumgarten, 1933; Cattell, 1943; Fiske, 1949; Klages, 1926; Thurstone, 1934; Tupes & Cristal, 1961) the Big Five traits emerged; namely Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness (John & Srivastava, 1990). These five factors serve as the basis of personality research and unite the field under a common language. The specific personality traits of individuals are commonly investigated using self-report personality assessments. The Multidimensional Personality Questionnaire (MPQ) is a standardized, self-report personality assessment that is composed of 18 total scales. Of the 18 scales, three assess the validity of the individuals' responses, four assess broad personality dimensions, and 11 measure primary personality traits (Tellegan & Waller, 2008). The MPQ has been shown to be a valid measure, generating a complete and adequate representation of individual personality and

possessing strong psychometric properties including test-retest reliability, internal consistency, and construct validity (Tellegan & Waller, 2008). Traits measured by the MPQ have also been shown to correlate well with the Big Five factors (Church, 2004; Tellegan & Waller, 2008). The relationship between personality and vocational choice has been frequently investigated within the field of vocational psychology (Holland; 1959). Studies examining the relationship between medical specialty or career choice and personality have been conducted (Larson et al., 2010; Eley et al., 2012; Myers & Davis, 1976; Friedman & Slatt, 1988), producing conflicting results regarding the relationship between personality and specialty choice. Research examining the personality of SLP students has been conducted, but very few studies were found (Baggs, 2013). In the field of speech-language pathology, there is no existing literature on the relationship between personality and career choices within the field, and therefore, there is a lack of empirical evidence suggesting which personality traits are found consistently within the facets of the profession.

### **Justification**

Currently, literature investigating the relationship between personality and the vocational choices of speech-language pathologists (SLPs) does not exist and only one study could be found that specifically describes the personalities of SLP students (Baggs, 2013). Many years of research have been dedicated to relating personality and vocational choice in other fields, specifically with medical specialty. According to some the aforementioned studies, significant relationships between personality and career choice have been found in professions similar to speech-language pathology, such as education, nursing, family medicine, and pediatrics. The personality traits found in speech-language pathology students, therefore, may also be realized through empirical investigation, and these personality traits may differentiate specialty choices within the field.

The field of Speech-Language Pathology has grown immensely, creating expansive opportunities to work with diverse populations, from pediatrics to geriatrics, in a multitude of settings, such as hospitals, schools, or home health. SLPs may also choose to specialize in a type of communication disorder or deficit. Despite the many facets of specialty choice within the field of speech-language pathology, we will focus on age and career preferences for the purposes of this study. Due to the lack of research concerning vocational choice in SLPs, the present study will be undertaken to uncover the relationship between personality and the practice preferences of speech-language pathology students.

The main goal of this study is to create a personality profile of SLP students, or a representation of the personality traits commonly found in these students, and determine whether there is a relationship between personality and specialty choice within the field. The Multidimensional Personality Questionnaire (MPQ), a valid assessment of personality traits, will be used to determine the personality traits of the participants.

The findings of this study could provide valuable information for students and new professionals who are faced with the task of deciding their career path. Most professionals are eventually able to uncover their preferred practice settings through experience, and many cross boundaries throughout their careers. Most, however, discover a population and setting through which they gain the most gratification. Is there a way to identify these preferences at the beginning of the student's career? If so, many improvements to the education and career counseling of students could be made. Three specific research questions will be addressed in this study:

1. What is the "personality profile" of undergraduate and graduate speech-language pathology students?
2. What is personality profile of undergraduate and graduate speech-language pathology students categorized by preferred patient age preference?
3. What is the personality profile of undergraduate and graduate speech-language pathology students categorized according to the preferred career setting?

## Method

### Survey Development

**Demographic questionnaire.** A custom demographic questionnaire was developed specifically for this study and was given via Qualtrics. Demographic information was acquired for each of the respondents and completed before the Multidimensional Personality Questionnaire (MPQ) assessment was administered. The demographic questionnaire for this study was designed to address three main areas: 1) background information; 2) preferred patient age preference; and 3) preferred career setting. The students also indicated their level of commitment to the profession and their indicated career preferences by selecting a point on a custom decidedness scale (1: undecided, 2: somewhat undecided, 3: somewhat decided, and 4: decided; Larson et al., 2010). Three different decidedness scales were presented; one presented to undergraduate students regarding decidedness on the career of speech-language pathology, one regarding patient age preference and one regarding preferred facility choice.

***Preferred patient age preference and career setting.*** The respondents were asked to indicate the average age of the clients/patients they believe they wish to work with in their future careers. Four age brackets and descriptions were given to each of the respondents. The participants were asked to indicate only one of the following choices:

Early Intervention: Birth to 4  
Primary School Age: 5-10  
Secondary School Age: 11-18  
Adults: 19 and Older

After indicating preferred patient age preference, the respondents were asked to identify one of the following settings they would hope to conduct therapy in their future careers as



speech-language pathologists. Table 1 lists the setting options as they were provided according to indicated age preference on the demographic questionnaire. Settings were divided into two main categories: school and healthcare. The school setting was divided into three facilities: preschool, primary school, and secondary school. The healthcare setting was divided into six different facilities: rehabilitation hospital, acute care hospital, pediatric/acute care hospital, skilled nursing facility/assistive living, home health, and outpatient clinic.

*Table 1: Patient Age Preferences and Corresponding Facility Choices Provided on the Demographic Questionnaire*

Age Preference	Facility Preference
Early Intervention	Preschool Acute Care/Pediatric Hospital Rehabilitation Facility Home Health Outpatient Clinic/Office
Primary School Age (5-10)	Primary School Acute Care/Pediatric Hospital Rehabilitation Facility Home Health Outpatient Clinic/Office
Secondary School Age (11-18)	Secondary School Acute Care/Pediatric Hospital Rehabilitation Facility Home Health Outpatient Clinic/Office
Adults	Acute Care Hospital Rehabilitation Facility Assisted Living/Skilled Nursing /Nursing Home Home Health Outpatient Clinic/Office

Following is a formal definition of each of the facility choices. These descriptions were provided to the respondents before being asked to indicate their facility choices. Provided choices and descriptions were derived from the American Speech-Language-Hearing Association (American Speech-Language-Hearing Association, n.d.; American Speech-Language-Hearing Association, 2011b; Employment Settings, n.d.).

*School setting.* In public and private education settings, a SLP could work with children ranging from pediatrics to adolescents. The job description of a school SLP includes providing services to children with intellectual disabilities or developmental disabilities, pulling students out of class for service provision, traveling to multiple schools to provide services, developing Individualized Education Plans (IEPs) and Individual Family Service Plan's (IFSPS), conducting screenings and evaluations, and facilitating teacher and parent training. Some may teach full-time in a classroom of children with speech and language deficits. The education setting can be divided into three types of facilities:

1. *Preschool:* SLPs who work in the preschool setting focus mainly on early intervention and providing treatment for early identified speech and language disorders. Children who have not yet begun kindergarten are considered preschool age. This normally includes children under the age of 5.
2. *Primary School:* Primary school is also frequently described as Elementary School. SLPs work in both private and public settings to provide both intervention services and prevention services to children from ages 5-10 with speech and language disorders.
3. *Secondary School:* Secondary school includes both middle school and high school students over the age of 10 and under the age of 19. SLPs work in both private and public

settings to provide intervention services to students with a variety of speech language disorders.

*Health care setting.* According to a 2011 census by the American Speech-Language-Hearing Association (ASHA, 2011b), 38% of certified SLPs are employed in the healthcare setting. There are many different types of facilities through which to provide services that fall within the realm of medical Speech-Language Pathology. Professionals frequently see clients with swallowing disorders and communication deficits due to stroke, traumatic brain injury, or neurological disorder. Working in a health care facility does not necessitate working with adult clients, though this is a common assumption. Children may also be on the case load of many SLPs working in general or rehabilitation hospitals. Some hospitals are dedicated to the care of infants-adolescents, such as the many children's hospitals and pediatric hospitals that exist nationwide. The Health Care setting can be divided into many different types of facilities. The following health care facilities were given as choices to the respondents (Home Care Recruitment and Retention Considerations, n.d.; Employment Settings, n.d.; American Speech-Language-Hearing Association, 2011a; American Speech-Language-Hearing Association, 2011b):

1. *Acute Care Hospital:* A short term care facility where admitted patients are treated immediately following injury by professionals from a number of disciplines including Speech-Language Pathologists. SLPs are responsible for the evaluation and treatment of swallowing disorders and other communication deficits caused by head injury, stroke, disorders of respiration, and surgical procedures. Short term care is provided to improve the patient's cognition and strength in order to later withstand long term rehabilitation in a rehabilitation hospital, outpatient clinic, or skilled nursing facility.

2. *Pediatric/Acute Care Hospital:* A pediatric hospital is an inpatient facility dedicated to treating infants, toddlers, preschoolers, school aged children, and adolescents from birth to 18. SLPs in pediatric hospitals are responsible for the evaluation and treatment of children with a variety of swallowing and communication impairments due to brain injury, stroke, cancer, and craniofacial abnormalities. These facilities also provide short term care to improve the child's health and ability to withstand rehabilitation in a rehabilitation hospital or outpatient clinic.
3. *Rehabilitation Hospital:* A facility dedicated to the evaluation and rehabilitation of communication disorders that resulted from head injury, TBI, stroke, disease, or other neurological condition. Rehabilitation hospitals provide intensive long term care to patients who reside within the facility. Therapy goals frequently include increasing cognition, speech, and swallowing ability in order to adequately function independently at home. SLPs in rehabilitation settings frequently co-treat with other disciplines, including occupational therapy and physical therapy.
4. *Outpatient Clinic:* An outpatient facility is devoted to patients or clients that are outpatient, or outside of a hospital. Some clinics exist in conjunction with a university or within an acute care or rehabilitation hospital. Outpatient facilities are associated with a wide variety of patients including pediatric and adult clients depending on the clinic. SLPs in outpatient clinics are dedicated to the evaluation and treatment of a wide variety of communication disorders. Treatment is long term, usually requiring several weeks, months, or years of intervention. In outpatient clinics, patients do not reside within the facility, but instead schedule appointments for intervention.

5. *Home Health:* To provide home health services, the SLP must be willing to travel to and from the residences of the patients or clients to which they are providing services. Home health SLPs are responsible for a variety of services, including evaluation and treatment, to a wide variety of populations.
6. *Skilled Nursing Facility:* Skilled Nursing Facilities are dedicated to long term care. They are more commonly described as nursing homes or assisted living facilities, where patients reside within the facility and receive rehabilitation services. These facilities usually provide services to the elderly population in need of the greatest assistance and care.

Table 1 lists the setting options as they were provided according to indicated age preference on the demographic questionnaire.

**The Multidimensional Personality Questionnaire.** Personality traits inherent to the participants were assessed using the Multidimensional Personality Questionnaire (MPQ). The MPQ (Tellegan and Waller, 2008) assessed 11 primary, specific personality dimensions and three broad higher order traits through the participant's self-report. The 11 primary dimensions are labeled as follows: Wellbeing, Achievement, Social Potency, Social Closeness, Stress Reaction, Alienation, Aggression, Control, Harmavoidance, Traditionalism, and Absorption. The three broad scales are labeled as follows: Positive Emotionality (PEM), Negative Emotionality (NEM), and Constraint (CON). The assessment consisted of 276 binary questions and required approximately 45 minutes to complete. To develop the MPQ, repeated factor analyses were conducted over several years, each time adding, deleting, and refining test items, until the current MPQ assessment structure emerged (Tellegan & Waller, 2008). The MPQ has been shown to have excellent psychometric properties including construct validity, test-retest reliability, internal

consistency (Tellegan & Waller, 2008). The MPQ has also been shown to correlate strongly with the Big Five (Church, 1994; Tellegan & Waller, 2008).

The MPQ is usually administered in paper-pen format, but the assessment was presented electronically in this study via Qualtrics, a secure online survey server. The test items were administered individually, with one question visible on the screen at a time. Test instructions were presented prior to administration. Instructions mirrored those used on the front page of the test booklet. DiLalla (1996) evaluated the validity of a computer administrated form of the MPQ. 227 Participants were divided into two groups, one group completing the computer administrated version of the assessment and the other completing the paper version. Analysis of the results indicated similar psychometric properties between the two versions, such as scale reliability and internal consistency (DiLalla,1996). According to DiLalla (2006), computer administration had no effect on resulting primary or broad personality scales.

## **Procedure**

After receiving permission from the Auburn University Institutional Review Board (IRB- authorization number 14-260 EX1407, approved date 7/7/14), undergraduate and graduate speech-language pathology students over the age of 19 were recruited to participate using a recruitment survey. One hundred and seventy-four department heads from across the country were contacted via email and asked to forward a recruitment email to undergraduate and graduate students within their department. All educational institutions contacted were listed by ASHA as an accredited program for both undergraduate and graduate speech-language pathology students. The initial recruitment email contained an information letter and a link to the recruitment survey via qualtrics, an internet based survey software program. The recruitment

survey contained an information letter and requested only the students' email addresses if they wished to participate. This same recruitment survey was also posted on the National Student Speech Language Hearing Association (NSSLHA) listserv on September 22, 2014. The research survey was then sent to the email addresses provided by interested students. Following recruitment, participants completed the research survey online via qualtrics.

## **Results**

### **Participants Demographics**

Initially, 529 students requested to be included, and all were sent an individual email via Qualtrics containing a link to the research survey. Of these students, 308 completed the research survey. The responses were filtered for completion in Qualtrics, leaving 255 completed responses. These results were further filtered to exclude respondents that did not meet the pre-determined participant inclusion criteria: 1) 19 years of age or older, 2) current enrollment status in undergraduate or graduate coursework at an accredited secondary/post-secondary institution, and 3) relative decidedness on their future career goals (e.g. a rank of three or higher on a custom decidedness scale; Larson, Wu, Bailey, Gasser, Bonitz & Borgen, 2010). Of the 255 initial respondents, 4 were excluded due to age, 9 based on enrollment status, and 7 undergraduate students were excluded due to un-decidedness on the career of speech-language pathology leaving 235 responses. Undergraduate participants who are undecided on their career choice in speech-language pathology may have the tendency to change their minds; therefore, these students were determined to be unable to contribute valid information regarding personality and preferred career choice

The data was further examined for missed or skipped questions in the Multidimensional Personality Assessment. Seventy-five respondents of the remaining 235 contained missing data in their responses, either due to computer error or the individual's choice to skip the question. Three respondents were initially excluded because they skipped more than two questions from a single scale, negatively affecting the validity of their MPQ assessment, leaving 232 respondents. In order to increase the validity of the assessments containing missing data, data was imputed by



the researcher based on the respondents' own answers to similar or sometimes the same questions. For example, if a participant answered true for the statement, "I am highly organized and meticulous," the researcher would impute "false" for the missing question reading, "I am not organized." In the final data set, 143 data points were imputed out of 63,756 total data points within the sample. Therefore, only 0.2% of the data in the final data set is imputed.

The 232 completed MPQ assessments were analyzed using the MPQ scoring syntax. The validity scales of the MPQ were then examined to reveal if any of the respondents' data sets could be deemed inconsistent or invalid. The Variable Response Inconsistency (VRIN) scale reveals respondents that provide inconsistent answers to assessment content (Tellegan, 1988). There are 44 VRIN item pairs, and the VRIN score represents the total number of items answered incorrectly. The True Response Inconsistency (TRIN) scale identifies individual assessments where the respondent gave fixed response of True, regardless of question content. There are 27 TRIN item pairs within the MPQ, and high and low TRIN scores reflect indiscriminate responding (Tellegan, 1988). Based on the normative population, the mean VRIN score is 4.61 and the standard deviation is 2.17, and the mean TRIN score is 0.13 with a standard deviation of 2.04. Responses more than 3 standard deviations from the mean for either of the VRIN or TRIN scales were excluded from analysis, and respondents with scores 2 standard deviations from the mean on both the VRIN and the TRIN scales were also excluded (Miller, Greif, & Smith, 2003). Only one respondent met exclusion criteria with a VRIN score of 12, therefore, the respondent's assessment was excluded from analysis due to inconsistent answers. All other responses were deemed valid according to VRIN and TRIN scores.

The remaining assessments were further examined based on indicated age and facility decidedness. Two one-way multivariate analyses of variance (MANOVA) were conducted to

Table 2: Mean Raw Scores and Standard Deviations for MPQ Primary Scales Based on Age and Facility Degree of Decidedness

Scale	Age								Facility							
	Undecided		Somewhat Undecided		Somewhat Decided		Decided		Undecided		Somewhat Undecided		Somewhat Decided		Decided	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
WB	19.47	3.86	19.45	3.82	18.06	4.70	17.50	5.06	18.95	3.51	18.46	4.89	18.42	4.35	17.93	5.17
SP	9.95	5.97	9.73	5.33	11.14	5.45	9.42	5.93	9.23	5.93	10.00	4.98	11.11	5.73	9.80	5.82
AC	13.47	3.34	13.78	3.89	13.33	4.08	13.81	3.87	13.73	3.30	13.39	4.16	13.46	4.14	13.93	3.04
SC	16.37	4.13	15.24	3.78	14.76	4.15	14.69	4.33	15.05	4.19	15.16	4.01	15.10	4.11	14.2	4.20
SR	12.58	5.77	11.50	5.85	11.59	6.13	12.47	5.89	12.95	5.82	11.68	6.39	11.51	5.65	12.20	6.46
AG	2.26	1.24	2.03	1.80	2.87	2.56	2.56	2.67	2.00	1.54	2.15	1.81	2.81	2.61	3.03	2.70
AL	3.11	2.62	3.35	3.20	3.25	3.69	3.00	3.17	2.64	2.46	3.13	2.97	3.24	3.57	3.77	4.26
CO	18.68	3.87	18.16	4.51	19.17	4.64	18.67	4.21	19.72	3.73	19.24	3.84	18.83	4.54	17.10	5.71
HA	17.58	3.80	17.76	3.73	18.17	4.78	18.31	4.47	16.82	4.03	18.45	4.27	18.24	4.14	17.33	5.73
TR	20.26	4.33	16.90	6.02	17.13	4.54	16.31	5.09	19.14	5.23	16.42	5.58	17.46	4.51	16.63	5.43
AB	19.79	7.58	17.85	7.88	17.03	7.34	14.72	6.39	16.50	7.43	17.73	7.47	16.69	7.62	17.63	6.74

Note. M=Mean. SD=Standard Deviation. WB=Wellbeing. SP= Social Potency. AC= Achievement. SC= Social Closeness. SR= Stress Reaction. AG=Aggression. AL= Alienation. CO=Control. HA=Harmavoidance. TR= Traditionalism. AB=Absorption.

evaluate the effect of age and facility decidedness on the 11 primary personality traits. Table 2 contains the means and standard deviations for age and facility degree of decidedness for the primary personality traits. Significant differences were not found among the different degrees of age decidedness on the primary personality traits, Wilks's  $\Lambda=0.841$ ,  $F(33, 640.026) = 1.173$ ,  $p = 0.235$ . Significant differences were also not observed among the different degrees of facility decidedness on the primary personality traits, Wilks's  $\Lambda=0.863$ ,  $F(33, 640.026) = 0.991$ ,  $p = 0.484$ . Because age and facility decidedness had no significant effects on the 11 primary traits, no responses were removed from analysis based on degree of decidedness. After all aforementioned methods of response filtering were completed, 24 MPQ assessments were not analyzed, leaving 231 respondents for personality analysis.

**Background information.** The majority of participants were between the ages of 19 and 30 (92.2%;  $n=213$ ), and all participants fell below age 56. Most of the respondents described themselves as Caucasian (91.3%;  $n=211$ ), and the majority of the remaining participants were African American (2.6%;  $n=6$ ), Hispanic (1.7%;  $n=4$ ), and Asian (1.7%;  $n=6$ ). Regarding enrollment status, 35.1% ( $n=81$ ) were undergraduate students and 64.9% ( $n=150$ ) were graduate level students. The respondents represented academic institutions from 31 different states, though the majority of students were completing coursework in Alabama (22.9%;  $n=53$ ), Wisconsin (9.5%;  $n=22$ ), California (8.7%;  $n=20$ ), Ohio (7.4%;  $n=17$ ), Texas (4.8%;  $n=11$ ), and Pennsylvania (4.3%;  $n=10$ ). Most of these students, despite enrollment in graduate level coursework, had completed less than 50 hours of practicum (59.5%). Table 3 reports the background information of the respondents in its entirety.

Table 3: *Participant Demographics*

Characteristic		<i>N</i>	%
Age	19	13	5.6
	20-24	166	71.9
	25-29	32	13.9
	30-34	7	3
	35-39	4	1.7
	40-44	3	1.3
	45+	6	2.6
Enrollment Status	Undergraduate	81	35.1
	Graduate	150	64.9
Race	White/Caucasian	211	91.3
	African American	6	2.6
	Hispanic	4	1.7
	Asian	4	1.7
	Native American	2	0.9
	Pacific Islander	1	0.4
	Other	3	1.3
Children	Yes	16	6.9
	No	215	93.1
Practicum Experience	Less than 50 Hours	137	59.3
	50-100	17	7.4
	100-150	17	7.4
	150-200	23	10.0
	200-250	15	6.5
	250-300	13	5.6
	300 +	3	3.9

### **Participant Career Preferences**

**Age preference.** When asked to indicate the average age of patients the respondents prefer to work with in their future careers, 61.9 % ( $n=143$ ) chose children from birth to age 18 and 37.2% ( $n=86$ ) chose adults 19 and older. Only 2 respondents skipped the question.

Respondents who answered children were further prompted to specify which of the following age groups they would prefer: Early Intervention/Birth to 4, Primary School Age/5-10, and

Secondary School Age/11-18. 25.5% ( $n=59$ ) chose Early Intervention, 31.2% ( $n=72$ ) chose Primary School Age, and 5.2% ( $n=12$ ) chose Secondary School Age.

Table 4: *Student Indicated Age Preferences*

SLP Student Age Preference ( $N=231$ )	<i>N</i>	%
Adults	86	37.2
Total Children	143	61.9
Early Intervention	59	25.5
Primary School Age	72	31.2
Secondary School Age	12	5.2

**Setting preference.** After indicating age preferences, respondents were asked to indicate preferred facility choice based on age. 2 participants did not provide a response. Of the respondents who chose Early Intervention ( $n=59$ ), 59.3% ( $n=35$ ) indicated a preference for Health Care while 40.7% ( $n=24$ ) indicated the preference for schools. Of the 35 respondents that indicated Health Care, 48.6% ( $n=17$ ) indicated they would most like to work in an Acute Care/Pediatric Hospital, 31% ( $n=11$ ) indicated Outpatient clinic/Office, 17.1% ( $n=6$ ) indicated home health, and 2.9% ( $n=1$ ) indicated Rehabilitation facility.

Regarding the SLP student who chose Primary School Age ( $n=72$ ), 69.4% ( $n=50$ ) indicated a preference for Schools and 30.6% ( $n=22$ ) indicated the preference for a health care setting. Of the 22 respondents who specified health care, 31% ( $n=11$ ) designated Acute Care/Pediatric Hospital, 22.7% ( $n=5$ ) indicated Rehabilitation Facility, 22.7% ( $n=5$ ) chose Outpatient Clinic/Office, and 4.5% ( $n=1$ ) chose Home Health.

Most of the respondents who chose Secondary School Age ( $n=12$ ), 75% ( $n=9$ ) indicated a preference for healthcare, while 25% ( $n=3$ ) indicated a preference for schools. Of the 9

respondents who indicated health care, most indicated a preference for outpatient clinic (55.6%;  $n=5$ ), but one respondent (11.1%) indicated Acute Care/Pediatric Hospital and three (33.3%) indicated Rehabilitation Facility.

Table 5: *Student Indicated Facility Preferences*

Age	SLP Student Facility Preference ( $N=231$ )		
	Facility	$N$	%
Adult	Acute Care Hospital	20	23.3
	Rehabilitation Facility	44	51
	Skilled Nursing Facility	11	12.8
	Home Health	4	4.7
	Outpatient Clinic/Office	7	8.1
Early Intervention	School	24	40.7
	Total Healthcare	35	59.3
	Acute Care/Pediatric Hospital	17	31
	Rehabilitation Facility	1	22.7
	Home Health	6	17.1
	Outpatient Clinic/Office	5	22.7
Primary School	Primary School	50	69.4
	Total Healthcare	22	30.6
	Acute Care/Pediatric Hospital	11	31
	Rehabilitation Facility	5	22.7
	Home Health	1	4.5
	Outpatient Clinic/Office	5	22.7
Secondary School	Secondary School	3	25
	Total Healthcare	9	75
	Acute Care/Pediatric Hospital	1	11.1
	Rehabilitation Facility	3	33.3
	Home Health	-	-
	Outpatient Clinic/Office	5	55.6

Of the respondents ( $n=86$ ) who indicated a desire to work with adults, 51% ( $n=44$ ) specified Rehabilitation Facility, 23.3% ( $n=20$ ) selected Acute Care Hospital, 12.8% ( $n=11$ ) indicated Assisted Living/Skilled Nursing/Nursing Home, 8.1% ( $n=7$ ) selected Outpatient Clinic/Office, and 4.7% ( $n=4$ ) indicated home health.

When age preference is disregarded, most respondents reported a preference for working a health care setting (66.4%;  $n=152$ ) rather than in a school (33.3%;  $n=77$ ). Of the respondents who indicated health care, 21.2% ( $n=49$ ) reported a preference for an Acute Care/Pediatric Hospital, 22.9% ( $n=53$ ) preferred a Rehabilitation facility, 4.8% ( $n=11$ ) reported a preference for Home Health, 12.1% ( $n=28$ ) preferred working in an Outpatient Clinic/Office, and 4.8% ( $n=11$ ) reported a preference for Assisted Living/Skilled Nursing Facility.

### **Personality Profile of SLP students**

A general personality profile of SLP students was obtained from the responses. Descriptive statistics for each of the 11 primary scales are provided in Table 6. On the Wellbeing scale, the mean score of the SLP students was 18.42. High Wellbeing scores indicate that the sample of SLP students would describe themselves as cheerful with a happy disposition. On the Social Potency scale, the mean score of the SLP students was 10.44. Social Potency scores are average indicating that some of the respondents would describe themselves as decisive, and persuasive, whereas others would consider themselves passive. Social Potency scores also indicate that the SLP students may or may not enjoy being in leadership roles and the center of attention, rather than allowing others to take charge.

Table 6: Mean Raw Scores, Standard Deviations, Points Possible, Minimums, Maximums, and Ranges for MPQ Primary Scales for All Participants.

MPQ Scale	M	SD	Points Possible	Min	Max	Range
WB	18.42	4.54	23.00	3.00	23.00	20.00
SP	10.44	5.56	25.00	0.00	24.00	24.00
AC	13.52	3.93	20.00	1.00	19.00	18.00
SC	15.00	4.09	21.00	3.00	21.00	18.00
SR	11.79	5.97	23.00	0.00	23.00	23.00
AG	2.57	2.34	19.00	0.00	13.00	13.00
AL	3.22	3.40	20.00	0.00	19.00	19.00
CO	18.81	4.48	24.00	3.00	24.00	21.00
HA	18.05	4.40	26.00	2.00	26.00	24.00
TR	17.21	5.06	27.00	3.00	26.00	23.00
AB	17.10	7.42	34.00	1.00	33.00	32.00

*\*Note.* WB=Wellbeing. SP= Social Potency. AC= Achievement. SC= Social Closeness. SR= Stress Reaction. AG=Aggression. AL= Alienation. CO=Control. HA=Harmavoidance. TR= Traditionalism. AB=Absorption. M=Mean. SD=Standard Deviation

The Achievement scale measures drive and ambition. The mean score of the SLP sample on the Achievement scale was 13.52. This relatively high score indicates that the majority of SLP students identify themselves as driven, ambitious, and hardworking instead of lackadaisical and lacking ambition. On the Social Closeness scale, the respondents had a high mean score of 15.00, which indicates that SLP sample describe themselves as more sociable, warm, and affectionate than distant and aloof. Scores indicate an enjoyment of being with others and close personal relationships. On the Stress Reaction scale, the respondents had a mean score of 11.79, which indicates a tendency to be easily upset with a higher reaction to stressful events such as tension, nervousness, and irritability. On the Aggression subtest, the SLP students scored a very low mean of 2.57. The respondents, therefore, describe themselves as non-violent. They reported an abhorrence of hurting others, physical aggression, seeking revenge, or taking advantage of others. Low scores also indicate that the students may have difficulty witnessing physical



violence. The Alienation scale assessed the tendency of the respondent to see themselves as victimized by their peers. The SLP students had a mean Alienation score of 3.22, a relatively low mean score that indicates the respondents may have a slight tendency to feel victimized by their peers or believe that others wish them harm. On the Control scale, the respondents had a mean score of 18.81. This high score indicates that the sample of SLP students have a tendency to be cautious, careful, and detail oriented in contrast to impulsive, reckless, and careless. On the Harmavoidance scale, the respondents' mean score of 18.05 indicates a slight enjoyment of exciting and adventurous activities, but prefer safer experiences overall. The Traditionalism scale measured the importance of high morals. A relatively high mean score of 18.05 was obtained from the respondents, which indicates the importance of morals and following the rules within the students. On the Absorption scale, the respondents achieved a mean score of 17.1. The high score obtained on this scale indicated that SLP students are creative and have many sensory and emotional experiences, such as vivid and compelling imaginings and deep immersion in thoughts and memories.

## **Personality and Career Choice**

**Personality and age preference.** A one-way multivariate analysis of variance (MANOVA) using a Bonferroni adjustment ( $p=0.5/11=0.005$ ) was conducted to determine the effect of age preference on the 11 MPQ primary scales. The multivariate test for homogeneity of dispersion matrices, Box Test, was not significant  $F(66, 104751) = 0.889, p 0.727$ , indicating that the variance and covariance among the personality factors are homogenous. The mean differences were small and not significant across the two primary age divisions: Child (birth to 18) and Adult (19 and older), Wilks's  $\Lambda=0.939, F(11, 217.0) = 1.272, p = 0.242$ . Table 7

contains the means and standard deviations of the dependent variables for the two different age preferences.

Table 7: Mean Raw Scores and Standard Deviations for MPQ Primary Scales for Age Preference

MPQ Scale	Children Birth-18		Adults 19+	
	M	SD	M	SD
WB	18.56	4.61	18.14	4.47
SP	10.23	5.57	10.73	5.61
AC	13.45	4.08	13.62	3.73
SC	15.34	4.10	14.49	4.01
SR	12.08	5.92	11.27	6.08
AG	2.45	2.38	2.81	2.30
AL	3.31	3.48	3.09	3.32
CO	19.04	4.40	18.41	4.62
HA	18.28	4.53	17.64	4.23
TR	17.97	4.81	15.92	5.26
AB	17.07	7.53	17.20	7.32

\* Note. M=Mean. SD=Standard Deviation. WB=Wellbeing. SP= Social Potency. AC= Achievement. SC= Social Closeness. SR= Stress Reaction. AG=Aggression. AL= Alienation. CO=Control. HA=Harmavoidance. TR= Traditionalism. AB=Absorption.

**Personality and facility choice.** MANOVAs using a Bonferroni adjustment

( $p=0.5/11=0.005$ ) were conducted for facility preference on the 11 MPQ primary scales. The multivariate test for homogeneity of dispersion matrices, Box Test, was significant  $F(198, 39444) = 1.305, p 0.003$ , indicating variance or covariance among facility preference. Covariance matrices were evaluated for large group differences. Large group differences were observed and are believed to be contributing to the covariance. The mean differences were small and not significant across the 6 facility divisions: School, Acute Care Hospital, Rehabilitation Facility,

Table 8: Mean Raw Scores and Standard Deviations for MPQ Primary Scales for Facility Preference

MPQ	<u>S</u>		<u>ACH</u>		<u>RF</u>		<u>HH</u>		<u>OC</u>		<u>SN</u>	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
<b>Scale</b>												
WB	17.82	5.02	18.29	4.43	18.55	4.74	19.09	3.67	19.32	3.77	19.27	3.32
SP	9.71	5.66	11.80	5.52	10.89	5.45	9.27	7.52	10.14	5.30	8.82	3.79
AC	13.27	3.83	13.31	3.91	14.08	4.21	12.27	4.36	13.79	4.07	13.91	3.02
SC	15.10	4.22	15.06	4.03	14.57	4.18	13.91	4.50	16.61	3.28	13.45	3.70
SR	11.94	6.53	12.02	5.93	11.15	6.16	12.18	4.79	12.36	4.67	10.73	6.15
AG	2.48	2.41	3.06	2.56	2.49	1.90	2.73	3.58	2.25	2.34	2.36	1.50
AL	2.97	3.50	3.90	3.76	3.00	3.09	4.18	5.95	3.21	1.91	2.27	2.28
CO	19.48	4.91	18.33	3.71	17.92	4.93	19.36	4.37	18.89	3.82	19.64	3.80
HA	17.87	4.33	18.61	4.21	16.98	4.32	18.82	4.87	19.00	5.26	18.55	3.39
TR	17.96	5.35	17.94	4.36	14.94	5.33	18.64	4.48	15.73	5.44	17.96	5.35
AB	16.16	8.23	17.43	7.28	18.02	7.38	15.45	6.15	17.46	6.90	18.91	4.87

\* Note. M=Mean. SD=Standard Deviation. S=School. ACH=Acute Care Hospital. RF=Rehab Facility. HH=Home Health. OC= Outpatient Clinic. SN=Skilled Nursing. WB=Wellbeing. SP= Social Potency. AC= Achievement. SC= Social Closeness. SR= Stress Reaction. AG=Aggression. AL= Alienation. CO=Control. HA=Harmavoidance. TR= Traditionalism. AB=Absorption

Home Health, Outpatient Clinic, and Skilled Nursing Facility; Wilks's  $\Lambda=0.773$ ,  $F(55, 989.52) = 1.031$ ,  $p = 0.415$ . Table 8 contains the means and standard deviations of the dependent variables for the 6 different facility preferences. Facilities were then combined into the two broad categories of healthcare and school settings to reduce the observed large group differences. The multivariate test for homogeneity of dispersion matrices, Box Test, remained significant  $F(66, 79,309) = 1.422$ ,  $p .014$ . The mean differences remained insignificant across the 2 divisions, Wilks's  $\Lambda=0.946$ ,  $F(11, 217) = 1.128$ ,  $p = 0.340$ . Table 9 contains the means and standard deviations of the dependent variables when facility preferences were grouped into two categories: healthcare and school.

Table 9: Mean Raw Scores and Standard Deviations for MPQ Primary Scale when Facility Preference is divided into Two Broad Categories; Healthcare and School.

MPQ	Healthcare (n=152)		School (n=77)	
	M	SD	M	SD
<b>Scale</b>				
WB	18.70	4.28	17.82	5.02
SP	10.78	5.52	9.71	5.66
AC	13.63	4.00	13.27	3.83
SC	14.97	4.02	15.10	4.22
SR	11.70	5.70	11.94	6.53
AG	2.64	2.32	2.48	2.41
AL	3.36	3.38	2.97	3.50
CO	18.46	4.23	19.48	4.91
HA	18.13	4.48	17.87	4.33
TR	16.82	4.90	17.96	5.35
AB	17.61	6.98	16.16	8.23

\* Note. M=Mean. SD=Standard Deviation. WB=Wellbeing. SP= Social Potency. AC= Achievement. SC= Social Closeness. SR= Stress Reaction. AG=Aggression. AL= Alienation. CO=Control. HA=Harmavoidance. TR= Traditionalism. AB=Absorption.

## **Discussion**

The demographic questionnaire used in this study obtained useful information about the current vocational choices of SLP students. A personality profile of SLP students was generated and descriptively compared to previous research regarding the personalities within other vocational choices. When examining the relationship of the SLP students' indicated career preferences with their personalities, no significant differences were found across indicated age and facility choices.

Indicated age and facility preferences on the MPQ provide insight into the current trends of SLP student vocational preferences. The majority of the respondents indicated a desire to work with children. Of these students who chose children, most indicated a preference for working with primary/elementary school followed by early intervention, but very few indicated a desire to work with secondary school children. Of the respondents who chose early intervention, the majority desired to work in healthcare rather than in schools. Almost half of the students who indicated a desire to work with early intervention selected the preference "acute care/pediatric hospital," though there are far fewer early intervention career opportunities in hospitals than in schools, outpatient clinics, private practice, or home health.

The respondents who chose primary school age indicated a greater desire to work in schools while the majority of the respondents who chose secondary school age indicated a preference for healthcare. Secondary school age children may require a multitude of services within the field of speech-language pathology either in schools or in healthcare. School based interventions, though they were of less interest to our respondents, are vital to the success of high

school and middle school students with communication disorders. SLPs are becoming steadily more involved in reading and literacy interventions, and the decreased number of respondents who indicated secondary school age in general could be either unaware of SLP presence in secondary schools, or students may not be interested in specializing in these types of interventions. Further, it is difficult to specialize in providing services specifically to secondary school age population in healthcare, which the SLP students may not be aware of.

Rehabilitation Facility and Acute Care Hospital industries were the most prevalent preferences of the students who indicated a desire to work with adults, whereas careers in Assisted Living facilities, Outpatient Clinics/Offices, and Home Health were less desirable. When age preference is disregarded and the groups are combined, most of the respondents reported a preference for working in the various health care settings rather than in a school. These results reveal that student job preferences may not match career availability. While more students indicated a desire to provide services in healthcare, the Bureau of Labor Statistics reported that schools employed the greatest number of SLPs across settings at 41% (Speech-Language Pathologists, 2012). In summary, the demographic questionnaire provided a glimpse into the current career preferences of students. Many of their preferences are not in line with current job availability. It may be beneficial to increase graduate school training and guidance on career possibilities and availability.

A general personality profile of SLP students was obtained by analyzing descriptive statistics of the respondent's scores on the MPQ personality assessment. Based on the MPQ results, SLP students may be described in the following manner based on Tellegan's (n.d.a) trait descriptions of the 11 primary scales:

SLP students are relatively cheerful with naturally happy dispositions and optimistic views of their futures. They enjoy taking leadership roles and managing others, and may sometimes be forceful and persuasive with their ideas. SLP students are driven to succeed and ambitious in their careers. They are warm and affectionate towards others, enjoy personal relationships, and they are kind and sociable, in interactions. Overall, SLP students have higher reactions to stress, such as being easily upset or irritated, but they are not aggressive or violent, but instead have an extreme abhorrence of violent behavior. They are trusting individuals, who feel that their peers have no desire to hurt them emotionally or physically. They have a tendency to be cautious, careful, and detail oriented in their work and lives. They displayed a slight enjoyment of exciting and adventurous activities, but overall preference for safer, everyday experiences. SLP students placed high importance on morals and traditional ideals, such as strict rearing and the importance of following the rules. They were also found to be creative, overall, with many sensory and emotional experiences, such as vivid and compelling imaginings and deep immersion in thoughts and memories.

It is important to note that although there does appear to be a general profile for SLP students, there was variability in the scores for each of the 11 primary scales. This may indicate the field of speech language pathology allows many personality types to succeed within it.

The MPQ profile can also be compared to a normative sample, reported in terms of the big five, and related to previous research regarding the personality of SLP students (Braggs, 2013). The Big 5 traits correlate with the MPQ (Tellegan and Waller 2008). Extroversion correlates with Social Closeness, Agreeability is the negative correlate of Aggression, Neuroticism correlates with Stress Reaction, and Conscientiousness correlates with Control and

Achievement, and Openness weakly correlates with Absorption. Based on these correlates, the personality of SLP students can be described by the Big Five traits and the students are high in all big five traits; Extroversion, Agreeability, Neuroticism, Conscientiousness, and Openness.

The generated personality profile of SLP students was compared to normative data for the MPQ provided by Tellegan and the University of Minnesota Press (Tellegan, n.d.c). Compared to the normative sample, respondents scored higher on 8 of the primary scales; Wellbeing, Social Potency, Achievement, Social Closeness, Stress Reaction, Alienation, Control, and Absorption. The respondents scored lower than the normative sample for the Aggression, Harmavoidance, and Traditionalism scales.

Our findings can also be compared to the findings Baggs (2013), who also evaluated the personalities of SLP students, though comparisons are difficult due to the differences in scoring and the traits examined. Baggs (2013) assessed the students using the Myers Briggs Type Indicator, and reported that the majority of SLP students are ESFJ and ISFJ. The students are, according to his findings; practical, rational, traditional, perceptive to the needs of others, and compassionate towards others. He also explained that SLP students are Feeling rather than Thinking, in that they make decisions based on affective response rather than logical reasoning. Our findings also reflect perceptiveness to the needs of others (Social Closeness), and a tendency for students to be traditional, placing a high importance on morals and following the rules (Traditionalism). In contrast, Baggs (1990) reported a balance of I and E (introversion and extroversion) within the students, whereas the SLP students' mean score on the Wellbeing scale in the present study indicate a tendency to the big five correlate Extraversion.

The personality profile of SLP students can also be compared to previous research regarding vocational choice. According to Holland's Theory of Vocational Personalities in Work



Environments, vocational choices are a direct expression of personality (Holland, 1959). Holland (1959) originally proposed six dimensions of career preference, or six major classes of environments. The field of speech-language pathology fits best within Holland's category Supportive Environment, those who have personality traits and interests that correspond with a helping profession such as teacher, counselor, or therapist (Holland, 1956). As mentioned above, there appears to be a personality profile of SLP students, though it differs slightly from Holland's original hypothesis. Based on Holland's Model (1959), therapists would choose a Supportive Environment due to their "desire for attention and socialization in a structured and safe setting" (Holland, 1959). They would be verbal with good interpersonal skills, characterized as responsible, threatened by and avoid situations requiring intellectual problem solving. They would also deal with problems through feelings and interpersonal manipulations of others rather than through rationality (Holland, 1959, p. 37). Many of these statements are synonymous with our findings. The SLP students scored highly in social potency, meaning they enjoy attention and leadership roles. The SLP students also scored highly in traditionalism and social closeness, which coincides with Holland's assertion that helping professionals are responsible and have good interpersonal skills. Holland's statement that helping professionals deal with problems through feeling and not rationalism is not supported by our findings, but it does correspond with the findings of Baggs (2013). Our findings do coincide with Holland's in regards to harm avoidance. Holland describes a helping professional's work environment as "safe", and the SLP students scored highly in Harmavoidance, indicating a desire to be in a safe, comfortable environment. Holland (1959) also proclaims that helping professionals feel threatened or avoid situations requiring intellectual problem solving. Our results do not support this claim, and instead high scores in Control indicate the tendency of SLP students to be tenacious problem

solvers, who are meticulous and sometimes refer to themselves as perfectionists. Holland's theory also posits that students choose a vocation with an environment that allows their personality traits to thrive within it. Job satisfaction and retention have also been shown to depend on the extent the occupational environment complements personality (Mount et. al, 2005). It is possible that the students chose speech-language pathology because they felt that their personality would flourish within it, hoping to find a satisfying vocational environment. Being a speech pathologist permits the student to service and interact with individual's in need, allowing their trait Social Closeness to thrive. There are many opportunities within the field to lead and influence others, satisfying their need for leadership, as described by high scores on the MPQ scale Social Potency. Being a speech pathologist allows the students to be challenged intellectually and requires hard work and perseverance, qualities SLP students possess as described by achievement and control primary scales. ASHA reported that meaningfulness of job is one of the top three factors contributing to job satisfaction (SLP's prioritization of Job Satisfaction factors, n.d.). Even if the personalities of the SLP students are able to flourish and the students feel that their jobs are significant, they still may not be satisfied with their careers. Judge, Mount, and Heller (2002) as well as Ilies and Judge (2002) studied the relationship between the Big Five and job satisfaction. They found that Neuroticism correlated negatively with job satisfaction. Based on the findings of the present study, the SLP students scored highly on the MPQ trait Stress Reaction, which correlates strongly with Neuroticism. Therefore, the SLP students may have a greater tendency to be unsatisfied with their careers no matter the population or facility due to their neurotic personalities.

The personality profile obtained through this study contains some similarities to the previously described personalities of other related professions. Eley, Eley, Bartello, and Rogers-

Clark (2012) found that nurses have a need and enjoyment of caring for others, a trait best described by the primary scale Social Closeness. SLP students also scored highly on social closeness, indicating that they are also gregarious and affectionate. Larson, Wu, Bailey, Gasser, Bonitz and Borgen (2010) examined the relationship between college major and personality using the Multi-Dimensional Personality (MPQ) scales. Nine different majors were examined: Engineering, Sport and Exercise Physiology, Physical and Biological Sciences, Architecture, Humanities, Social Science, Elementary Education, Business, and Computer Science. We hypothesized that speech-language pathologists would have personalities similar to those majoring in elementary education. When mean scores are compared, Elementary education majors were similar to SLP students for the primary scales Alienation, Aggression, and Harmavoidance. Similar mean scores indicate that both of these populations feel the same degree of trust amongst their peers and they do not feel victimized, are not forceful or overly persuasive, and prefer safe environments rather than the unpredictable.

The SLP students are different than the Elementary Education Students in the Stress Reaction and Control scales. The SLP students scored higher than elementary education majors in both of these traits indicating that SLP students react more strongly to stress and are more concerned with perfectionism and order in their work and lives. The SLP students scored lower for each of the other primary traits: Wellbeing, Social Closeness, Social Potency, Traditionalism, and Absorption. In fact, the elementary education majors had the highest score on Social Closeness across the examined majors. This indicates that the elementary education have more of a tendency towards a happy disposition, a higher desire for social interaction and warmth, a greater ambition for leadership and persuasion, a higher regard for traditional values, and an increased apt for creativity than the sample of SLP students.

Other majors examined that are related to speech-language pathology include sport and exercise physiology, physical and biological science, and social science. The students who majored in sport and exercise physiology scored similarly to SLP students on the primary scales Stress Reaction, Social Closeness, Wellbeing, Achievement, Absorption, and Traditionalism. The SLP students scored lower on the Alienation, Aggression, and Social Potency scales, indicating that SLP students feel less victimized than their peers and refrain from forcefulness and leadership when compared to the sport and exercise physiology majors. The SLP students scored higher on the Control and Harmavoidance scales, indicating that the SLP students have higher standards regarding the quality of their work, and they are more avoidant of dangerous situations.

The biological science majors scored similarly to the SLP students on six of the 11 primary scales: Wellbeing, Social Closeness, Social Potency, Achievement, Absorption, and Traditionalism. The science majors have higher scores on Alienation, Stress Reaction, and Aggression, indicating that they are more suspicious of their peers, have stronger reactions to stress, and are more forceful than the SLP students. The SLP students scored higher in Harmavoidance and Control. The social science majors were similar to the SLP students in the Wellbeing, Social Closeness, Achievement, Stress Reaction, and Traditionalism Scales. The SLP students had lower scores on Absorption, Harmavoidance, Alienation, and Social Potency, which again highlights the student's desire for a safe work environment and their trusting nature, but the social science majors are more creative and have a greater enjoyment leadership and attention when compared to the SLPs.

In summary, when our findings and the results of Larson et. al (2010) are compared, the SLP students' scores on the primary scales Wellbeing and Social Closeness were comparable to

8 of the other groups, but were much lower than the scores of Elementary Education Majors. Scores on the Aggression and Alienation scales were lower than all 9 groups, but SLP scores were closest to Elementary Education majors, indicating that these two groups are the least aggressive and most trusting when compared to the other 9 groups. On the Harmavoidance scale, SLP students had the highest mean score, followed by the Elementary Education group, indicating a desire for safety and familiarity. The SLP students also scored lower than all of the examined majors on the primary scale Social Potency, and the Science majors obtained the second lowest score. The lower mean score in Social Potency may reflect that SLP students do not enjoy having an audience, are not forceful, and do not seek leadership positions as much as the other 9 majors. Control was the only MPQ primary scale higher than all the other described majors, which indicates that the SLP students may be more meticulous, deliberate, and careful in their work and planning than the students within the 9 other majors. Although we proposed that Elementary Education majors were the most similar to SLP students, the results do not support this hypothesis. The Elementary Education majors are the most similar to SLP students in regards to Harmavoidance and alienation, but the SLP students are not as cheerful and do not desire warmth and interaction to the extent of the Elementary Education Majors. The SLP student mean MPQ scores were closest to that of the physical and biological science group, as they scored similarly on 6 of the MPQ primary scales.

When examining the relationship of the aforementioned career preferences with the students' personalities, no significant differences were uncovered when examining age or facility preferences. We initially examined personality and career preferences with the goal that identified differences could assist in career counseling. If SLP students gained earlier insight into their practice preferences, internship and externship opportunities could be managed in a way

that provides exposure to the patient population the students prefer, therefore enabling students to gain experience in that area. In a survey on job satisfaction in speech-pathologists, 27% of professionals reported that they had changed facilities within the last 3 years (Zingesser, 2004). Assisting SLP students in discovering their preferences early may help eliminate early job dissatisfaction. Many investigators have previously evaluated the relationship between personality and specialty choice. Some have found that personality does differentiate across specialties (Rovenzzi-Carroll and Leavitt, 1984; Mehmood, Khan, Walsh, and Borleffs, 2013; and Hojat and Zuckerman, 2008). Others did not report significance between personality and career choice (Borges and Savakis, 2002; Myers & Davis, 1976; and Friedman & Slatt, 1988). The present study falls within the latter group. The hypothesis that personality can differentiate between specialty choices was not proven in the context of this investigation. Our Findings reveal a wide variety of personality types within age and facility preferences; therefore, student training and educational placements cannot be based on personality type. Factors other than personality may be more useful in the early identification of career preferences for SLP students. Specifically, educational experiences, such as various clinical practicums, may have a large impact on eventual career preference. Students and professionals may identify their preference based on previous experiences alone. SLP students may also choose a population or career based on various vocational factors such as monetary reimbursement and flexibility of schedule rather than personality.

### **Limitations**

The present study does contain limitations. The sample size was large enough for power, overall, but it was impossible to control for sample size across facilities and age preference.

Perhaps with a larger initial group of respondents, the choice distributions could be normalized and personality types could be more adequately compared. We did combine facility groups into two large categories; healthcare and school, in an attempt to normalize the distribution, but results were not significant. On the demographic questionnaire, we limited the student's vocational choices to only one choice instead of allowing them to make multiple choices. Working with only one population in one setting is not common in the field of speech-language pathology. Professionals may be generalists who provide services to a wide range of individuals, may choose a single facility and provide services to multiple age populations, or they may choose a single patient population but work within many different types of facilities. For analytical purposes, we chose to limit the preferences of the respondents in order to make comparisons between groups. Because we limited vocational choices, the results may not be an accurate reflection of the broader career preferences of the participants. Another limitation of the present study is that we did not analyze the MPQ results for gender differences. We did not obtain the sex of the SLP students in the demographic questionnaire; however, previous studies did not separate for gender during vocational analysis, and no significance was found when gender interactions were examined (Larson, Wu & Bailey, 2009; Caspi et. al, 2003; Baggs, 2013). Additionally, in the normative data for the MPQ provided by Tellegan (n.d.c), assessment results and scores were not separated by or corrected by sex differences. Because the field of speech-language pathology is female dominated, the proportion of males within the sample may not have been large enough to affect generated personality results.

## **Future Research**

Career aspirations expressed by SLP students during their undergraduate/graduate careers may not reflect their careers as certified SLPs. An investigation of the personalities of current professionals may provide more reliable insights into the personality traits that distinguish different age and facility choices. Instead of focusing on age/facility preference, investigators may examine the relationship between personality and specialty in one of the many areas of our field such as swallowing, child language, or voice. Now that we have the means and standard deviations for the 11 primary scales for SLP students, they can be compared to the means and standard deviations for other vocational choices to determine the degree of convergence or divergence between SLPs and other professionals.



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## Appendix A

Dear Department Head,

I am currently a graduate student in Speech-Language Pathology at Auburn University. I am conducting research this summer regarding the personality of speech language pathology students and their corresponding career preferences, such as preferred age group and facility choices. All data is being collected via survey through Qualtrics. This survey will ask a variety of questions about career preferences and will contain a personality assessment, the Multidimensional Personality Questionnaire. The survey should take no longer than 30-40 minutes to complete. I need 100-150 participants from across the country, and we hope students from UNIVERSITY NAME will participate. Please forward the email below (*link to recruitment survey*) to all of your current graduate and undergraduate speech-language pathology students and encourage them to complete my survey.

If you have any questions or would like more information please do not hesitate to contact me! Thank you so much for your assistance in this research project.

Thank you,  
Morgan Leonard

## Appendix B

Dear Student,

I am a graduate student in the Department of Communication Disorders at Auburn University. I would like to invite you to participate in my research study to uncover the personality profile of speech-language pathology students and the personality profiles of students categorized by preferred patient age preference and preferred career settings. You may participate if you are a student above the age of 19 and currently enrolled in graduate or undergraduate coursework studying Speech-Language Pathology.

Participants will be asked to complete a survey containing a demographic questionnaire and a personality assessment. The demographic questionnaire will gather information regarding your background information and the patient age preference and facility you are most interested in working with. The survey will take 30-40 minutes to complete.

Your participation could greatly increase our knowledge of the type of students who pursue a degree in Speech-Language Pathology. Knowledge of personality traits found in those students who prefer certain age groups and settings (e.g. hospital) may also be discovered. Findings may contribute to the determination of career choices and the counseling of speech-language pathology students by professional faculty in the future.

If you would like to know more information about this study, an information letter can be obtained by providing your email below. Once providing your email, you will be sent a link to the research survey.

If you have any questions, please contact me at [cmv0003@auburn.edu](mailto:cmv0003@auburn.edu) or my advisor, Dr. Laura Plexico, at [lwp0002@auburn.edu](mailto:lwp0002@auburn.edu).

Thank you for your consideration,  
Morgan Leonard

If you would like to participate in the described research study, please enter your email address below. A link to the survey will be sent directly to the email provided:

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## Appendix C

*(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS AN IRB APPROVAL INFORMATION CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)*

### **INFORMATION LETTER for a Research Study entitled**

### **“The Role of Personality in Career Preference of Speech-Language Pathology Students”**

**You are invited to participate in a research study** to uncover the personality traits of Speech-Language Pathology students in general and the personality traits of students according to indicated career preferences. The study is being conducted by Morgan Leonard, graduate student, under the direction of Dr. Laura Plexico, Associate Professor, in the Auburn University Department of Communication Disorders. You are invited to participate because you are an undergraduate or graduate speech-language-pathology student and are age 19 or older.

**What will be involved if you participate?** Your participation will be completely voluntary. If you choose to participate in this research study, you will be asked to complete an electronic survey regarding your career preferences and personality. Your total time commitment will be approximately 30-45 minutes.

**Are there any risks or discomforts?** The risk associated with participating in this study is the possibility that the answers to the survey may be intercepted between the participant’s computer and Qualtrics.com. To minimize these risks, we will collect all data anonymously and all answers to survey questions are de-identifiable. You should not experience any discomfort in participating in this study.

**Are there any benefits to yourself or others?** If you participate in this study, you can expect to help further current knowledge of the personality of speech-language pathology students and associated career preferences. We/I cannot promise you that you will receive any or all of the benefits described. Benefits to others may include better information regarding personality of students within the field as well as contributions to career counseling or the determination of career choices of students.

**Will you receive compensation for participating?** There is no compensation for completing this survey; however, your participation would be greatly appreciated.

**Are there any costs?** There are no costs associated with participating in this study except for the 45 minutes of your time it takes to complete the survey.



## Appendix D

1. I have read and understood the above consent form and desire of my own free will to participate in this study.
  - Yes
  - No
  
2. What is your age?
  - 18-60
  
3. What is your race?
  - White/Caucasian
  - African American
  - Hispanic
  - Asian
  - Native American
  - Pacific Islander
  - Other \_\_\_\_\_
  
4. What is your current status?
  - Single
  - Married
  - Living with partner
  - Divorced
  - Separated
  - Widowed
  
5. Do you have children?
  - Yes
  - No
  
6. The following describes my belief system.
  - My faith is important to me
  - I am spiritual
  - I am not spiritual, and my faith is not important to me.
  - I choose not to answer this question

7. What level of education are you currently receiving in the field of Speech-Language Pathology?

- I am currently enrolled in Undergraduate Coursework
- I am currently enrolled in Graduate Level Coursework
- I am not currently enrolled in undergraduate or graduate coursework in the field of Speech Language Pathology

8. You indicated that you are an undergraduate student. How decided are you that you want to pursue a career and receive a graduate degree in Speech-Language Pathology?

I am ----- about my future career as a speech-language pathologist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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9. In what state is this university located?

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri

- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming
- I do not attend school in the United States

10. In which state do you currently reside? For out of state students, please select your home state rather than the state you attend school.

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa

- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming
- I do not reside in the United States

11. Please indicate the estimated hours of clinical practicum you have completed.

- Less than 50 Hours
- 50-100
- 100-150
- 150-200
- 200-250
- 250-300
- 300-350



- 350-400
- 400-450
- 450 +

The following questions will ask you to indicate your preferred age and setting preferences for your future career as a speech-language pathologist. In other words, what age group would you most like to work with upon graduation? What setting would you like to work in upon graduation? Above each question is a description the facility choices. Please refer to the descriptions when indicating career preferences.

1. Please indicate the average age of the patients you prefer to work with in your future career
  - a. Children: Birth-18
  - b. Adults: 19 and older
  
2. You have indicated that you wish to work with children. Which of the three populations are you most interested in working with?
  - Early Intervention: Birth to 4
  - Primary School Age: 5-10
  - Secondary School Age: 11-18

Would you prefer to work with Children Birth to 4 in the...

- Healthcare Setting
- School

In which of the following healthcare settings would you most like to work with children Birth to 4

- Acute Care/Pediatric Hospital
- Rehabilitation Facility
- Home Health
- Outpatient Clinic/Office

Would you prefer to work with Primary School age Children in the...

- Healthcare Setting
- Primary School

In which of the following healthcare settings would you most like to work with primary school children?

- Acute Care/Pediatric Hospital
- Rehabilitation Facility
- Outpatient Clinic/Office
- Home Health

Would you prefer to work with Secondary School age Children in the...

- Healthcare Setting
- Secondary School

In which of the following healthcare settings would you most like to work with Secondary School children?

- Acute Care/Pediatric Hospital
- Rehabilitation Facility
- Home Health
- Outpatient Clinic/Office

3. In which of the following healthcare settings would you most like to work with Adults?

- Acute Care Hospital
- Rehabilitation Facility
- Assisted Living/Skilled Nursing Facility/Nursing Home
- Home Health
- Outpatient Clinic/Office

4. How decided are you on your aforementioned age preference?

I am ----- on my future age preference mentioned above	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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5. How decided are you on your aforementioned facility preference?

I am ----- on my future facility preferences mentioned above	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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