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OFFICE OF GRADUATE STUDIES**

**A SURVEY OF FIRST YEAR SPEECH-LANGUAGE PATHOLOGY AND
AUDIOLOGY GRADUATE STUDENTS ON THE GRADUATE SCHOOL
APPLICATION PROCESS**

by

Kimberly L. Amrod

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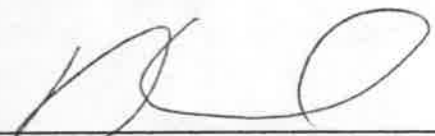
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Jennifer L. Smart, Ph.D.
Chairperson, Thesis Committee Signature

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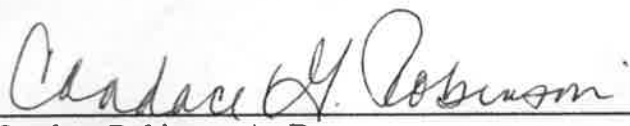
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Diana C. Emanuel, Ph.D.
Committee Member Signature

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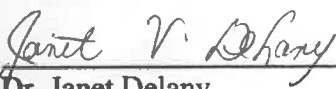
Date



Candace Robinson, Au.D.
Committee Member Signature

5/12/15

Date



Dr. Janet Delany
Dean of Graduate Studies Signature

May 12, 2015

Date

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Abstract

A Survey of First Year Speech-Language Pathology and Audiology Graduate Students on the Graduate School Application Process

Kimberly Amrod

Limited information is available on how students interested in pursuing a career in the Communication Sciences and Disorders (CSD) field feel about the graduate school application process. A shortage of professionals within both audiology and speech-language pathology has become an issue of concern for CSD graduate programs, who are responsible for the training of these individuals, as well as the American Speech-Language-Hearing Association (ASHA) who accredits CSD graduate programs, due to several known barriers that are preventing a widespread growth of professionals in these fields. A pilot survey was administered to 100 first year CSD graduate students to obtain information regarding their recent rationale for selecting their respective career path and their experience with the graduate school application process. Results from this study confirmed the need for academic programs to do the following: improve recruitment efforts, evaluate the students' criteria for selecting a graduate program, and clarify the importance of certain application materials used by graduate admission committees to students interested in applying to CSD graduate programs.

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Key to Abbreviations

ASHA: American Speech-Language and Hearing Association

Au.D.: Doctor of Audiology

CANS: Central Auditory Nervous System

CAPCSD: Council of Academic Programs in Communication Sciences and Disorders

CCC: Certificate of Clinical Competence

CF: Clinical Fellowship

CFCC: Council for Clinical Certification

CSD: Communication Sciences and Disorders

GPA: Grade Point Average

GRE: Graduate Record Examination

IDEA: Individuals with Disabilities Education Act

IRB: Institutional Review Board

KASA: Knowledge and Skills Acquisition

NSSLHA: National Student Speech Language Hearing Association

Ph.D.: Doctor of Philosophy

Q&A: Questions and Answers

SLP: Speech-Language Pathology

SPSS: Statistical Package for the Social Sciences

U.S.: United States

CHAPTER 1

INTRODUCTION

Communication Sciences and Disorders (CSD) is the umbrella term commonly accepted in the field to describe an undergraduate major that offers a pre-professional course of study to prepare students for graduate school in speech-language pathology or audiology. Other career tracks; however, are available for CSD undergraduate students to pursue after graduation if they do not want to pursue a career in audiology or speech-language pathology. Common alternative careers that audiologists and speech-language pathologists have reported considering were in the fields of education, psychology, medicine and physical therapy (Doyle & Freeman, 2002; Hyman & Shewan, 1987). For students who are interested in attending graduate school for speech-language pathology or audiology, a decision of which career track to pursue must be made (typically before the fall of a student's senior year as graduate school applications are typically due in January each year). Both career paths require a graduate degree for entry-level positions.

Undergraduate CSD programs act as a direct pipeline for audiology and speech-language pathology graduate programs (Ackley, Mahshie, & Lasasso, 2004; Emanuel, Donai, & Araj, 2012). According to the U.S. Bureau of Labor Statistics (2008-2009), a 25% increase in the number of audiologists is needed to meet the demands of the hearing population. This increase in demand has been attributed to retiring audiologists, personnel shortages, and a decline of undergraduate CSD student enrollment (Ackley et al., 2004; Emanuel et al., 2012). A recent study suggested that graduate programs reconsider current recruitment strategies, and investigate factors that influence students' decisions to pursue a career path in CSD (Emanuel et al., 2012). More opportunities to

promote awareness of both audiology to the general public, specifically high schools and undergraduate programs, are needed to address these shortages (Emanuel et al., 2012).

Students interested in continuing their education in CSD often struggle in deciding which career-track to pursue for graduate school. Both audiologists and speech-language pathologists share similar goals of improving communication and quality of life for individuals who receive their services, despite both careers being different fields. Clinical exposure and practicum experiences have shown to help students select which profession to pursue at the graduate level (Ash, Clayton & Atkinson, 2005; Terrizzi, 1988). Examining the similarities and differences of the professions, and vocational interests/personality traits of CSD students, may help students differentiate between which career-track to pursue (Evans, 2003).

Students' decisions about the CSD graduate application process has not been studied in recent years. A survey performed by Rockwood and Madison (1993) found that CSD students in the process of applying to graduate school and current CSD students ranked similar reasons for applying to graduate programs. The two groups differed in their rationale for accepting admission to a specified graduate program. Pannbacker, Lass, & Middleton (1996) compiled a paper titled "Selecting a Doctoral Program in Communication Sciences and Disorders" in the *National Student Speech Language Hearing Association Journal* to serve as an informative source for students to use during the graduate school decision-making process. Various selection criteria previously used by students during this process were comprised. A current understanding of which selection criteria students are currently using is important to both the graduate admissions committees and the students applying to graduate school.

CHAPTER 2

LITERATURE REVIEW

The Field of Communication Sciences and Disorders

A bachelor's degree in CSD is offered by many universities in the United States (U.S.). The name of the major in undergraduate programs varies across universities (e.g., University of Tennessee - Audiology and Speech Pathology; University of Maryland - Hearing and Speech Sciences; James Madison University- CSD, etc.) but all are focused on educating students in the areas of speech-language pathology and audiology, in addition to other main areas of CSD (e.g., hearing science and speech science). A main goal of CSD programs is to prepare students to continue training at the graduate level (Lew et al., 2012). For consistency in this paper, CSD will be used throughout when referring to all undergraduate programs in speech-language pathology and audiology.

CSD students are exposed to several different content areas in their coursework, all related to communication sciences and/or disorders. Undergraduate CSD programs include course work in the basic communication processes (anatomy/physiology, physical, linguistics/psycholinguistics), disorders/pathologies (speech, language, hearing), evaluation/diagnostics (speech, language, hearing), remediation/management (speech, language, hearing), and clinical practicum (Terrizzi, 1988). Terrizzi (1988) found that there were minor differences in the mean number of undergraduate practicum hours and number of credits required in the humanities between the CSD programs surveyed. While the type of degree offered by the institution (e.g., bachelor of science vs. bachelor of arts) can often impact differences seen in the required credit hours and/or

general education requirements. Overall, it was noted that undergraduate CSD students receive similar coursework across institutions (Terrizzi, 1988).

Students interested in going to graduate school to become a speech-language pathologist or audiologist will need to make a decision on which discipline to pursue their graduate degree in by the fall of their senior year. While the undergraduate curriculum in CSD is similar the graduate coursework and degrees are vastly different. The training to become a speech-language pathologist primarily focuses on the diagnosis and treatment of communication and swallowing disorders, whereas the training to become an audiologist concentrates on the diagnosis and treatment of hearing and balance disorders (ASHA, 2010). Both professions train students to perform diagnostic assessments, recommend appropriate treatments, consume research of communication disorders related to their clinical focus, and use rehabilitation tools to improve communication function (Lew et al., 2012).

Job Outlook. According to the U.S. Bureau of Labor Statistics (2008), a 25% increase in the number of audiologists is needed to meet the demands of the hearing population (U.S. Department of Labor, 2008). This high level of demand noted in the U.S. Bureau of Labor Statistics (2008) is attributed to the lower enrollment numbers of students in undergraduate CSD programs and retiring audiologists at the time the statistics were obtained (Ackley et al., 2004; Emanuel et al., 2012). ASHA recognized the need to improve recruitment efforts, especially in the school setting (ASHA, 2007). Findings of the U.S. Bureau of Labor Statistics (2010) project the need of an additional 14,000 speech-language pathologists to account for personnel shortages, further supporting ASHA's push to improve recruitment efforts. Additionally, the change in

employment (occupational growth rate) for audiology from 2012-2022 is projected to be 34%, well above the average occupational growth rate of 11% (U.S. Department of Labor, 2014). The growth rate for speech-language pathology is similarly projected to be above average at 19% over the same time period, indicating a high job outlook for upcoming professionals to the field (U.S. Department of Labor, 2014).

Obstacles for the Field of CSD

General visibility of CSD as a major and career path is overall low (Emanuel, Donai, & Araj, 2012). Students are typically unaware of the field until taking a college undergraduate course in CSD (Doyle & Freeman, 2002; Rockwood & Madison, 1995). A pilot study surveying new college students at California University of Pennsylvania in 2003 found that only 12% of the students were well aware of the CSD undergraduate major (Emanuel et al., 2012). When administered five years later, the awareness rose to 17% in the entering students at the same institution (Emanuel et al., 2012). This study's findings support that the efforts to improve recruitment to the CSD major have not worked at this university (Emanuel et al., 2012).

Recruitment Considerations. The demonstration of “career commitment” by students from such an early age should be considered by academic programs during the marketing efforts (Stith et al., 1998). Concerns surrounding known shortages in the CSD field, as well as other health professions (e.g., physicians), must be addressed (ASHA, 2004; Cooper, 2007). Recruiting bright and able students to graduate programs is necessary to increase the overall output of healthcare professionals to meet population demands (Cooper, 2007). It has been shown that medical, dentistry, optometry, and physical therapy students are less likely to switch career paths the earlier the initial

interest in the field is developed (Knight, 1973; Levine, 1978; Pavalko, 1964; Rogoff, 1957; Stith, Butterfield, Strube, Deusinger & Gillespie, 1998). Extending recruitment efforts towards the younger population may help reduce current shortages within the health professions field (Stith et al., 1998).

Besides extending recruitment efforts towards the younger population, CSD academic programs should extend marketing efforts towards individuals with various interests and backgrounds. Audiology, as a career, could be appealing to students in other majors (e.g., those interested in medicine, sciences/engineering, physical or occupation therapy, psychology or sociology) (Emanuel et al., 2012). Additionally, health and education students have consistently demonstrated the greatest interest in taking CSD courses; hence, recruiting efforts should target these students (Emanuel et al., 2012). Previous studies have also shown that speech-language pathologists and audiologists expressed interests in education, psychology, medicine and/or physical therapy as alternative occupation(s) (Doyle & Freeman, 2002; Hyman & Shewan, 1987). If students who eventually pursue CSD have also expressed an interest in field such as education, medicine, physical therapy, etc., it is not unlikely that students in these fields may be interested in CSD. By appealing to a broader population of undergraduate students, perhaps CSD graduate programs can become more diverse.

Preparation of CSD Students for Graduate School

CSD students have expressed feeling poorly prepared for graduate school due to a lack of exposure and information to make an informed decision about which career to pursue (e.g. speech-language pathology vs. audiology) (Brodsky & Cooke, 2000). In a study performed by Davenport and Kennedy (1996), 50% of the audiology graduate

students surveyed (n=378) rated their undergraduate coursework preparation as fair to poor. Of those students, 85% had a CSD degree. Many students reported the desire to restructure the undergraduate curriculum with a greater focus on audiology-based coursework, as opposed to the overwhelming amount of course work they received in speech-language pathology (Davenport & Kennedy, 1996). Additionally, 73% of audiology graduate students favored the option to pursue an undergraduate track/emphasis in audiology at the undergraduate level (Davenport & Kennedy, 1996). In regards to making a decision between CSD career paths, 41% of audiology graduate students and 52% of audiologists felt they did not have enough information to make an informed decision between which career-track to pursue (Brodsky & Cooke, 2000). These numbers were lower for speech-language pathology graduate students (29%) and speech-language pathologists (22%); however, overall, perspectives indicated a need for additional field exposure and career information (Brodsky & Cooke, 2000). By including more audiology related courses and/or putting these courses earlier in the curriculum, undergraduate CSD programs can better ensure students can make a more informed decision about graduate school.

Deciding between Graduate Programs: Speech-Language Pathology or Audiology

CSD undergraduate students interested in pursuing graduate school often struggle in deciding which career track to pursue. In fact, over 90% of audiology graduate students admitted to having considered an alternative career, and felt they would have been equally satisfied in another career such as education, medicine, pharmacy or physical therapy (Doyle & Freeman, 2002). This may be due to a lack of information about the CSD professions, and similar reasons across fields, for entering the professions

(Brodsky & Cooke, 2000). Students exposed to a variety of clinical experiences in both fields could provide reassurance to students selecting a career-track (Brodsky & Cooke, 2000). Most undergraduate programs incorporate clinical practicum into the curriculum which can help students decide on a career path for graduate school and/or assist with a focus for their careers (Terrizzi, 1988). Service learning integrates collaborative teaching and learning strategies to enhance academic knowledge and personal growth and involvement; however, it is not routinely incorporated in to CSD undergraduate programs (Ash, Clayton & Atkinson, 2005).

Similarities in the professions of speech-language pathology and audiology, such as the demographics within the professions, the motivating factors to practice, and the diverse practice settings, can make the decision to select a specific discipline for graduate school even more challenging (Evans, 2003). Both professions also share a national organization (e.g. American Speech-Language Hearing Association) and an undergraduate major, therefore, examining the differences (rather than similarities) between the professions may provide more useful information to undergraduate students making this decision.

Similarities between the Professions. One of the several similarities that exist between the professions of audiology and speech-language pathology is the current demographics within the professions. The Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) and ASHA jointly publish an annual CSD Education Survey National Aggregate Data report highlighting student demographics, enrollment, number of applicants and acceptances to CSD graduate programs, etc. (CAPCSD Education Survey, 2013). Recent results from the survey

indicated most students enrolled in the CSD undergraduate major, as well as graduate speech-language pathology and audiology, programs are female, white, and able bodied (CAPCSD Education Survey, 2013). This demographic profile is consistent with previous aggregate surveys and demographics of those currently practicing in the field of audiology and speech-language pathology (CAPCSD Education Survey, 2011; CAPCSD Education Survey, 2012). ASHA has attempted to improve the diversity of both professions through implementing various recruitment opportunities in secondary schools in areas of high diversity (e.g. minorities in Boston, Massachusetts) (Margulies-Hochman, Herskovitz, & Graboski, 2008). These efforts included constructing teaching models to present to juniors and seniors in high school during their career exploration courses to instill interest in CSD careers as they start considering post-secondary school opportunities (Margulies-Hochman et al., 2008). The low level of males in both professions is thought to be due to constructed views and social expectations of allied health professions (mostly women) as nurturers and communicators. This notion may be deterring young males from pursuing speech language pathology or audiology, and contributing to the gender imbalance seen in the CSD professions (Litosseliti & Leadbeater, 2012). More research is needed to identify why males seek alternative careers to the CSD field, and to understand why this demographic trend of white females has remained constant for so many years (Litosseliti & Leadbeater, 2012).

Motivating Factors to Practice. Similar motivating factors are shared by CSD students and professionals to enter the field (Brodsky & Cooke, 2000; Byrne, 2007; Doyle & Freeman, 2002; Evans, 2003; Keshishian & McGarr, 2012; Lass et al., 1995). Personal influences, educational influences and employment have been reported to be a

strong influence in the career decision to become a speech-language pathologist or audiologist (Brodsky & Cooke, 2000; Rockwood & Madison, 1993). The most common motivating factor reported by undergraduate and graduate students in the CSD field was the desire to work in a helping profession (Brodsky & Cooke, 2000; Lass et al., 1995; Rockwood & Madison, 1993). Professionals within the field of speech-language pathology and audiology expressed a high level of career satisfaction, and expressed helping others, working with people of all ages, interesting coursework and earning a comfortable living as attractive aspects of the field (Lass et al., 1995). Undergraduate and graduate CSD students also expressed positive feelings towards their decision to enter the CSD field, with the majority of students stating they were “very satisfied” or “satisfied” with their major choice (Lass et al., 1995). Other qualities of the CSD major seen as influential to students included interesting work, instructor quality, opportunities for clinical experience, and interacting with people (Byrne, 2007; Keshishian & McGarr, 2012; Lass et al., 1995). Due to such similar motivating factors to enter the field, one can see why CSD students would struggle with selecting a career path in audiology vs. speech-language pathology.

Diverse Work Setting. Both audiologists and speech-language pathologists can work in a variety of settings. Practice settings for audiology may include medical-based settings, privately-owned practices, college/university clinics, government agencies, and schools (ASHA, 2010). Speech-language pathologists, similarly, have the option to work in settings that include schools, hospitals, rehabilitation facilities such as nursing homes, early intervention organizations, and private practices (ASHA, 2007). Potential CSD graduate students, thus, may have a difficult time deciding which career-track to pursue

as each career offers a variety of environments to work in and diverse patient populations.

Differences between the Professions. Speech-language pathologists differ from audiologists in several aspects related to clinical services, specialty area, and professional role. As defined under ASHA's scope of practice, a speech-language pathologist "is the professional who engages in clinical services, prevention, advocacy, education, administration, and research in the areas of communication and swallowing" for those of all ages (ASHA, 2007, p 1). Communication problems include areas related to language, feeding and swallowing and cognition (ASHA, 2007). Clinical services provided by speech-language pathologists largely include the screening and assessment of speech, language, and/or swallowing disorders. The scope of practice for speech-language pathology has grown over the past years, largely due to the increased use of collaborative models of care (Shulman et al., 2009). Government mandated laws and regulations, such as the Individuals with Disabilities Education Act (IDEA) and No Child Left Behind Act, have caused a gradual increase in the caseload of speech-language pathologists, and demand for more specialized knowledge (Shulman et al., 2009). Speech-language pathologists will increasingly face issues related to role ambiguity as their professional boundaries start to expand (Shulman et al., 2009).

Audiologists, just like speech-language pathologists, are autonomous professionals who provide diagnostic and rehabilitative services to people across the lifespan with auditory-related communication difficulties and/or balance disorders. A variety of comprehensive services that are provided by licensed audiologists assess the function and structure of the outer, middle, and inner ear, the VIIIth cranial nerve, the

Central Auditory Nervous System (CANS), and the vestibular system. Hearing aid dispensing, as well as cochlear implant evaluations, also falls under the audiologists scope of practice (ASHA, 2004).

Licensure and Degree Requirements. Standards for clinical certification in audiology and speech-language pathology are defined by a credentialing body of ASHA called the Council for Clinical Certification (CFCC) in Audiology and Speech-Language Pathology (Council for Clinical Certification, 2013). Many of the differences associated with licensure and certification requirements are attributed to the terminal degree required for each discipline (e.g., the current entry-level degree requirement for speech-language pathology is a master's degree, whereas the requirement for audiology is a clinical doctorate). On average, graduate students in audiology need 11 semesters or 15 quarters to complete their program, whereas speech-language pathology students can complete their program in five semesters (CAPCSD Education Survey, 2013). All graduate clinical experience and coursework must be completed at a Council on Academic Accreditation (CAA) accredited speech-language pathology or audiology program. Applicants for certification must complete a program of study that includes academic coursework and supervised clinical experience, successfully complete a Clinical Fellowship (CF), and pass a field-specific national examination adopted by ASHA. The CF in speech-language pathology must consist of no less than 36 weeks of full-time professional experience (or a part-time equivalent), whereas the CF in audiology is typically one full year or at least 48 weeks (Council for Clinical Certification, 2013). All graduate CSD students must successfully demonstrate knowledge and skills outlined

in their respective field's Knowledge and Skills Acquisition (KASA) standards (Council for Clinical Certification, 2012).

Vocational Interests. Separate vocational interests and personality traits of students have been successfully separated and associated with each profession (Evans, 2003). In a study by Evans (2003), a self-administered interest inventory was piloted to speech-language pathology and audiology graduate students at Towson University, as well as current professionals. Through this study, clear differences in vocational preferences and personality traits of speech-language pathologists and audiologists were seen. Speech-language pathologists and speech-language pathology graduate students indicated a preference to work with kids and enjoyed the social sciences, whereas audiologists and audiology graduate students preferred to work with older adults and preferred the physical sciences (Evans, 2003). Furthermore, those in the speech-language pathology field were more generally more creative and treatment-focused, in comparison to those in the audiology field who were more technical and diagnostic-focused (Evans, 2003). These results indicated that CSD students facing a difficult time choosing between the two career-tracks should consider taking an interest inventory to assess personality traits and vocational interests, or attend career counseling (Evans, 2003).

Graduate School Application Process

Applying to graduate school is a major decision for college students (Peterson, 1993). The decision to apply to graduate school is largely influenced by an individual's beliefs and attitudes towards graduate school, and their intrinsic motivation (Ingram, Cope, Harju & Wuensch, 2000). A self-assessment of personal strengths and weaknesses, interests, skills and career goals can provide a student insight as to whether graduate

school is the right option for the individual (Peterson, 1993). Once the decision to attend graduate school has been made, students must take the time to research prospective academic programs. It is important that students understand the quality, program goals and requirements of individual graduate programs as students' academic ignorance has led to increased attrition rates from graduate programs (Bain et al., 2010). It is important that students select programs that are a good climate and fit (Bain et al., 2010).

ASHA's online directory, EdFind, can assist students in their research process. EdFind provides information on all CSD undergraduate and graduate programs (Appler, 2006). Students have the option to browse by name of program, area of study, degree type, location, CSD study abroad opportunities, combined degree programs, distance education offerings, and other various options. Information specific to application requirements, number of applications received, admission offers and target class size is also provided per program to help students understand the competitiveness of each program. The CAA also requires accredited academic programs to post student achievement data on each program's website (e.g. completion rates, Praxis performance, and employment rates) (ASHA, 2014). By researching all aspects of an academic program, students can better ensure that they are applying to graduate programs that meet their wants, needs and expectations.

Applications. Speech-language pathology and audiology graduate programs are highly competitive. The graduate programs receive many applications from strong students (ASHA, 2015). Currently 74 institutions offer an entry-level clinical doctorate program in audiology, and 251 institutions offer a master's in speech-language pathology in the U.S., most of which receive applications that far outnumber available seats

(CAPCSD Education Survey, 2013). This has led to increased number of rejections of qualified students due to capacity limitations of academic programs (ASHA, 2015). Unfortunately at this time academic programs cannot simply accept more students into their programs without adding faculty, and/or likely sacrifice program quality (Windmill, 2013). If a student does not get into graduate school there are limited resources to help guide them on how to proceed (e.g., retake the GRE, apply to more schools, consider second bachelor's degree, etc.) therefore personal blogs are currently one of the few places to find advice on what to do next. One blogger suggested CSD students should apply to multiple programs to increase chances of acceptance (Speechy Musings, 2013). This includes applying to schools in different tiers of competitiveness (e.g., apply to schools in a competitive tier, comfortable tier, and safe tier) (Speechy Musings, 2013). It has also been suggested that applicants should apply to programs they would only seriously consider attending, as application costs are expensive (Zepeda, 2007).

There are a variety of application requirements (e.g., pre-requisite course, minimum grade point average (GPA), minimum Graduate Record Examination (GRE), etc.) that students must sift through before filling in the application. Additionally, there are variations between application materials across programs. Most programs will not consider a GPA less than a 3.3 (Polovoy, 2014). The median GPA range for students offered admission to an audiology graduate program is a 3.23-4.00, which is similar to the range of 3.29-4.00 for speech-language pathology programs (CAPCSD Education Survey, 2013). Fulfilling all of the application requirements is of high importance to graduate program admissions officials (e.g., Montclair University's CSD department will

not even consider applications in which the student has missing material or outstanding pre-requisites).

Students should also consider that each piece of the application is important because programs also weigh admission criteria differently in terms of what is important to their program (Polovoy, 2014). For example, the University of Pittsburgh and University of South Carolina rate GPA and GRE scores as the most important aspects of an application (Polovoy, 2014). Other schools; however, may rely more on personal communication skills and clinical experience (Polovoy, 2014). It is important to understand what is favorable, and more importantly required, by each program as the “best” application varies significantly by program.

Selecting a Graduate School Program

CSD academic programs have limited and outdated information available to review as to why and how students select and accept their graduate programs (Condon, 1983; Rockwood & Madison, 1993). A decline in students enrolled in CSD training programs, and anticipated demands of both professions, have heightened the need for more effective recruitment tools (Rockwood & Madison, 1993). Surveys have previously been utilized to obtain information as to how and why students selected and entered the CSD field (Condon, 1983; Rockwood & Madison, 1993). Questions geared towards how students select a particular graduate program could also provide useful information to those responsible for recruiting CSD students (Rockwood & Madison, 1993). Rockwood and Madison (1993) and Condon (1983) provided some insight as to the criteria CSD students at the time (20-30 years ago) were using to select CSD graduate programs. Current and prospective graduate CSD students of that study stated they were most

influenced to apply to a particular program based on location, program reputation, reputation of the university and the practicum facilities (Rockwood & Madison, 1993). In regards to the decision to accept a graduate program, prospective students of the study were most influenced by location, program reputation, reputation of the university, cost, and practicum facilities (Rockwood & Madison, 1993). These meaningful influences changed slightly for current graduate CSD students of the same study, as they ranked program reputation as the most influential, followed by location of school, reputation of university, practicum facilities, and personal contact with a faculty member (Rockwood & Madison, 1993). In the study by Condon (1983), CSD graduate students (chosen at random from twenty universities from the 1980 *Guide to Graduate Education in Speech-Language Pathology and Audiology*) were asked to rate 33 items on a three-point scale as to how influential the item was in their decision to select a graduate program (Condon, 1983). The top-5 ranked items, in order, included practicum facilities, program reputation, number of different course offerings, cost, and average level of training of faculty (Condon, 1983). Therefore, some variation can be seen through the years as to which factors were most important to students when selecting a CSD graduate program.

Selection Criteria. Selecting a graduate program should be based on an “objective analysis” of several factors, requiring a significant amount of research by the student (Pannbacker et al., 1996). Ludlow (1986) stated that “particular care” is needed when selecting a doctoral program in CSD; however, limited information exists on which to base such an important decision. For such reasons, Pannbacker et al. (1996) derived a list of several factors from the literature to be analyzed for students during the graduate school application process. Factors were categorized into four main sections: facility

(e.g., reputation, location, nearness to home, size, support services, history, safety), financial (e.g., cost, support, qualifications for in-state tuition), academics (e.g., reputation, course offerings, duration of program, credit requirements, class size, admission requirements, selectivity), and clinic (e.g., clientele). By making selection criteria more explicit to prospective CSD graduate students, students may have an easier time finding appropriate programs (Pannbacker et al., 1996).

Statement of Purpose

The overall aim of this study was to obtain information from both first year audiology and speech-language pathology graduate students about their recent career choice and feelings towards the graduate school application process.

CHAPTER 3

METHODS AND MATERIALS

Participants

Participants were recruited from the three Maryland universities that have graduate programs in speech-language pathology and/or audiology (Towson University, Loyola University, and University of Maryland, College Park). All participants were first year speech-language pathology or audiology graduate students. The study was submitted to the Institutional Review Board (IRB) prior to data collection and an exemption was obtained (Appendix A). Participants completed consent forms prior to completing their surveys. A blank consent form can be seen in Appendix B.

Survey Instrument Design

A survey titled: “A Survey of First Year Speech-Language Pathology and Audiology Graduate Students on the Graduate School Application Process” was provided to recruited schools in paper format during the Spring 2015 semester. Each school received the exact number of copies they needed for their cohort. The graduate program directors and/or chairperson were contacted at each university to request permission to recruit their students. The graduate program directors then assisted the researchers in finding a time that would not be disruptive to the academic program for administration of the survey. Professors in the respective academic programs administered all surveys before or after class.

The survey questionnaire consisted of three main topic areas: motivating factors for selecting speech-language pathology or audiology, the graduate school application process, and demographics/student profile. Section one aimed to investigate the ‘when’ and ‘how’ participants became aware of the field and profession, if they majored in CSD,

and motivating factors for how they selected the career path. Section two asked participants to provide insight as to how many schools they applied to, their acceptance percentage, selection criteria that influenced their decision to accept admissions into their graduate program, and their level of certainty in applying to graduate school. Participants were also asked how they learned about the graduate school application process, and what steps they would have taken if they had not received admissions into any program. Lastly, section three asked participant's to provide demographic and academic background information (e.g. age, gender, ethnicity, hometown region, current and past university, current academic program, and undergraduate GPA and best GRE scores).

The survey consisted of open and closed-set questions with various formats: yes/no, multiple choice, fill in the blank, and ratings using a Likert scale (1-5). Participants were given the option to select "other" and handwrite in responses or comments wherever applicable. Many questions were developed based on a review of previous surveys conducted by Rockwood & Madison (1993), Condon (1983), Pannbacker et al. (1996) and Davenport & Kennedy (1996). The survey instrument can be found in Appendix C.

Data Analysis

Responses to the surveys were analyzed using inferential and descriptive statistics. Graphs were created utilizing the Statistical Package for the Social Sciences (SPSS) software and Excel. Specifically, frequency counts/percentages, the Fisher's exact test, and chi square analysis were used to investigate relationships between student profile variables (e.g. current academic program, undergraduate GPA, GRE scores) and responses given concerning the application process.

CHAPTER 4

RESULTS

One hundred surveys (n = 100) were distributed and collected from two Maryland institutions, Loyola University (speech-language pathology M.S program; n = 44) and Towson University (speech-language pathology M.S. program and doctor of audiology program; n = 56). The third institution, University of Maryland, College Park, was contacted several times via email and telephone to obtain approval to administer the survey. The program directors were contacted via email three times with only one response and zero follow-up after that. The chairperson was contacted via email twice and via telephone twice. The chairperson responded one time with no follow-up after that. Therefore without the support of the program directors the distribution of the survey could not be completed at the University of Maryland, College Park. Cumulative summary data for each survey question can be found in Appendix D.

Demographics

Respondents included 89 first year speech-language pathology graduate students (87 females, 2 males), and 11 first year audiology graduate students (all females). Participants were predominately White (90%), with the remainder of respondents self-selecting as Black/African American (5%), Hispanic/Latino (4%), and Asian/Pacific Islander (1%). The majority (85%) of respondents were 21 to 24 years of age. Almost all participants (95%) were from the Mid Atlantic (New Jersey, New York, and Pennsylvania) or South Atlantic region (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington D.C., and West Virginia). Over half (55%) of the respondents received their bachelor's degree from a Maryland institution.

Additionally, 31 of the 43 students who selected 'South Atlantic' as their hometown region attended a Maryland college/university for their undergraduate studies (72.1%). Refer to Figure 1 for a summary of all demographic information. When comparing the age, ethnicity, and hometown region of speech-language pathology ($n = 89$) and audiology ($n = 11$) students, a Fisher's exact test indicated no significant differences between the two groups, $p > 0.05$.

Student Profile. Additional student profile information obtained from this survey included undergraduate major, undergraduate GPA and GRE scores (verbal, quantitative, writing). Of the 100 participants surveyed, the majority (83%) indicated their undergraduate major as Communication Sciences and Disorders (CSD). The remaining 17 respondents specified their undergraduate major as psychology/cognitive sciences ($n = 8$), education ($n = 3$), communication ($n = 3$), language ($n = 1$), sociology ($n = 1$), or no response ($n = 1$). Most of the non-CSD majors (88.2%, $n = 15$) indicated the need to take additional pre-requisite courses in order to meet application requirements of CSD graduate programs.

A total of 86% of respondents indicated their undergraduate GPA as a 3.5 or higher. When comparing the undergraduate GPAs of speech-language pathology ($n = 89$) and audiology ($n = 11$) students, a Fisher's exact test showed audiology students had significantly higher GPAs (3.75+) than the speech-language pathology students, $p = 0.022$. Of those who provided GRE information, the highest number of respondents reported a score of 150-154 on both the quantitative (35.5%) and verbal (34.4%) sections. Only 8.6% ($n = 8$) of the responders reported a score below 144 on the verbal section. Similarly, only 16.1% ($n = 15$) of the responders reported a score below 144 on

Figure 1. Demographics of Survey Participants

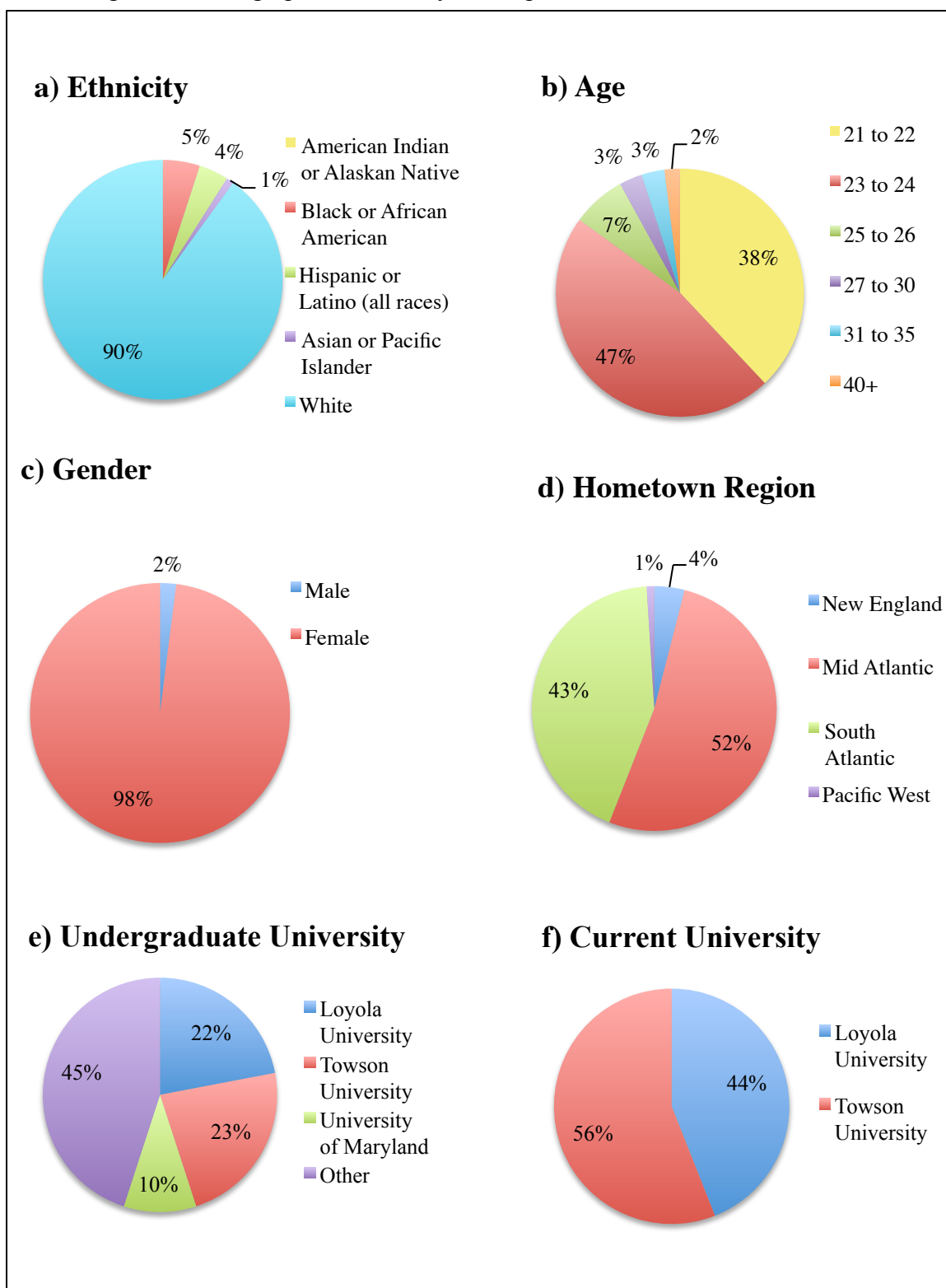


Figure 1: (a) ethnicity, (b) age, (c) gender, (d) hometown region, (e) undergraduate university, (f) current university

the quantitative section. Most of the respondents (68.4%, $n = 65$) reported a score of “4” or “4.5” on the writing section. Only 14.7% ($n = 14$) of the 95 respondents indicated that they scored below a “4”. When comparing the quantitative scores of speech-language pathology ($n = 83$) and audiology ($n = 10$) students, a Fisher’s exact test showed audiology students had significantly higher scores (155+) than the speech-language pathology students, $p = 0.021$. No significant differences in performance on the writing (4.5+) or verbal (145+) sections were found, $p > 0.05$.

Motivating Factors for Selecting Speech-Language Pathology or Audiology

Respondents were asked to indicate the point in time at which they first developed an interest in becoming a speech-language pathologist or audiologist. Of the respondents ($n = 95$), 44.2% ($n = 42$) indicated their initial interest developed during high school, whereas 54.7% ($n = 52$) indicated it was at some point during their college career (majority in their freshman or sophomore year). Only 1.1% ($n = 1$) stated their initial interest developed in elementary school. When comparing the speech-language pathology ($n = 84$) and audiology ($n = 11$) students’ development of interest in the field (during college), a Fisher’s exact test showed no significant difference, $p = 1.0$, between the groups.

Respondents ($n = 99$) were also asked to report how they first learned about the profession. The largest number of responders (41.4%, $n = 41$) indicated “family/friends” as the means through which they learned about the profession. When comparing how speech-language pathology ($n = 88$) and audiology ($n = 11$) students first learned about the profession, a Fisher’s exact test showed speech-language pathology students were significantly more likely to report ‘family/friends’ than audiology students, $p = 0.024$.

“Personal experience” (e.g. family member had hearing loss) was reported by 25.2% (n = 25) of the respondents as to how they learned of the profession. Other notable responses included through “academic professors” (13.1%, n = 13), a “work experience” (7.1%, n = 7), “college/career fairs” (6.1%, n = 6), or “other” (7.1%, n = 7).

Rankings of Motivating Factors to the Career Path. Respondents (n=70) were asked to rank their top motivating factors for selecting the career path. The “desire to be in a helping profession” was ranked as the number one motivating factor by the largest number of respondents (54.3%, n = 38), and received the highest number of votes as a top three motivating factor (80%, n = 56). “Interesting work” was ranked as the number one motivating factor by 18.6% (n = 13) of the respondents, with 71.4% (n = 50) rating it as a top three motivating factor. Other notable motivating factors that received “top three” votes included “job availability” and “a personal experience”. Many of the respondents (51.4%, n = 36) ranked “job availability” as a top three motivating factor for selecting the career path, whereas 32.9% (n = 23) ranked a “personal experience” as a top three motivating factor. “A college class” was selected in the top three by 21.4% (n = 15) of the respondents. Similarly, “salary” was selected in the top three by 20% (n = 14) of the respondents. Just 12.9% (n = 9) of the respondents ranked “a clinic experience” as a top three motivating factor, whereas only 2.9% (n = 2) ranked “alternative career/backup”, “a high school class”, or “other” as a top three motivating factor. Refer to Figure 2 for the percentages of each factor selected by respondents (AUD, SLP, Combined) as a top three motivating factor. No significant difference was found between the speech-language pathology students’ and audiology students’ ratings of motivation factors using the Fisher’s exact test, $p > 0.05$.

Figure 2. Percentage of Respondents that selected a top three motivating factor to the speech-language pathology or audiology career path.

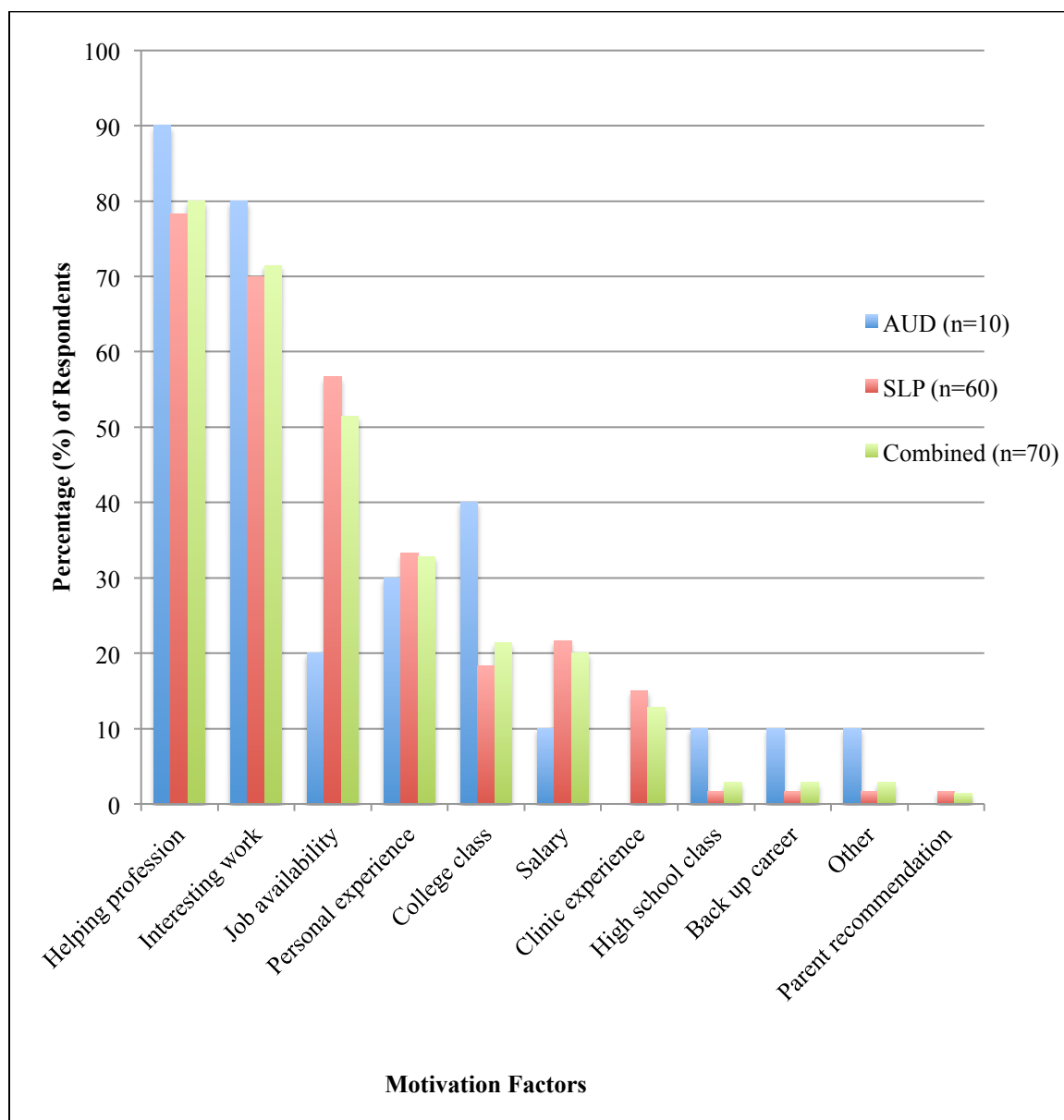


Figure 2: Motivation factors ordered by highest combined responses to lowest combined responses.

Graduate School Application Process

Respondents ($n = 99$) were asked to report if any factors influenced their decision to apply to graduate school (e.g., money, time to degree, personal reasons, program requirements). A total of 44.4% ($n = 44$) of the participants reported that their decision to apply graduate school was not influenced by any factor(s). The remaining respondents (55.6%, $n = 55$) reported that their decision to apply to graduate school was influenced by at least one factor. “Money” (36.4%, $n = 20$) and “program requirement” (32.7%, $n = 18$) were the most commonly reported influential factors. Only a few respondents reported “time” (12.7%, $n = 7$) or “personal reasons” (5.5%, $n = 3$) as factors that influenced their decision apply to graduate school. Remaining influential factors reported by respondents (12.7%, $n = 7$) varied (e.g., geography, changing career path, low career opportunity in current life). When comparing the report of an existing influential factor to attend graduate school by speech-language pathology ($n = 88$) and audiology ($n = 11$) students, a Fisher’s exact test indicated no significant difference between the groups, $p = 0.532$.

Another question of the survey asked participants ($n = 100$) to indicate how informed they felt about deciding to attend graduate school. The majority of the respondents indicated that they had at least some or many doubts when applying (60%, $n = 60$). The remaining 40% ($n = 40$) reported that they had no doubts or unanswered questions when applying to a speech-language pathology or audiology graduate program. Students who developed an interest in the field early in life (high school or earlier) did not significantly have less doubt or unanswered question when applying to graduate school according to a chi square test, $\chi^2 (1, N = 95) = 0.303$, $p > 0.05$, when compared to those who developed an initial interest later in life (during

college). When comparing how informed the speech-language pathology ($n = 89$) and audiology ($n = 11$) students felt about deciding to attend graduate school, a Fisher's exact test indicated no significant difference between the groups, $p = 0.518$.

Students were also asked to indicate all resources (select all that apply) through which they learned about the graduate school application. Of the 99 respondents, 79.8% ($n = 79$) reported that they learned about the graduate school application process through an "advisor and/or faculty mentor", 64.6% ($n = 64$) through their "peers", 57.6% ($n = 57$) from "online resources", and 34.3% ($n = 34$) during an "open house". Remaining resources reported by respondents included "through the career center at the university" (7.1%, $n = 7$), "from a career fair" (3%, $n = 3$), or "other" (5.1%, $n = 5$; other professional, National Student Speech Language Hearing Association (NSSLHA) meeting, counselor).

Number of Schools Applied to and Acceptance Percentages. Respondents ($n = 100$) were also asked to report how many graduate programs that they applied to. The overall responses ranged from one (4%, $n = 4$) to 14 schools (2%, $n = 2$). Specifically, the speech-language pathology students' responses to this question ranged from one to fourteen schools, whereas the audiology students' responses ranged from one to nine schools, see Table 1. The vast majority of students applied to eight or fewer schools (80%, $n = 80$), with four schools (18%, $n = 18$) being the most popular number. Applying to six schools was the overall average. Other popular responses included applying to three schools (11%, $n = 11$) and five schools (11%, $n = 11$). When comparing the number of schools applied to of speech-language pathology ($n = 89$) and audiology ($n = 11$) students, a Fisher's exact test showed the speech-language pathology students applied to

Table 1

Range, Mean, Standard Deviation of Number of Applications to Graduate Schools.

Program	N	Range	Mean	SD
Audiology	11	1-9	4.00	2.489
Speech-Language	89	1-14	6.03	3.028
Overall	100	1-14	5.81	3.031

five or more schools significantly more often than the audiology students, $p = 0.007$.

When asked to indicate the closest percentage of acceptances received (100%, 75%, 50%, 25%), responses ($n = 100$) were equally distributed across each category. A quarter (25%, $n = 25$) of the respondents indicated a 50% acceptance rate, 24% ($n = 24$) indicated a 100% or 75% acceptance rate, and 27% ($n = 27$) selected a 25% acceptance rate. Students with higher GPAs (3.75+) had significantly higher acceptance percentages (50 %+) than those with lower GPAs (<3.75), according to a chi square analysis, $\chi^2 (1, N = 100) = 14.571, p < 0.05$. Additionally, a chi square test indicated students who scored well on the GRE quantitative section (155+) reported significantly higher acceptance percentages (50%+) compared to students who performed poorer (<155) on the quantitative section, $\chi^2 (1, N = 93) = 19.085, p < 0.05$. No significant difference in acceptance percentages (50 %+) were found for GRE verbal (145+) or writing (4.5+) scores, $p > 0.05$. When comparing the acceptance percentages of speech-language pathology ($n = 89$) and audiology ($n = 11$) students, a Fisher's exact test showed the speech-language pathology students received lower acceptance percentages (25%) than the audiology students, $p = 0.033$. Most respondents (78%, $n = 78$) reported they were accepted into their top choice.

No statistical difference of receiving acceptance into the top choice school was found between the two groups, $p = 0.703$.

Rankings of Admission Criteria. Students were asked to rank the top three influential admission criteria that they believe the school at the top of their list used to rank applications. Of the 83 respondents, 67.5% ($n = 56$) selected “letters of recommendation” in the top three. Only 16.9% ($n = 14$) of participants selected it as the number one factor. “GRE scores” was selected as a top three factor by 57.8% ($n = 48$) of the respondents, with 15.7% ($n = 13$) indicating it as the number one factor. Almost half (48.2%, $n = 40$) of the respondents selected “essay/writing sample” in the top three, with 13.2% ($n = 11$) indicating it at number one. “Undergraduate GPA” was selected as number one by the largest number of respondents (22.9%, $n = 19$), with 44.6% ($n = 37$) of the total respondents selecting it in the top three. Less students (42.2%, $n = 35$) selected “undergraduate major GPA” as a top three factor, with 19.2% ($n = 16$) of the respondents selecting it as number one. Other factors selected by respondents in the top three included “institution at which undergraduate education was received” (16.9%, $n = 14$), “interview” (8.4%, $n = 7$), “I don’t know” (6%, $n = 5$), “contact at university” (4.8%, $n = 4$), “other” (2.4%, $n = 2$), and “undergraduate major” (1.2%, $n = 1$). Refer to Figure 3 for percentages. When comparing how speech-language pathology students and audiology students ranked admission criteria, a Fisher’s exact test showed audiology students rated “interview” as a top three factor significantly more so than speech-language pathology students, $p = 0.002$. No other significant differences were found between the speech-language pathology students’ and audiology students’ ratings of other admission criteria, $p > 0.05$.

Figure 3. Percentage of respondents that indicated a top three admission criterion used by their top choice graduate program to rate applications.

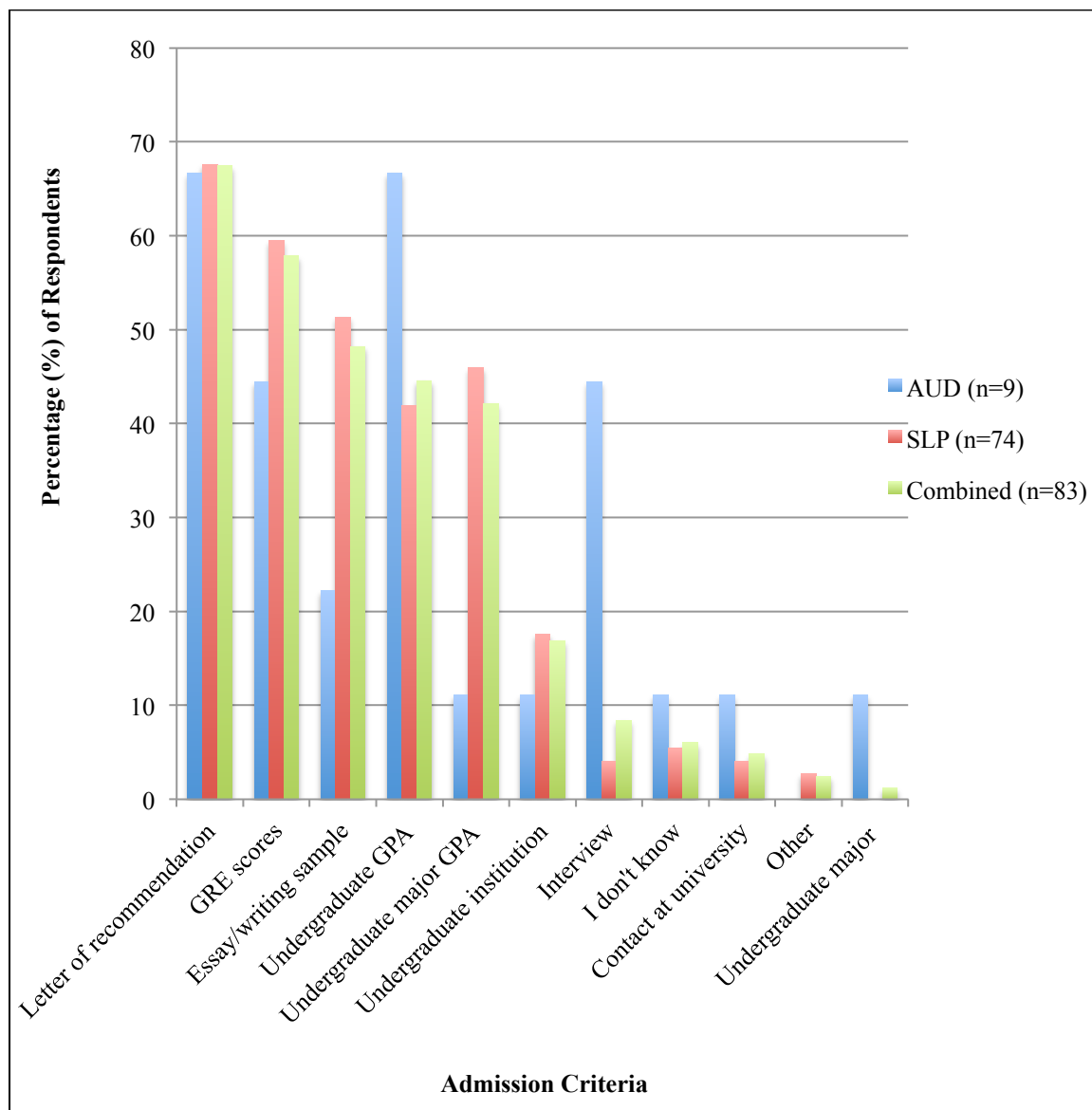


Figure 3: Admission criteria ordered by highest combined responses to lowest combined responses.

Rankings of Selection Criteria for Accepting Admissions. Respondents ($n = 77$) were also asked to rank selection criteria that influenced their decision to accept admission into a graduate program. “Program reputation” was ranked as the number one influential factor by the largest number of respondents (22.1%, $n = 17$), and received the most number of votes as a top three selection criteria (53.2%, $n = 41$). The second most ranked selection criterion (39%, $n = 30$) was “cost” (e.g., in state vs. out of state tuition), with 10 respondents (13%) indicating it as the number one factor. Respondents reported “closeness to home” (37.7%, $n = 29$) and “geographic location” (33.8%, $n = 26$) as other top three selection criteria. “Reputation of university” was selected in the top three by 23 respondents (29.9%), with 10 of those respondents (13%) selecting it as the number one criteria. Other selection criteria ranked by participants in the top three included “program curriculum and requirements” (20.8%, $n = 16$), “funding” (16.9%, $n = 13$), “accreditation status” (15.6%, $n = 12$), “only program offering admission” (10.3%, $n = 8$), “class size” (9.1%, $n = 7$), and “other” (9.1%, $n = 7$). Selection criteria such as “competitiveness of program”, “duration of program”, “support services”, “admission requirements”, and “size of university” were selected by very few respondents as a top three selection criteria (5 or less). Refer to Figure 4 for percentages. When comparing how speech-language pathology students and audiology students ranked selection criteria, a Fisher’s exact test showed the audiology students rated “cost” as a top three factor significantly more so than the speech-language pathology students, $p = 0.019$. No other significant differences were found between the speech-language pathology students’ and audiology students’ ratings of other selection criteria used for accepting admissions, $p > 0.05$.

Figure 4. Percentage of respondents who indicated their top three selection criteria for deciding to accept admission into a graduate program.

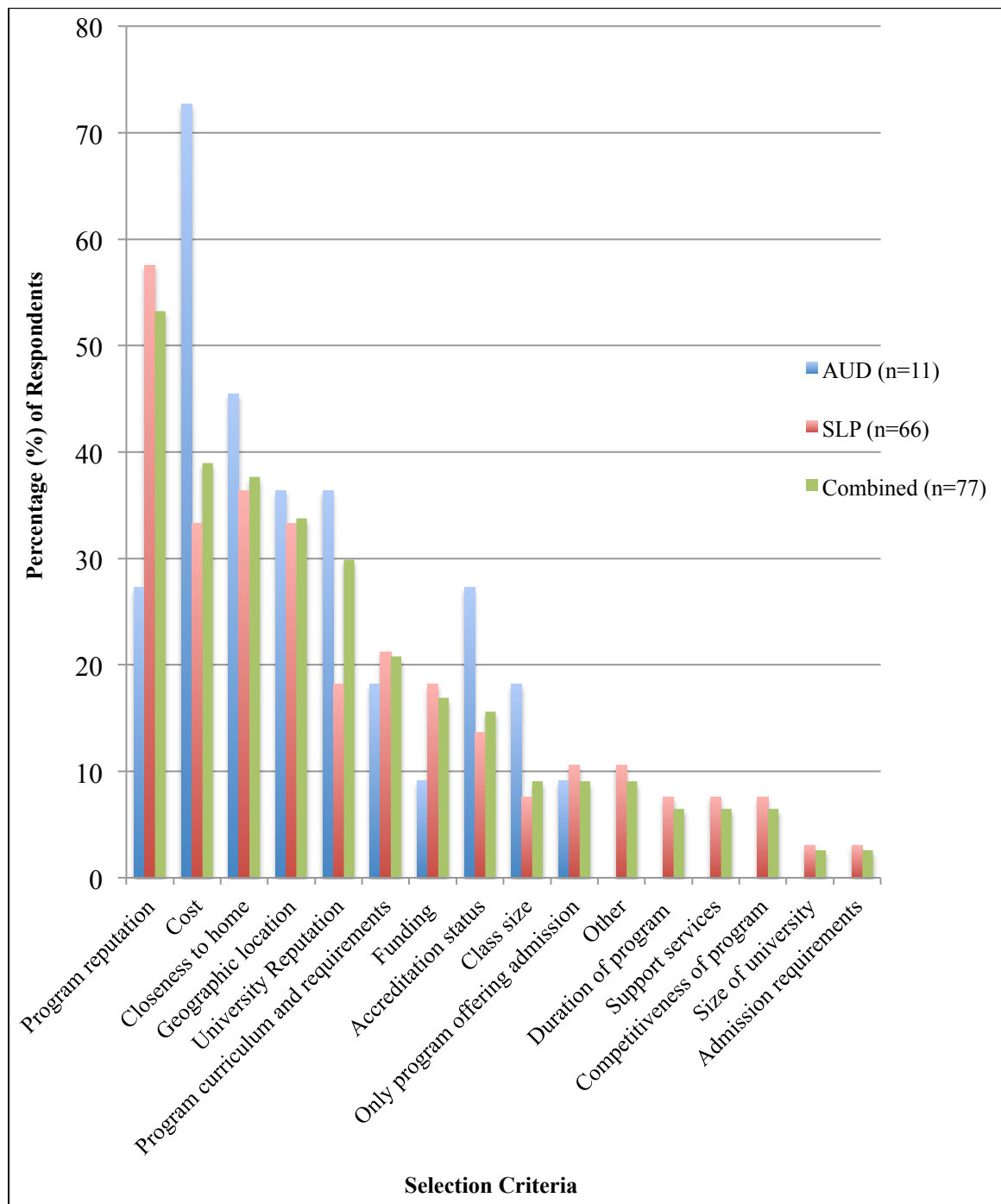


Figure 4: Selection criteria ordered by highest combined responses to lowest combined responses.

Respondents were asked to indicate what next steps they would have taken if they had not received any acceptances into graduate school. Of the respondents (n = 99), most reported that they would “work in a related field to gain more experience” (73.7%, n = 73), “apply next year to the same school” (69.7%, n = 69), “apply next year to a different school” (58.6%, n = 58), “retake the GREs” (57.6%, n = 57), and “talk to an advisor on ways to improve their application” (49.5%, n = 49). Other reported “next steps” included taking additional courses to improve knowledge and GPA (27.3%, n = 27), taking time off (15.2%, n = 15), becoming an SLP assistant or audiology technician and/or hearing aid dispenser (13.1%, n = 13), becoming a paraprofessional or Special Education aid (8.1%, n = 8), or other (7.1%, n = 7).

CHAPTER 5

DISCUSSION

Applying to graduate school is a necessary step for students interested in obtaining an entry-level position as a speech-language pathologist or audiologist. Projected shortages of healthcare professionals in both fields may require academic programs to take a closer look at current recruitment strategies (Emanuel, Donai & Araj, 2012). Furthermore, it may be of interest for institutions offering CSD graduate programs to examine how students tackle the graduate school application process. Investigating this juncture of a student's academic career may expose factors that influenced their decision to pursue the field, as well as factors that influenced their decision of which graduate programs to apply to and ultimately accept the offer to attend (Rockwood & Madison, 1993). The purpose of this study was to pilot a new survey to first year audiology and speech-language pathology graduate students about their recent graduate school application process.

Demographics

A total of one hundred ($n = 100$) surveys were received from first-year CSD graduate students of Loyola University and Towson University. The University of Maryland did not participate. Demographics of respondents in this study (predominately white females) were consistent with previous aggregate surveys and demographics of those currently practicing in the field of audiology and speech-language pathology and undergraduate CSD students (CAPCSD Education Survey, 2011; CAPCSD Education Survey, 2012, CAPCSD Education Survey, 2013). Only 10% of the respondents were non-white, and 2% were male. The issue of gender bias in the CSD professions could not

be investigated due to the extremely low number of males who participated in this study. While one hypothesis contributes this phenomena to current social expectations and constructed views of allied health professionals as ‘nurturers’ and ‘communicators’ (Litosseliti & Leadbeater, 2012), additional research is needed to identify other factors that may be deterring young males from pursuing a career in CSD, and why males seek alternative careers. Additionally, several respondents (n=43) reported ‘South Atlantic’ (this includes the state of Maryland) as their hometown region, of which 72% attended a Maryland institution for their undergraduate studies. This application trend of staying close to home for undergraduate and graduate studies most likely reflects the benefits of receiving in-state tuition and geographic closeness to home/family/support system. These factors, “cost” and “location”, were previously shown to be important to students selecting a graduate program (Condon, 1983; Rockwood & Madison, 1993)

Student Profile. Academic characteristics of respondents were based on their reports of undergraduate GPA, GRE scores (quantitative, verbal, writing), and undergraduate major. The majority had strong academic histories (3.5+ GPA, 4+ writing, 150+ quantitative/verbal), which is consistent with the pattern of applications being received by CSD graduate academic programs (CAPCSD Education Survey, 2013). Findings from this study found that audiology students earned significantly higher GPAs (3.75+) when compared to speech-language pathology students. These findings differ from the national aggregate CSD survey that reported that student GPAs for both audiology (3.23-4.00) and speech-language pathology (3.29-4.00) programs were practically identical (CAPCSD Education Survey, 2013). The significant difference in the GPAs of speech-language pathology and audiology students in this study may be related

to the specific programs surveyed, as GPAs of applicants to Towson University's audiology program in 2014 ranged from 3.553-4.00, whereas the GPAs of applicants to Loyola University's speech-language pathology program ranged from 3.12-4.00 (ASHA EdFind, 2015). Or the differences may be due to the fact that data was only obtained from one Au.D. program. Differences were also found between the quantitative GRE scores of speech-language pathology and audiology students, with audiology students having significantly higher scores (155+). Vocational differences researched between speech-language pathology and audiology students (such as the preference to work in the field that has more physical sciences, that includes more math-based coursework vs. the preference to work in the field that has more social sciences) (Evans, 2006). This may explain why audiology students performed better on the quantitative test (Evans, 2006). Quantitative scores on the GRE received by Towson University audiology applicants in 2014 ranged from 147-158, compared to 136-161 for Loyola University's speech-language pathology applicants (ASHA EdFind, 2015).

The vast majority (83%) of students also reported their undergraduate major as 'CSD', which highlights the important role undergraduate CSD programs play in student recruitment (Emanuel, Donai & Araj, 2012). All but two of the non-CSD majors ($n = 15$) were required to take additional prerequisite coursework before applying to CSD graduate programs. This requirement of CSD graduate programs has further exacerbated the lack of diversity within the profession, as graduate programs receive most of their students from undergraduate CSD programs. Academic programs should explore ways in which pre-requisite courses can be achieved during the graduate program. A change in how the requirements for the pre-requisite courses are completed may help with the

recruitment of interested-non-CSD students, especially for education and health students who have shown an interest in taking CSD courses (Emanuel, Donai & Araj, 2012).

Ultimately, changing how these requirements are met may diversify the field by recruiting students from other majors.

Motivating Factors for Selecting SLP or AUD

The majority (54.7%) of students initially developed an interest in the CSD field during college, primarily during their freshman or sophomore year. This is consistent with Doyle and Freeman's (2002) results that found 90% of audiology students first thought of a career in audiology after the age of 18, and that the majority of speech-language pathology and audiology graduate students are first introduced to the profession during undergraduate coursework (Doyle & Freeman, 2002). A surprisingly high number of respondents (44.2%) reported they initially developed an interest in the field during high school. This may reflect ASHA's emphasis on career recruitment, especially of the younger population, in hopes of preventing critical shortages of professionals in the field (ASHA, 2001, 2007; Byrne, 2010). Previous studies in other health professions (e.g. medicine, dentistry, optometry, and physical therapy) have suggested students who develop an earlier interest in a specific profession will be less likely switch careers (Knight, 1973; Levine, 1978; Pavalko, 1964; Rogoff, 1957; Stith, Butterfield, Strube, Deusinger & Gillespie, 1998). Findings of this study did not identify a significant difference in the certainty of applying to CSD graduate school between students who developed an interest in a CSD field during high school or earlier when compared to students who developed an interest later in college. Despite this, CSD graduate programs should still extend recruitment and marketing efforts towards the younger population to

help reduce current shortages within the health professions field (Stith et al., 1998). Additionally, “family/friends” and “personal experience” were commonly reported as how respondents first learned of the professions, which is consistent with previous reports (Emanuel, Donai, & Araj, 2012; Lass et al., 1995). Significantly more speech-language pathology students (than audiology students) learned of the profession through family members/friends; however, this difference may be due to the small sample size of audiology students present in the current study.

Rankings of motivating factors to the career path. Speech-language pathology students and audiology students had similar rankings of their motivating factors for selecting their career path. These similar rankings of how the student’s selected a career in CSD may be in turn why some students have trouble selecting which CSD career path to choose. This same notion has been highlighted in other reviews (Evans, 2006; Brodsky & Cooke, 2000). The “desire to be in a helping profession” was ranked as the number one motivating factor by the largest number of respondents (54.3%, $n = 38$), and similarly received the highest number of votes as a top three motivating factor (80%, $n = 56$). Brodsky and Cooke (2000) and Byrne (2007) likewise reported the desire to help people as a primary motivator to enter the CSD field. “Interesting work” had the second largest number of respondents in this study, which comparably was reported as a top influential factor by Keshishian and McGarr (2012) and Lass et al. (1995). Other meaningfully rated factors included “job availability” and “personal experience”. Market driven factors, such as job availability and salary, were not commonly reported as motivating factors to enter the CSD profession by Emanuel et al. (2012). Salary was not ranked in the overall top five reasons to enter the CSD field which does not agree with Doyle and Freeman’s

(2002) findings for audiology students. Marketing strategies should emphasize the availability of jobs and current demands of these professions in the workforce, as well as the opportunity to work in a helping profession that includes interesting work. It is hopeful that these strategies, along with continued recruitment efforts to enhance exposure of these professions, will entice students to consider a career in CSD.

Graduate School Application Process

Applying to graduate school is a major decision for college student that requires assessment of personal and career goals (Peterson, 1993). Previous research has shown the decision to apply to graduate school is largely influenced by job availability, and factors related to motivation, financial availability, and the time and energy an individual is willing to invest (Bain, Fedynich, & Knight, 2010; Ingram, Cope, Harju, & Wuensch, 2000). Less than half (44%) of the respondents reported that they were not influenced by anything when applying to graduate school. The majority of students (56%) reported “money” or “program requirement” as the influential factors to pursue graduate level education. Both career tracks require students to go to graduate school. Tuition costs and need for financial aid are two potential barriers that should be explored by individual programs. Findings of this study support the push for more assistantships, scholarships, and/or financial aid opportunities for graduate students, especially since affordable tuition has shown to be ‘most important’ to graduate students (Bain et al., 2010). Based on recruitment issues previously mentioned in this paper (limited awareness of profession, shortages of CSD professionals, decline of undergraduate CSD student enrollment), additional barriers for students considering CSD graduate school, such as costs, should be addressed (Ackley, Mahshie, & Lasasso, 2004; Emanuel, Donai, & Araj, 2012).

Students have reported feeling poorly prepared for graduate school (Brodsky & Cooke, 2000). This lack of perceived preparedness may hinder the application process (Brodsky & Cooke, 2000). Students reported that they felt that their undergraduate program did not provide them with enough information/exposure to make an educated decision between speech-language pathology and audiology (Brodsky & Cooke, 2000). Interestingly, the majority of respondents indicated that they had at least some or many doubts when applying (60%, $n = 60$). Audiology and speech-language graduate students and professionals have previously reported similar feelings of uncertainty in pursuing their selected CSD graduate programs (Brodsky & Cooke, 2000). Communication sciences and disorders undergraduate and graduate programs should confirm students have enough information about both professions to make an informed choice about their career path. Additionally, the results from this study indicate that students would also benefit from more information about the graduate school application process. Open houses, questions and answers (Q&A) forums, online resources, intentional academic advising, etc. could be used to improve both the students' understanding of the two fields and the application process. Additional opportunities for clinical experience at the undergraduate level may also assist in reducing the uncertainty CSD undergraduate students have about how to apply to graduate school and/or which career to pursue (Ash, Clayton, & Atkinson, 2005; Terrizzi, 1988). Likewise the option of adding an undergraduate audiology-track has been recommended for interested students to counter balance the amount of speech-language pathology coursework most undergraduate CSD students receive (Davenport & Kennedy, 1996). Implementation of some (or all) of these

suggestions could help ensure that students make informed decisions regarding CSD graduate programs.

According to our findings, most CSD graduate students learned of the graduate school application process through multiple resources (e.g. advisors and/or faculty mentors (79.8%), peers (64.6%), online resources (57.6%), and open house events (34.3%)). Development of one comprehensive yet easy to read handout or online resource could help reduce students' questions or doubts about applying to graduate school. It is essential for students to best understand the nature and requirements of graduate programs, and to find a program that fits their learning best (Bain et al., 2010). This survey indicated that advisors and faculty mentors play a significant role throughout this process. Therefore, it is recommended that advisors work closely with advisees to match academic interests and strengths with appropriate graduate programs. This interaction should reinforce the importance of researching many aspects of an academic program to students. Implementing this type of mentoring in CSD undergraduate programs may help to lower attrition rates from graduate programs which are, potentially, in part due to the "academic ignorance" of students during the application process (Bain et al., 2010). Students well versed on graduate school application processes likely will have a distinct advantage over students who are unsure about the process and/or need guidance to be successful and do not seek out help.

Number of schools applied to and acceptance percentages. It is well known that speech-language pathology and audiology graduate programs are highly competitive and receive many applications from strong applicants (CAPCSD Education Survey, 2013). Due to the competitive nature of these programs, students are encouraged to apply

to multiple programs. Historically well-qualified students have been rejected due to capacity limitations (ASHA, 2015). Results of this study indicated students doing this, as the speech-language pathology students, on average, applied to six schools, and audiology students, on average, applied to four schools. The speech-language pathology students in this study applied to more schools than the audiology students. This may be related to the number of Au.D. programs nationwide (74; to 251 speech-language pathology) (CAPCSD Education Survey, 2013) and the competitiveness of speech-language pathology programs, which receive more applications than audiology programs.

Acceptance percentages of CSD graduate students were distributed equally over the four categories (100%, 75%, 50%, 25%). Superior undergraduate GPAs and quantitative GRE scores were shown to improve acceptance rates of CSD graduate students. This is to be expected since both are considered important application criteria used by CSD academic programs when evaluating admission (Polovoy, 2014). Speech-language pathology students received overall lower acceptance percentages than audiology students; however, the differences in sample size of the two disciplines should be noted. Lower acceptance percentages could suggest that speech-language pathology students' take higher risks when applying (apply to significantly more top-tier competitive programs).

Rankings of admission criteria. Admission criteria of CSD graduate programs are fairly universal; however, the weight towards acceptance of each requested item (e.g., GPA, GRE scores, letters of recommendation, etc.) may vary by program (Polovoy, 2014). Investigation of the students' evaluation of typical admission criteria and their associated level of importance within their application is thus an important aspect of this

study to examine. Findings of this study were surprising as ‘letters of recommendation’ was the highest top three ranked factor when compared to other application material such as undergraduate GPA (overall or major), GRE scores, and essay/writing sample. This finding may indicate a misperception students have concerning the importance of application material, as most academic programs will not even consider a student with a low GPA and GRE scores (Polovoy, 2014). Letters of recommendation are used to help make a student stand out (Polovoy, 2014). Students need to understand the importance of maintaining a high GPA and preparing for the GREs in order to be competitive. This information should be shared with CSD students on a program level and during academic advising. The significant difference of ranking how important ‘interview’ was to the processing of graduate applications between audiology and speech-language pathology students may reflect the fact that speech-language pathology programs often do not include an interview, which may be due to the number of applications received. For example, in 2014, Loyola University’s speech-language pathology program received 336 applications and Towson University’s speech-language pathology program received 363 applications, compared to Towson University’s audiology program that received a total of 84 applications (ASHA EdFind, 2015). It is likely that speech-language pathology programs find it too difficult or time consuming to conduct interviews with all, or even some of the applicants.

Rankings of selection criteria for accepting admissions. Top ranked items of this study (in order) included program reputation, cost, closeness to home, geographic location and university reputation, which is comparable to results of Rockwood and Madison (1993) and Condon (1983) who similarly reported ‘program reputation’,

“location of school,” “university reputation,” and “cost” as top ranked items by students selecting graduate programs. Factors such as “practicum facilities”, “personal contact with a faculty member”, “number of different course offerings”, and “average level of training of faculty” were not frequently selected, or not selected at all, in this study as top items which is different from the findings in previous studies (Condon, 1983; Rockwood & Madison, 1993). This indicates some variation can be seen through the years as to which factors are most important to students selecting a CSD graduate program or it could also be a result of the methodology used in this study or it could be due to the limited population sample. Audiology students reported that ‘cost’ of a graduate program was more important to them than speech-language pathology students, which is likely due to the additional two years they must pay tuition (four-year degree versus two-year degree).

Barriers and Future Directions

Administering the survey to more CSD graduate programs to obtain a larger sample size is necessary to confirm results of this pilot study. Furthermore, the recruitment of more students from other programs outside of Maryland would improve external validity between speech-language pathology and audiology students. Additionally, getting information from other programs around the country would assist in identifying any potential regional trends. Recruiting to other programs, will, hopefully, increase diversity of respondents (e.g., more males, more minorities).

The clarity and wording of questions should be revisited before re-administering the survey in future studies to improve the efficacy of this measurement tool. Instructions of questions three, 12, and 13 were confusing. All three questions asked participant to

rank factors most important (1 being most influential, to 5 being least influential) or to rank their “top three” factors. Some respondents interpreted these directions incorrectly, and simply “checked” which factors were most important (rather than designating a numeric ranking), or gave the same numeric ranking to multiple factors. Resultantly, those answers could not be included in the data for interpretation. Adding an example of how to correctly answer these ranking-type questions may help clarify the task to participants (e.g. ‘cost’ - #1 factor, ‘program reputation’ - #2 factor, ‘location’, - #3 factor, ‘university reputation’ - #4 factor, and ‘accreditation status’ - #5 factor). Overall the specific task should be clearer in the directions to help increase the overall amount of acceptable responses from participants.

For future studies, it would be informative to administer a modified version of this survey to CSD faculty members for specific content areas. For example, the application criteria faculty members indicate they use in their admissions process compared to the students’ selections could provide insight into the differences between the applicant and the reviewer that may assist with improving the application process. Those results could assist with disseminating accurate information to undergraduate students about which application materials are considered “most important”.

“Program reputation” has consistently ranked as the number one selection factor for graduate students since the 1970s, the issue of how CSD graduate programs’ reputations are evaluated needs to be further explored. Measures used to evaluate CSD graduate programs may be biased or done in an unformed manner therefore providing inaccurate information to students who are comparing different programs.


Conclusions

As stated by Havighurst (1973), “a profession must continue to study itself in order to wisely plan its future” (p. 113). This study supports that current recruitment efforts should be extended to non-CSD majors, younger populations, as well as males, to better diversify the field and prevent critical shortages in the professions. Findings also confirmed a need to streamline information pertaining to the graduate school application process for both speech-language pathology and audiology prospective graduate students. Streamlining the process will, hopefully, simplify the career decision-making process. Students need more information on how to build a strong application and find a “best-fit” CSD graduate program, and this message should be reinforced by individual academic programs, faculty, and ASHA. Results from this study, may help academic institutions redesign their recruitment and marketing efforts due to the improved understanding about how students go about the graduate application process.

Appendix A



EXEMPTION NUMBER: 15-X045

To: Jennifer Smart
 From: Institutional Review Board for the Protection of Human
 Subjects, Melissa Osborne Groves, Member 
 Date: Wednesday, January 28, 2015
 RE: Application for Approval of Research Involving the Use of
 Human Participants

Office of Sponsored Programs
 & Research

Towson University
 8000 York Road
 Towson, MD 21252-0001

t. 410 704-2236
 f. 410 704-4494

Thank you for submitting an application for approval of the research titled,
*A Survey of First Year Speech-Language Pathology and Audiology
 Graduate Students on the Graduate School Application Process*

to the Institutional Review Board for the Protection of Human Participants
 (IRB) at Towson University.

Your research is exempt from general Human Participants requirements
 according to 45 CFR 46.101(b)(2). No further review of this project is
 required from year to year provided it does not deviate from the submitted
 research design.

If you substantially change your research project or your survey
 instrument, please notify the Board immediately.

We wish you every success in your research project.

CC: 4 Co-Pi's
 File

Appendix B

Department of Audiology, Speech-Language Pathology,
and Deaf Studies

INFORMED CONSENT

Project Title: A Survey of First Year Speech-Language Pathology and Audiology Graduate Students on the Graduate School Application Process

Principal Investigators:

Jennifer L. Smart, Ph.D.

Co-investigators: Kimberly Amrod, B.S., Brittany Dunn, B.A., Diana C. Emanuel, Ph.D., & Candace Robinson, Au.D.

Towson University

Dept. of ASLD

8000 York Road

Towson, MD 21252

Purpose of the Study:

The purpose of this study is to investigate the decision-making approach that you had during the graduate school application process and why you selected the Communication Sciences and Disorders (CSD) field.

Procedures:

You will receive a survey of 23 questions. You may ask questions at any time. You should complete all sections of the survey (to the best of your abilities), and provide additional information where applicable.

Risks/Discomfort:

There are no risks for those participating in this study.

Benefits:

There is no recent data on how speech-language pathology and audiology graduate students approach the graduate school application process. Data collected during this research study will help academic institutions understand how students became aware of the field, factors that attracted them to the field, and how they selected graduate

programs. This information may assist academic programs in the recruitment of future graduate students to their program, and potentially undergraduate students to the field.

Participation:

Participation in this study is voluntary. Participants can abstain from answering any survey question.

Compensation:

There is no compensation for participating in this study.

Confidentiality:

All obtained information will remain strictly confidential. Personal names and/or identifying information of participants will not be disclosed if descriptions and findings are published. If you agree to participate in this study, please indicate that you have read and understood information and sign your name below.

_____ I have read and understood the information on this form.

_____ I have had the information on this form explained to me.

Participant's Name (printed)

Participant's Signature

Date

Principal Investigator

Date

If you have any questions regarding this study please contact the Principal Investigator, Dr. Jennifer L. Smart, phone: (410) 704-3105 or email: JSmart@towson.edu or the Institutional Review Board Chairperson, Dr. Debi Gartland, Office of University Research Services, 8000 York Road, Towson University, Towson, Maryland 21252; phone (410) 704-2236.

THIS PROJECT HAS BEEN REVIEWED BY THE INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN PARTICIPANTS AT TOWSON UNIVERSITY (PHONE: 410-704-2236).

Appendix C

A Survey of First-Year Audiology and Speech-Language Pathology Graduate Students on the Graduate School Application Process

Instructions: Please respond to all questions listed in each section. Provide additional comments if needed.

Section 1: Motivating Factors for Selecting Speech-Language Pathology/Audiology

Q 1. What time in your life did you first develop an interest in becoming a Speech-Language Pathologist or Audiologist?

- ☐ Elementary school
- ☐ Middle school
- ☐ High school
- ☐ Freshman year of college
- ☐ Sophomore year of college
- ☐ Junior year of college
- ☐ Senior year of college

Q 2. How did you first learn about the profession?

- ☐ Personal experience (exposure to the field because self or family member/friend had hearing loss, delay or disorder)
- ☐ Work experience (i.e., camp counselor, babysitting, shadowing professional)
- ☐ Family/Friends
- ☐ Academic professors
- ☐ College/Career fairs
- ☐ Other; please specify _____

Q 3. What were your top motivating factors for selecting speech-language pathology or audiology for your career path? Rank from most (1) to least (5) influential.

- ___ Working in a helping profession
- ___ Availability of jobs
- ___ Interesting work
- ___ Salary
- ___ Clinical/practicum experience
- ___ Class taken at college
- ___ Class taken in high school
- ___ Parent recommendation
- ___ Alternative or backup career
- ___ Personal experience (e.g., sibling has speech delay, parent has hearing loss)
- ___ Other; please specify _____

Q 4. Did you major in Communication Sciences and Disorders at the undergraduate level?

- ☐ Yes (skip question 5)
- ☐ No; please specify your major _____

Q 5. Did you take additional pre-requisites to meet your program's requirements to apply?

- ☐ Yes
- ☐ No

Section 2: Graduate School Application Process

Q 6. Did any factors (money, time to degree, personal reasons, program requirements, etc.) influence your decision to apply to graduate school?

- ☐ Yes; The main factor was _____
- ☐ No

Q 7. Which is the most accurate statement regarding how informed you felt about deciding to go to graduate school:

- ☐ I had no doubts or unanswered questions when applying to a speech-language pathology/audiology program.
- ☐ I had some doubts and unanswered questions when applying to a speech-language pathology/audiology program.
- ☐ I had many doubts and unanswered questions when applying to a speech-language pathology/audiology program.

Q 8. How did you learn about the graduate school application process? Check all that apply.

- ☐ From my peers
- ☐ From my advisor and/or faculty mentor
- ☐ From a career fair
- ☐ From the career center at university
- ☐ During an open house(s)
- ☐ From online resources; ex.EdFind
- ☐ Other; please specify _____

Q 9. How many graduate school programs did you apply to? Write number below.

Q 10. What percentage of acceptances did you receive (either in writing or verbal) (select closest percentage)?

- ☐ 100%
- ☐ 75%
- ☐ 50%
- ☐ 25%

Q 11. Were you accepted into your top choice?

- ☐ Yes
- ☐ No

Q 12. What do you think the school at the top of your list used to rate your application?**Rank the top three factors.**

- ☐ Letters of recommendation
- ☐ Essay/writing sample
- ☐ Contact at university
- ☐ Interview
- ☐ Undergraduate overall GPA
- ☐ Undergraduate major GPA
- ☐ GRE scores
- ☐ Undergraduate major
- ☐ Institution at which undergraduate education was received
- ☐ I don't know
- ☐ Other; please specify _____

Q 13. What selection criteria influenced your decision to accept admission into your graduate school program? Rank from most (1) to least (5) influential.

- ☐ Reputation of university
- ☐ Geographic location
- ☐ Nearness to home
- ☐ Size of university
- ☐ Support services
- ☐ Cost (e.g. in state vs. out of state tuition)
- ☐ Funding (Research Assistantship, Graduate Assistantship, Teaching Assistant, scholarship, etc.)
- ☐ Program reputation
- ☐ Duration of program (credit hours, # of semesters)
- ☐ Program curriculum and requirements (course offerings, assessments, thesis, etc.)
- ☐ Class size
- ☐ Admission requirements
- ☐ Selectivity/competitiveness of program
- ☐ Accreditation status
- ☐ Only program offering admission
- ☐ Other; please specify _____

Q 14. If you had not received acceptance into to any of the programs, what next steps would you have taken? Select all that apply.

- ☐ Reapplied next year to the same schools
- ☐ Reapplied next year to different schools
- ☐ Taken additional courses to improve knowledge and GPA
- ☐ Talked to an advisor on ways to improve your application
- ☐ Taken some time off
- ☐ Worked in related field to gain more experience
- ☐ Retaken the GREs
- ☐ Became paraprofessional or Special Education aid
- ☐ Became an SLP assistant or audiology technician and/or hearing aid dispenser
- ☐ Other; please specify _____

Section 3: Demographics/Student Profile**Q 15. Age**

- ☐ 20 and under
- ☐ 21-22
- ☐ 23-24
- ☐ 25-26
- ☐ 27-30
- ☐ 31-35
- ☐ 36-39
- ☐ 40+

Q 16. Sex

- ☐ Female
- ☐ Male

Q 17. Ethnicity

- ☐ American Indian or Alaskan Native
- ☐ Black or African American
- ☐ Hispanic or Latino (all races)
- ☐ Asian or Pacific Islander
- ☐ White

Q 18. Hometown

- ☐ New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont)
- ☐ Mid-Atlantic (New Jersey, New York, and Pennsylvania)
- ☐ East North Central (Illinois, Indiana, Michigan, Ohio, and Wisconsin)
- ☐ West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota)
- ☐ South Atlantic (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington D.C., and West Virginia)
- ☐ East South Central (Alabama, Kentucky, Mississippi, and Tennessee)
- ☐ West South Central (Arkansas, Louisiana, Oklahoma, and Texas)
- ☐ Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming)
- ☐ Pacific West (Alaska, California, Hawaii, Oregon, and Washington)

Q 19. What college or university did you receive your bachelor's degree from?

- ☐ Loyola University
- ☐ Towson University
- ☐ University of Maryland
- ☐ Other; please specify _____

Q 20. Which university are you currently attending?

- ☐ Loyola University
- ☐ Towson University
- ☐ University of Maryland

Q 21. Select the academic program in which you are currently enrolled

- ☐ Speech-Language Pathology
- ☐ Audiology

Q 22. What was your cumulative undergraduate GPA?

- ☐ <3.0
- ☐ 3.0-3.24
- ☐ 3.25-3.49
- ☐ 3.50-3.74
- ☐ 3.75-4.0

Q 23. How did you perform on each section of the GRE:**Verbal Reasoning**

- ☐ 130-134
- ☐ 135-139
- ☐ 140-144
- ☐ 145-149
- ☐ 150-154
- ☐ 155-159
- ☐ 160-164
- ☐ 165-170

Quantitative Reasoning

- ☐ 130-134
- ☐ 135-139
- ☐ 140-144
- ☐ 145-149
- ☐ 150-154
- ☐ 155-159
- ☐ 160-164
- ☐ 165-170

Analytical Writing

- ☐ Less than 3
- ☐ 3
- ☐ 3.5
- ☐ 4
- ☐ 4.5
- ☐ 5
- ☐ 5.5
- ☐ 6

Thank you for your participation in this survey.

Appendix D

Question 1: Time of Initial Interest in Career Path		
Category	Percentage (%)	Number (n)
Elementary school	1	1
Middle school	0	0
High school	44.2	42
Freshman year of college	17.9	17
Sophomore year of college	24.2	23
Junior year of college	7.4	7
Senior year of college	5.3	5

Question 2: How First Learned of Profession		
Category	Percentage (%)	Number (n)
Personal experience	25.3	25
Work experience	7.1	7
Family/Friends	41.4	41
Academic professors	13.1	13
College/career fairs	6	6
Other	7.1	7

Question 3: Top 5 Rated Motivating Factors to the Career Path		
Category	Percentage (%)	Number (n)
Working in a helping profession	93.2	68
Availability of jobs	83.6	61
Interesting work	90.4	66
Salary	67.1	49
Clinic experience	32.9	24
Class taken at college	32.9	24
Class taken in high school	4.1	3
Parent Recommendation	19.2	14
Alternative Or back up career	11	8
Personal experience	41.1	30
Other	6.8	5

Question 4: Communication Sciences and Disorders Major		
Category	Percentage (%)	Number (n)
Yes	83	83
No	17	17

Question 5: Additional Pre-Requisites Required		
Category	Percentage (%)	Number (n)
Yes	88.2	15
No	11.8	2

Question 6: Influential Factor in Applying to Graduate School		
Category	Percentage (%)	Number (n)
Yes	55.6	55
No	44.4	44

Question 7: Level of Certainty in Applying to Graduate School		
Category	Percentage (%)	Number (n)
No doubts or unanswered questions	40	40
Some doubts and unanswered questions	48	48
Many doubts and unanswered questions	12	12

Question 8: All Resources used to Learn about Graduate School Process		
Category	Percentage (%)	Number (n)
From my peers	64.6	64
From my advisor and/or faculty mentor	79.8	79
From a career fair	3	3
From the career center at university	7.1	7
During an open house	34.3	34
From online resources	57.6	57
Other	5.1	5

Question 9: Number of Schools Applied to		
Category	Percentage (%)	Number (n)
One	4	4
Two	9	9
Three	11	11
Four	18	18
Five	11	11
Six	8	8
Seven	9	9
Eight	10	10
Nine	8	8
Ten	5	5
Eleven	2	2
Twelve	3	3
Thirteen	0	0
Fourteen	2	2

Question 10: Acceptance Percentage into Graduate School		
Category	Percentage (%)	Number (n)
100%	24	24
75%	24	24
50%	25	25
25%	27	27

Question 11: Accepted into Top Choice		
Category	Percentage (%)	Number (n)
Yes	78	78
No	22	22

Question 12: Top 3 Rated Influential Admission Criteria		
Category	Percentage (%)	Number (n)
Letters of recommendation	65.1	56
Essay/writing sample	47.7	41
Contact at university	4.7	4
Interview	8.1	7
Undergraduate overall GPA	43	37
Undergraduate major GPA	40.7	35
GRE scores	57	49
Undergraduate major	1.2	1
Institution at which undergraduate education was received	16.3	14
I don't know	8.1	7
Other	2.3	2

Question 13: Top 5 Rated Selection Criteria for Accepting Admission into a Graduate Program		
Category	Percentage (%)	Number (n)
Reputation of university	36.7	29
Geographic location	46.8	37
Nearness to home	54.4	43
Size of university	10.1	8
Support services	15.2	12
Cost	48.1	38
Funding	21.5	17
Program reputation	69.6	55
Duration of program	21.5	17
Program curriculum and requirements	38	30
Class size	15.2	12
Admission requirements	7.6	6
Selectivity/competitiveness of program	24.1	19
Accreditation status	29.1	23
Only program offering admission	13.9	11
Other	10.1	8

Question 14: All Next Steps if not Accepted into Graduate School Program		
Category	Percentage (%)	Number (n)
Reapply next year to same schools	69.7	69
Reapply next year to difference schools	58.6	58
Take additional courses to improve knowledge and GPA	27.3	27
Talk to advisor on ways to improve application	29.5	49
Take time off	15.2	15
Work in related field to gain experience	73.7	73
Retake GREs	59.6	59
Become paraprofessional or Special Education aid	12.1	12
Become an SLP assistant or audiology technician and/or hearing aid dispenser	23.2	23
Other	9.1	9

Question 15: Age		
Category	Percentage (%)	Number (n)
20 and under	0	0
21-22	38	38
23-24	47	47
25-26	7	7
27-30	3	3
31-35	3	3
36-39	0	0
40+	2	2

Question 16: Sex		
Category	Percentage (%)	Number (n)
Female	98	98
Male	2	2

Question 17: Ethnicity		
Category	Percentage (%)	Number (n)
American Indian or Alaskan Native	0	0
Black or African American	5	5
Hispanic or Latino (all races)	4	4
Asian or Pacific Islander	1	1
White	90	90

Question 18: Hometown Region		
Category	Percentage (%)	Number (n)
New England	4	4
Mid Atlantic	52	52
East North Central	0	0
West North Central	0	0
South Atlantic	43	43
East South Central	0	0
West South Central	0	0
Mountain	0	0
Pacific West	1	1

Question 19: Undergraduate University		
Category	Percentage (%)	Number (n)
Loyola University	22	22
Towson University	23	23
University of Maryland	10	10
Other	45	45

Question 20: Current University		
Category	Percentage (%)	Number (n)
Loyola University	44	44
Towson University	56	56
University of Maryland	0	0

Question 21: Current Program		
Category	Percentage (%)	Number (n)
Speech-Language Pathology	89	89
Audiology	11	11

Question 22: Undergraduate GPA		
Category	Percentage (%)	Number (n)
Less than 3.0	0	0
3.0-3.24	4	4
3.25-3.49	10	10
3.50-3.74	29	29
3.75-4.0	57	57

Question 23: GRE Performance-Verbal Reasoning		
Category	Percentage (%)	Number (n)
130-134	0	0
135-139	5.4	5
140-144	3.2	3
145-149	18.3	17
150-154	34.4	32
155-159	20.4	19
160-164	12.9	12
165-170	5.4	5

Question 23: GRE Performance-Quantitative Reasoning		
Category	Percentage (%)	Number (n)
130-134	10.7	1
135-139	5.4	5
140-144	9.7	9
145-149	21.5	20
150-154	35.5	33
155-159	19.4	18
160-164	5.4	5
165-170	2.2	2

Question 23: GRE Performance-Analytical Writing		
Category	Percentage (%)	Number (n)
Less than 3	0	0
3	2.1	2
3.5	12.6	12
4	36.8	35
4.5	31.6	30
5	13.7	13
5.5	3.2	3
6	0	0

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CURRICULUM VITA

Kimberly Amrod



Audiology

Doctor of Audiology., May 2016

Secondary education: Ridgefield High School, Ridgefield, Connecticut, June 2008

<u>Collegiate institutions attended</u>	<u>Dates</u>	<u>Degree</u>	<u>Date of Degree</u>
Towson University	08/2012-05/2016	Au.D.	05/2016
Juniata College	08/2008-05/2012	B.S.	05/2012

Major: Audiology

Professional publications:

Amrod, K., Deschenes, S., Folz, D., Kump, S., & Naar, R. (2010). Effects of water chemistry on watercress survivability. *Journal of Ecological Research*, 12, 1-9.

Professional positions held:

AC Tinnitus, Hyperacusis and Balance Center– 1776 S. Queen St, York, PA, 17403
Audiology Student Clinician, August 2014 – May 2015

The Hearing and Speech Agency– 5900 Metro Dr, Baltimore, MD, 21215
Audiology Student Clinician May 2013 – July 2013

Chesapeake Ear, Nose, and Throat– 410 Malcolm Dr, Westminster, MD, 21157
Audiology Student Clinician, January 2013 – May 2013

