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# Factors Contributing to the Shortage of Speech-Language Pathologists in Utah Schools

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FACTORS CONTRIBUTING TO THE SHORTAGE OF SPEECH-LANGUAGE  
PATHOLOGISTS EMPLOYED IN UTAH SCHOOLS

by

Stephanie Harris

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of

Educational Specialist

Department of Counseling Psychology and Special Education  
Brigham Young University

August 2007

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GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Stephanie Harris

This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

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As chair of the candidate's graduate committee, I have read the thesis of Stephanie Harris in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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## ABSTRACT

### FACTORS CONTRIBUTING TO THE SHORTAGE OF SPEECH-LANGUAGE PATHOLOGISTS EMPLOYED IN UTAH SCHOOLS

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This study examined factors contributing to Utah's critical shortage of school-based speech-language pathologists. Specifically, this study focused on the following three constructs: (a) stress levels among professionals currently in the field, (b) attrition and the reasons professionals leave their positions, and (c) factors at the university level. Stress among Utah's speech-language pathologists was assessed using the Speech-Language Pathologist Stress Inventory (Fimian, Lieberman, & Fasteneau, 1991). Of the 230 potential participants, 97 completed and returned questionnaires. Results indicated that Utah's school-based speech-language pathologists experience less overall stress than a normative sample of speech-language pathologists throughout the United States; however, Utah's professionals reported significantly greater stress related to caseload, salary, and use of prescription drugs. However, overall stress was not related

to caseload size or the number of service delivery sites. In regard to how various aspects of burnout were related, a weak positive relationship was found between years of experience and *Time and Workload Management*. Overall, *Total Stress* appeared to be most strongly related to *Lack of Professional Supports*. Attrition was investigated by distributing an existing survey to the special education directors of Utah's 40 school districts, who reported the status of speech-language pathologists employed in their respective districts. All 40 of the directors responded to the survey. Based on their report, 67 of the speech-language pathologists left their positions during the 2004-2005 school year, representing 14.5% of Utah's school-based speech-language pathologists. The top reasons indicated for speech-language pathologists leaving their positions were (a) moved, (b) children/pregnancy, (c) changed district within state, (d) retired, and (e) left education. Finally, the directors of Utah's three university graduate-level speech-language pathology programs were surveyed to assess factors at the university level that may be contributing to the shortage. All three directors responded to the survey. The mean number of applicants over the three-year period in question was 186 per year, and of these, an average of 111.3 or 60.0% was accepted. From these three combined programs, an average of 67 students graduated each year, and approximately 30 to 40% of these graduates initiated practice in Utah's schools. Data from one of the three programs, Utah State University, indicated that the addition of an outreach program significantly increased their number of graduates.

## ACKNOWLEDGEMENTS

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## INTRODUCTION

The field of speech-language pathology has changed dramatically over the years, particularly as pertaining to education. The role of a school-based speech-language pathologist has blossomed from a mere “speech correctionist” to an integral part of multidisciplinary teams, providing a wide variety of crucial services. Unfortunately, the number of personnel and availability of resources in the educational domain have not matched the rapid expansion of roles.

### *National Shortages*

Throughout the past several decades, shortages of special education personnel have been chronic and well-documented (Crane, 1982; Edgar & Pair, 2005; Fimian, 1985; McIntyre, 1981). The need for special education teachers has spurred vast amounts of research on stress/burnout, attrition, and factors motivating entrance into the field. While research on how these issues specifically impact special education teachers has been abundant (Billingsley, 2004; Fore III, Martin, & Bender, 2002; McLeskey, Tyler, & Flippin, 2004; Miller, Brownell, & Smith, 1999), research on how they affect other special education personnel has been limited.

In particular, few studies have been conducted on how such factors affect speech-language pathologists working in public school settings, though a critical shortage has certainly plagued schools for years. For example, a survey of school administrators conducted by the American Speech-Language-Hearing Association (ASHA) during the 1999-2000 school year revealed 11,148 unfilled job vacancies in public school districts (American Speech-Language-Hearing Association, 2003). In 2001, another ASHA survey indicated that of the 2,009 speech-language pathologists surveyed, half reported a shortage of these professionals in their district. According to Garmoe (2001), this study also investigated the perceptions of 45 speech-language

pathologists in Illinois, finding that 21 of these speech-language pathologists reported shortages in their districts.

In 2005, Florida's Palm Beach County School District estimated spending an additional \$1.6 million contracting with private speech-language pathologists to meet the minimum needs of their students for the next year and a half. The director of special education commented, "The personnel just isn't out there" (Kopkowski, 2005, p. 1B). Similarly, Clark County school district in Nevada anticipated filling 44 vacancies in their speech-language pathology department with independent contractors, greatly increasing their district's personnel budget (Bach, 2003).

In Florida, a task force was organized in order to address the severe shortage of qualified school-based speech-language pathologists. This task force examined various factors contributing to the dearth of professionals, finding that many speech-language pathologists choose not to enter the educational sector because they are dissuaded by high caseloads and low salaries. Additionally, an insufficient number of students graduating from university speech-language pathology programs was found to be a significant issue (Florida State Department of Education, 2001).

Likewise, researchers have begun to examine the critical shortage of speech-language pathologists in the state of Utah. In 1998, the Utah State Office of Education sponsored a longitudinal study examining reasons why special education personnel, including speech-language pathologists, leave their positions in public schools (Menlove, Garnes, & Salzberg, 2004). While this research examines valuable factors relating to Utah's critical shortage of speech-language pathologists, including reasons that individuals leave their positions, it fails to address other issues that likely contribute to this vexing problem.

One such issue is the level of stress/burnout among school-based speech-language pathologists. Numerous studies have examined the levels of stress/burnout among special education teachers (Fimian, 1986; Firth & Mims, 1985; Johnson, Gold, & Knepper, 1984; Lawrenson & McKinnon, 1982; Olson & Matuskey, 1982; Weber & Toffler, 1989; Weiskopf, 1980; Zabel & Zabel, 1982); however, very few have investigated these phenomena as they pertain to speech-language pathologists. Given the relationship between level of stress/burnout and attrition (Blood, Ridenour, Thomas, Qualls, & Hammer, 2002), this issue warrants closer examination.

Other potential causes of Utah's shortage are factors at the university level impacting entrance into the field. In a survey of school administrators, 59% attributed shortages in their districts to a lack of qualified applicants (American Speech-Language-Hearing Association, 2003). If university programs are not graduating an adequate supply of qualified professionals into the field, then examining factors at the university level may be an important step in identifying causes of Utah's shortage.

With shortages already at critical levels, the demand for qualified speech-language pathologists is expected to grow. According to Boswell (2002), speech-language pathology is among the top 30 most rapidly growing occupations, with positions expected to increase 39% nationally by the year 2010. Individual states vary in their reported need for qualified speech-language pathologists. More specifically, expectations vary across states, ranging anywhere from an increase of 19% to 63%, with at least 9 states expecting growth of over 50% (Boswell, 2002). With Utah's population growing at a rate more than double that of the national average between 2000-2006, the state may be particularly impacted by the expected increase (U.S. Census

Bureau, 2007). Clearly, the importance of addressing today's critical shortage is paramount if the field is expected to meet tomorrow's demands.

#### *Statement of Problem*

While research has examined factors contributing to the shortages of special education personnel, few of these have given specific focus to the field of speech-language pathology. Additionally, very little research has been conducted on factors specific to speech-language pathologists practicing in Utah's public schools. While studies have begun to examine reasons why Utah's school-based speech-language pathologists leave their positions, research investigating other critical factors contributing to this shortage, such as levels of professional stress/burnout and factors related to entrance into the field, is lacking.

#### *Statement of Purpose*

The general purpose of this study is to identify some of the possible causes of the critical shortage of speech-language pathologists in Utah's public schools. More specifically, the aim of this study is threefold: (a) to assess the level of stress in Utah's school-based speech-language pathologists and to examine what professional characteristics contribute to stress, (b) to gain additional insight into the reasons Utah's speech-language pathologists employed in public schools leave their positions, and (c) to examine the supply of qualified professionals entering the field from Utah's university training programs.

#### *Research Questions*

There are three primary questions that this study will attempt to answer. First, "How does the average stress level of Utah's school-based speech-language pathologists compare to a normative sample? Are there differences according to selected demographic variables? What factors appear to most significantly impact stress?" Second, "What percent of speech-language

pathologists working in Utah's public schools left their positions during the 2004-2005 school year? What are the most common reasons for these professionals leaving their positions? What are the average numbers of years in the position and years of experience associated with each reason for leaving?" Finally, "How well are Utah universities preparing speech-language pathologists for the schools based on the number of students admitted, graduated, and employed by schools as well as program flexibility?"

### *Importance of Study*

As previously stated, shortages in speech-language pathology personnel come at high financial expense to school districts. In fact, Janota (2004) reported that school districts paid contracted speech-language pathologists an average of \$20 more per hour than full-time employees. Additionally, shortages in personnel can lead to increased caseloads and responsibilities for existing professionals, thus perpetuating the cycle of burnout and attrition. An ASHA survey asked speech-language pathologists to report on how shortages impacted their jobs. Responses included (a) an increased caseload (37%), decreased quality of services (11%), inability to provide students with needed services (7%), decreased opportunity for individual services (4%), and failure to provide students with mandated services (3%) (Peters-Johnson, 1998). Indeed, children and youth may be paying the price for the shortage of speech-language pathologists in schools. This serious issue warrants close attention in order to provide appropriate and sufficient services to the students in Utah's schools.

## REVIEW OF LITERATURE

The literature review will discuss the following elements and their relationship to the current shortage of speech-language pathologists: (a) stress and burnout, (b) attrition, (c) job satisfaction, and (d) factors at the university level.

### *Stress and Burnout*

Much of the research on personnel shortages in special education in general has focused on job-related stress and burnout (Fimian, 1986; Firth & Mims, 1985; Johnson, Gold, & Knepper, 1984; Lawrenson & McKinnon, 1982; Olsen & Matuskey, 1982; Weber & Toffler, 1989; Weiskopf, 1980; Zabel & Zabel, 1982). Stress is defined as “the cumulative effect of task demands that [school-based professionals] face in the performance of their professional roles and responsibilities” (Wisniewski & Gargiulo, 1997, p. 325). Stress can develop into burnout, “a debilitating psychological condition brought about by work-related frustrations that result in lowered productivity and morale” (Veninga, 1979, p. 45). Speech-language pathologists experiencing work-related stress may manifest symptoms such as “loss of concern or objectivity for the client, a negative or unrealistic impression of one’s own abilities, paranoid reactions, and an inability to utilize coping mechanisms” (Miller & Potter, 1982, p. 177). Physical symptoms may also arise from stress, including fatigue, illness, exhaustion, and gastrointestinal complications. These symptoms not only impact an individual’s professional conduct, but their personal lives as well. For example, in one study, 22% of speech-language pathologists experiencing even mild levels of burnout indicated that their personal lives were impacted, and this percentage increased to 78% in the moderate/high group (Miller & Potter, 1982). For obvious reasons, stress and burnout may lead to attrition, thus contributing to the critical shortage of personnel.

Research on how speech-language pathologists are specifically impacted by stress and burnout is available but limited. Such studies may be particularly valuable, since two of the four school-based populations at a heightened risk for burnout include those who work with hearing and visually impaired students and those who work with speech and language impaired students (Wisniewski & Gargiulo, 1997). Thus, examining the job components that contribute to this increased risk is of critical importance. Frank and McKenzie (1993) found that school personnel in consulting roles exhibited the highest levels of burnout. This finding is significant for speech-language pathologists working in schools, since many function primarily as consulting professionals. Unfortunately, there may be few opportunities for speech-language professionals to discuss their feelings of stress and burnout with those in a position to help. In a national survey of speech-language pathologists working in a variety of settings, only 7% reported that there were resources readily available for helping employees cope with stress and burnout (Miller & Potter, 1982).

Another frequently referenced job component that is believed to contribute to stress and burnout is caseload size. Large caseloads and time limitations have been identified as two of the biggest challenges facing today's school-based speech-language pathologists (Peters-Johnson, 1998). Many studies indicate that caseloads for speech-language pathologists in educational settings far exceed those of professionals practicing in the private sector, perhaps explaining why many professionals choose employment in the latter. While special education personnel in general are prone to increasing caseload size, Wisniewski and Gargiulo (1997) reported that speech-language pathologists are especially vulnerable to "high levels of occupational stress, tension, and negative attitudes due to their large caseloads, minimal facilities and resources, and professional isolation" (p. 338). These problems are compounded by the fact that the roles of

speech-language pathologists in educational settings are expanding, with mounting administrative responsibilities, legally mandated paperwork, and interdisciplinary meetings increasing professional demands (Blood et al., 2002).

Blood et al. (2002) surveyed 2,000 speech-language pathologists currently practicing in schools. They found that the average caseload was an overwhelming 56.3 children, with a strong negative correlation between caseload and job satisfaction. Peters-Johnson (1998) reported that 53% of school-based speech-language pathologists have a caseload between 40 and 69 clients and conduct a mean of 14 individual sessions, 22 group sessions, and 7 classroom sessions per week. If sessions are 30 minutes each, the average professional spends 21.5 hours per week in direct service delivery. During a school week of 35 hours, this leaves little time for the many other responsibilities speech-language pathologists are expected to perform, including assessment, consultation, parent and school meetings, hearing screenings, progress monitoring, paperwork, and development of Individualized Education Programs (IEPs) (Condon, Simmons, & Simmons, 1986). In fact, the results of a survey reported by Peters-Johnson (1998) indicated that respondents often worked overtime to fulfill these responsibilities. Despite their large workload, only 15% of respondents reported that they had access to support personnel such as aids, who can, according to the study, significantly reduce the burden of paperwork and scheduling.

In fact, future speech-language pathologists may be overwhelmed by large caseloads before ever entering the field. Lass and Ruscello (1995) surveyed 315 undergraduate and graduate speech-language pathology students to identify areas of the profession that they considered unattractive. Twenty percent of the respondents reported “too much work” as an undesirable aspect of their chosen profession. While the caseload of speech-language

pathologists working in public school settings tends to far exceed that of speech-language pathologists employed in private settings, their salary does not. In 2004, the median salary of speech-language pathologists practicing in elementary or secondary schools was \$48,320, while the median salary for those employed in offices of other health professionals was \$57,240 (U.S. Bureau of Labor Statistics, 2005). Thus, many graduates find the private sector far more enticing (Rosa-Lugo, Rivera, & McKeown, 1998).

Miller and Potter (1982) identified a significant correlation between burnout and perceived job effectiveness, with 25% of speech-language pathologists in the moderate to severe burnout group perceiving themselves as ineffective at work. Of those reporting moderate to high levels of burnout, the individuals that reported the highest level of perceived ineffectiveness were those employed in public schools. Perhaps identifying strategies for improving the self-efficacy of school-based professionals could assist in the reduction of burnout.

Given the many risk factors for the development of stress and burnout in school-based speech-language pathologists and the negative consequences that result, identifying areas for intervention may be a key strategy in reducing the attrition of these professionals and thus addressing the critical shortage. Fimian, Lieberman, and Fastenau (1991) developed an instrument for this very purpose called the Speech-Language Pathologist Stress Inventory. The instrument is comprised of six factors: Bureaucratic Restrictions, Emotional-Fatigue Manifestations, Time and Workload Management, Instructional Limitations, Biobehavioral Manifestations, and Lack of Professional Supports. In their survey, the developers of this instrument found that Time and Workload Management had the most significant bearing on stress, mirroring other studies that suggest that workload, caseload, and time restraints greatly contribute to stress level.

### *Attrition*

While stress and burnout are obvious correlates of attrition (Blood et al., 2002), professionals have other reasons for leaving their positions as well. The Utah State Office of Education has conducted annual surveys of Utah's 40 school districts since 1998 (Menlove et al., 2004). The purpose of this research is to determine the number of special education personnel, including speech-language pathologists, who leave their positions each year and the reasons for their departure. The number of speech-language pathologists who left their positions increased from 11.0% during the first year of the study (1998-1999) to 15.1% during the third year (2000-2001). The three most common reasons that special educators (including speech-language pathologists) identified for leaving were retirement, moving, and general education transfer. While the latter does not apply to speech-language pathologists, retirement and marriage may be areas that warrant further study.

Though individual characteristics associated with attrition have been studied in special education teachers, no studies were found that describe how demographic factors may specifically relate to the attrition of speech-language pathologists in educational settings. However, research on special education teachers may identify areas for possible exploration. For example, Brownell and Smith (1992) reported a relationship between gender and attrition, with females leaving at a higher rate. These researchers also found age to be a significant contributor, with professionals under 30 years of age being twice as likely to leave their positions when compared to their older counterparts. While race has only begun to be studied in relation to attrition, research thus far has been unable to identify a significant relationship (Brownell & Smith, 1992).

Despite research into the causes of attrition, very few studies have documented the effectiveness of interventions aimed at preventing or reducing the problem. Brownell and Smith (1992) have proposed several possible strategies that may serve as models for future intervention efforts aimed at reducing attrition of school-based speech-language pathologists. Possible interventions include induction programs to increase support for new professionals, provision of collaboration opportunities, and increased decision-making opportunities. Research indicates that school-based speech-language pathologists become increasingly more satisfied with their jobs the longer that they remain in the field; thus, increasing job satisfaction early in employees' professional careers may be an important step in reducing attrition and addressing the shortage of personnel (Blood et al., 2002).

#### *Job Satisfaction*

Indeed, examining factors that contribute to job satisfaction may be valuable in identifying characteristics that protect against stress/burnout and attrition. Miller and Potter (1982) found a significant correlation between degree of burnout and job dissatisfaction, with 79% of professionals experiencing moderate to high levels of burnout indicating they were not satisfied with their jobs. According to Wisniewski and Shewan (1987), "If the members of a profession are satisfied, it is likely that they will be productive, produce quality work, report being successful, remain in their profession, and encourage others to enter their profession" (p. 30). Thus, job satisfaction of current employees may serve to reduce attrition and assist in the recruitment of other professionals, thus potentially addressing shortages on two different levels. Perhaps most importantly, level of job satisfaction has been linked to student learning outcomes (Blood et al., 2002).

In one study, speech-language pathologists currently employed in educational settings were found to have lower levels of job satisfaction than speech-language pathologists working in other settings; thus, this issue deserves close attention (Russo & Flahive, 2005). Numerous characteristics of the work environment have been found to contribute to job satisfaction, including salary, opportunities for advancement, supervision, recognition, sense of autonomy, severity of student behavior, and working conditions (Blood et al., 2002). In order to examine what factors specifically impact school-based speech-language pathologists, Pezzei and Oratio (1991) surveyed a random sample of speech-language pathologists working in public schools throughout the United States. Using a questionnaire designed specifically for the study, the researchers assessed correlates of job satisfaction in these individuals. They found that supervision (i.e., helpful, competent, friendly, and concerned supervisor; fair hiring; facilitates cooperation) was the factor with the highest loading, accounting for 33% of the variance. Specifically, job satisfaction appeared to be most correlated with a “helpful supervisor.” Workload accounted for 8% of the variance, with “excessive amounts of work” having the highest loading. Finally, coworkers accounted for 7% of the variance, with “helpfulness of coworkers” having the strongest loading. The results of this study complement research examining attrition of special educators, which indicate that lack of support from administration is one of the most commonly-cited reasons for leaving special education (Brownell & Smith, 1992).

Additionally, Pezzei and Oratio (1991) identified certain background characteristics that appear to have a significant impact on job satisfaction: academic status, gender, and the number of years employed in the public schools. Specifically, female employees with advanced education and more years of experience appeared to have the highest levels of job satisfaction. In

this study, caseload size was the job setting characteristic most strongly predictive of satisfaction among professionals, followed by the location of the job setting, employee status, number of students served per day, and grade level of students served. The results indicated that those most at risk for job dissatisfaction were itinerant employees working in urban middle schools with large caseloads, averaging between 11 and 20 students served per day (Pezzei & Oratio, 1991).

In another study of job satisfaction of school-based speech-language pathologists, Blood et al. (2002) found that while a majority of these professionals reported general satisfaction with their jobs, they reported being less satisfied than the normative samples with several specific job components. These included pay and pay raises, satisfaction with coworkers, quality of supervision by their primary supervisor, and opportunities for advancement. Perhaps these areas deserve particular attention in regards to the recruitment and retention of qualified personnel. Opportunities for advancement may require particular scrutiny, since dissatisfaction with this aspect has been identified as one of the first signs of burnout in school personnel (Bakker & Schaufeli, 2000).

As these studies show, caseload size may not only impact levels of stress/burnout, it may also have a significant bearing on job satisfaction. Greenwald and Brorson (2001) found that caseload size was negatively correlated with overall job satisfaction, satisfaction with the type of work done on the job, and perceptions of the job satisfaction of others in the field. Conversely, caseload size was positively correlated with thoughts of quitting and perceptions of thoughts of quitting by others in the field. Greenwald and Brorson found that 33% of school-based speech-language pathologists serving the average number of clients, 40 to 60, had thoughts of quitting.

More work for less pay may have an adverse effect on the job satisfaction of school-based speech-language pathologists. Indeed, districts in the top salary range have been much

more successful in retaining special education personnel (Brownell & Smith, 1992), and low pay was found in one study to be one of only four job factors that correlated strongly with low job satisfaction (Blood et al., 2002). Additionally, in their study of speech-language pathology college students, Lass and Ruscello (1995) found that 28.2% of respondents viewed “salary” as an unattractive aspect of the profession. In fact, 62% of the students surveyed indicated plans to work in a medical setting upon graduation.

Finally, the findings have been mixed regarding the relationship between job satisfaction and the geographical setting in which speech-language pathologists work. While Pezzeri and Oratio (1991) found that employment in urban settings increases the risk for job dissatisfaction, other research suggests that those employed in rural settings appear to be more dissatisfied with their careers, though the findings on this have been mixed (Blood et al., 2002). Speech-language pathologists in rural settings may be dissatisfied because of lower salaries, professional isolation, and more pronounced personnel shortages, leading to higher caseloads. In fact, studies suggest an annual turnover rate between 30 and 60% for speech-language pathologists working in rural school districts (Coleman, Thompson-Smith, Pruitt, & Richards, 1999). Since many of Utah’s school districts are located in rural areas, these findings may be of particular significance for the current study.

#### *Factors at the University Level*

Examining issues at the university level that affect entrance into the field of speech-language pathology may be as valuable as investigating factors impacting exit from the field. As previously stated, 59% of school administrators attributed shortages in their districts to a lack of qualified applicants (American Speech-Language-Hearing Association, 2003). Indeed, in 2004 the number of positions available in schools far exceeded the number of job-seekers (American

Speech-Language-Hearing Association, 2003). The Utah Speech-Language Pathology and Audiology Licensing Act Rules (1997) mandate that all practicing professionals obtain a master's level degree or higher, which is the standard in most states. However, results of a national survey conducted by the Council of Graduate Programs in Communication Sciences and Disorders (CGPCSD) in 1994 indicated that while enrollment of undergraduate students had increased by 25%, the enrollment of students in master's and doctoral level programs decreased. In fact, since the survey began in 1982, the number of master's students had decreased from 520 to 376, and the number of doctoral students had declined from 116 to 69. In addition, the 1993-1994 year saw the smallest increase in institutional funding and no change in the number of academic programs or the total number of faculty members (Mills, Bernthal, Creaghead, & Gilbert, 1994).

While some schools have allowed professionals, including speech-language pathologists, to work on letters of authorization while they complete the graduate requirement, it is often difficult for working individuals to attend graduate programs due to scheduling conflicts. Some programs have been developed to help ameliorate the shortages. For example, Rosa-Lugo et al. (1998) developed a consortium program with public school districts and a local university where classes were scheduled to accommodate the working student. Additionally, students were allowed to take fewer credit hours per semester and thus prolong their enrollment for this same purpose. Students accepted into the consortium program were required to complete their internships in a public school setting, with an expectation that they continue to work for the district for a "reasonable period of time" upon graduation (p. 235). This program graduated 68 qualified speech-language pathologists between 1993 and 1997, which likely helped alleviate the shortage of professionals in many of Florida's districts.

### *Summary*

Stress and burnout appear to have a significant impact on speech-language pathologists working in public schools. Stress and burnout may partially explain the high levels of attrition of Utah's professionals, however, other causes, including retirement and moving, have been identified. Job components that may contribute to stress and burnout, including caseload size and salary, may also influence job satisfaction. While the examination of these issues may lead to a greater understanding of why personnel leave the field, a lack of qualified professionals entering the field may also significantly contribute to Utah's shortage.

## METHODS

The present study examined (a) the perceived stress of school-based speech-language pathologists in Utah, (b) the attrition rates of this same population and the reasons they leave their positions, and (c) how well Utah's three speech-language pathology university programs are preparing students for careers in education.

### *Stress of Speech-Language Pathologists*

#### *Participants*

Participants for the first portion of the study included a random sample of speech-language pathologists practicing in Utah schools during the 2005-2006 school year. A list of speech-language pathologists was obtained from the Utah State Office of Education (USOE), and one-half of the 539 licensed, registered, and practicing speech-language pathologists were randomly selected to participate by using a random number table. This resulted in a target sample of 270 participants. Failure to obtain approval from one district necessitated that 40 participants later be dropped from the study, reducing the sample to 230 individuals. Of these, 97 participated in the study, a 42.2% participation rate.

The following is a summary of the demographic information of the participants. There were 94 (93.8%) females and 4 (4.1%) males. Ninety (92.8%) of the respondents were Caucasian, 2 (2.1%) were Hispanic, 1 (1.0%) was African-American, and 1 (1.0%) was Asian. These figures are similar to those obtained by ASHA in a 2006 national sample of speech-language pathologists, where 93.0% were Caucasian and 95.6% were female (ASHA, 2007). Participants in this study averaged 13.1 years of experience, had a mean caseload between 21-25 and 26-30 students, and provided services at an average of 2.1 sites. Thirty (30.9%) individuals reported employment in rural locations, while 65 (67.0) reported working in urban settings. The

median estimated salary of the participants was \$44,896. In comparison, the most recent figures from U.S. Bureau of Labor Statistics (2005) indicate a national median salary of \$48,320 for school-based speech-language pathologists, and this figure has likely increased as a result of salary raises and other adjustments.

### *Procedures*

Approval from the Institutional Review Board at Brigham Young University was obtained before the study ensued. Upon approval, each selected participant was emailed the survey materials at addresses obtained from district websites or by directly contacting district offices. Survey materials included an informed consent letter, questionnaire, and instructions for returning the survey via email. A follow-up letter was sent via email along with another consent form and questionnaire to participants who had not responded within one week, and a final follow-up letter with additional survey materials was sent via email to individuals who had not responded after two weeks. Returned surveys were tracked by using participants' return email addresses; however, responses were printed and separated from the actual emails in order to protect confidentiality.

In order to increase return rates, a \$5 gift certificate was sent to all respondents who provided a mailing address with their returned survey. Upon receipt, the return address pages were immediately separated from the questionnaires in order to protect the confidentiality of respondents.

### *Measures*

In order to assess the level of stress among speech-language pathologists in Utah's public schools, the Speech-Language Pathologist Stress Inventory (SLPSI) developed by Fimian et al. (1991) was used (see Appendix A). The SLPSI contains 48 items that the respondent rates

on a five-point response scale, ranging from “no strength, not noticeable” (1) to “major strength, extremely noticeable” (5). Sample items include “My caseload is too big,” “I feel administrative policies limit my effectiveness,” and “I do not feel like a member of the school.” Items are grouped into the following six subscales, listed with their constituting item numbers and internal consistency reliabilities: Bureaucratic Restrictions (items 8-10, 15-17;  $\alpha = .83$ ), Emotional-Fatigue Manifestations (items 14, 18, 20-24, 31-33;  $\alpha = .84$ ), Time and Workload Management (items 1-4, 11-13, 37;  $\alpha = .87$ ), Instructional Limitations (items 19, 34-36, 38, 39, 43;  $\alpha = .75$ ), Biobehavioral Manifestations (items 25-30;  $\alpha = .71$ ), and Lack of Professional Supports (items 5-7, 40-42, 44-48;  $\alpha = .83$ ). The average of the 48 items constitutes the Total Stress Score, which has an internal consistency reliability of .93. Each of the subscales was found to be significantly interrelated at the 0.001 level. A significant relationship ( $r = .66$ ) between the Total Stress Score and Total Burnout Score on the Maslach Burnout Inventory (Maslach & Jackson, 1986) is evidence of construct validity.

Along with completing the questionnaire, respondents were asked to provide some basic demographic information, including gender, ethnicity, years of experience, school level (early intervention, preschool, elementary, middle school, junior high school, high school or post-secondary school), caseload size, number of work sites, and the three most common disability categories of clients served. Participants were also asked to provide the district and city in which they are employed, which was used to determine geographical location and estimated salary. Salaries for each participant were approximated by referring to districts’ published salary schedules. All respondents were assumed to have Master’s degrees as mandated by the Utah Speech-Language Pathology and Audiology Licensing Act Rules (1997), and reported number of years of experience was used to estimate participants’ “step” on the salary schedule.

### *Data Analysis*

Responses were entered into the Statistical Package for the Social Sciences (SPSS) computer program. Descriptive statistics were used to describe item, subscale, and Total Stress Score means and standard deviations. These scores were compared to that of a normative sample of speech-language pathologists throughout the United States, provided in the study by Fimian et al. (1991), using single sample *t*-tests. Independent samples *t*-tests were also used to test for differences among groups based on select demographic variables, and Spearman rho and Pearson correlation coefficients were used to test for relationships among variables.

### *Attrition: Reasons for Leaving*

### *Participants*

The second portion of the research was a continuation of a longitudinal study that has been conducted through the Utah State Office of Education since 1998 (Menlove et al., 2004). The purpose of this longitudinal study is to examine reasons why special education personnel, including speech-language pathologists, leave their positions in Utah public schools. Participants included the special education directors of each of Utah's 40 public school districts. Because the research was part of an ongoing study, the names and contact information for each of these individuals had already been compiled and were simply updated as needed. All 40 of the district special education directors participated in the study.

### *Procedures*

Surveys were sent via regular mail to each district's special education director. Two days later, electronic versions of the surveys were sent via email. Survey materials included an informed consent letter, questionnaire, and a self-addressed, stamped envelope for surveys sent via regular mail. A small gift was also included in order to increase response rate. Participants

were asked to provide information about how many special education personnel, including speech-language pathologists, left their district during the previous (2004-2005) school year. Respondents were also asked to provide the reasons why these individuals left their positions, choosing one reason for each individual from 11 categories. These categories included an “other” option, where respondents could write reasons not identified in the other 10 categories. Personal demographics, including names of personnel, were not requested in order to protect confidentiality. Follow-up emails were sent to individuals who had not responded within three weeks of the initial mailing, and phone calls were made to individuals who had not responded within one week of the follow-up email. By the end of the four weeks, 100% of the special education directors had responded.

### *Measures*

The questionnaire developed for this study (see Appendix B) included separate forms for each professional category in special education, including one for speech-language pathologists. These forms requested the employment status (full- or part-time), number of years in position, number of years in education, and reason for leaving for each individual who left their position during the 2004-2005 school year. The response options were coded into categorical responses for each item. Additionally, respondents were asked to provide information about the number of current employees in each professional category, the number of employees currently working on letters of authorization, and whether or not vacancies required districts to restructure in order to compensate for shortages. However, because the latter two items were not specific to speech-language pathologists, they were not reported as part of this study.

Before the study commenced, surveys were field tested by special education directors and revised based on their feedback. No changes have been made to the instruments since their introduction into the study.

### *Data Analysis*

Response data for this portion of the research were also entered into SPSS. Descriptive statistics were used to identify the number and percentage of professionals who left their positions statewide as well as to identify the most common reasons employees had for leaving. For each reason, the average number of years in the position and the average number of years of experience were calculated.

### *University Survey*

#### *Participants*

In order to answer the third research question, the names and contact information of the directors of the three university-level speech-language pathology programs in Utah (Brigham Young University, University of Utah, Utah State University) were obtained from the university websites. These three individuals served as the participants for this portion of the study, and all three responded.

#### *Procedures*

Survey materials were sent via email to each of the participants. Survey materials included a letter of informed consent, questionnaire, and instructions for submitting the surveys via email. Follow-up emails were sent to individuals who had not responded after one week and again after two weeks.

### *Measures*

The instrument used in this portion of the research was an 11 item, open-ended questionnaire that requested general information about each program, developed specifically for this study. The first eight items pertained to the number of applicants, number of students accepted, program capacity, number of yearly graduates, number of recent graduates working in school settings, and number of interns working in school settings for the 2003-2004, 2004-2005, and 2005-2006 school years. The final three questions related to accommodations the program makes for students currently working in schools on letters of authorization. Three university faculty members reviewed the instrument, and adjustments were made according to their feedback.

### *Data Analysis*

Due to the small number of participants, data collected were reported in raw form. Basic descriptive statistics were also used to calculate means where feasible.

## RESULTS

### *Stress of Speech-Language Pathologists*

#### *Return Rate of Survey*

The Utah State Office of Education (USOE) supplied a list of licensed and registered school-based speech-language pathologists practicing in the state of Utah. Half of the 539 speech-language pathologists on record were randomly selected for participation in the study through use of a table of random numbers. This resulted in a target sample of 270 participants.

Email addresses were obtained from district websites or, if needed, by directly contacting individual district offices. Before providing email addresses of their employed speech-language pathologists, one large school district required a district-specific application to conduct research. A letter was received several weeks into the study indicating that the research request had been denied, necessitating that the 40 individuals from this district be dropped from the study. Thus, the target sample was reduced from 270 to 230 participants.

Survey materials including a letter of informed consent and the Speech-Language Pathologist Stress Inventory were emailed to all 230 randomly selected participants. After one week, 52 participants completed and returned questionnaires, for a response rate of 21.7%. A follow-up email was then sent to the remaining participants along with additional copies of the survey materials. In the following week, an additional 22 questionnaires were received, increasing the response rate to 32.2%. After a final follow-up email two weeks after the initial request, 23 more questionnaires were returned, for a final response rate of 97 (42.2%).

#### *Data Analysis of Research Questions*

*Research question 1a: How does the average stress level of Utah's school-based speech-language pathologists compare to a normative sample?* The Total Stress Score for each

participant was determined by calculating the mean of all 48 items on the questionnaire. The mean Total Stress score of the participants was 2.4,  $SD = 0.5$ . Using a single-sample  $t$ -test, the sample mean was compared to that of the normative sample ( $M = 2.7$ ,  $SD = 0.6$ ). The analysis revealed a significant difference among the scores for these two groups ( $t(96) = -6.0$ ,  $p < .001$ ), with the sample stress score mean being significantly lower.

Calculating the means of the comprising survey items yielded scores for each of the six subscales. As Table 1 shows, single sample  $t$ -tests revealed significant differences at the .001 level between the normative sample and the study sample in the areas of Total Stress, Emotional-Fatigue Manifestations, Instructional Limitations, Lack of Professional Support, and Biobehavioral Manifestations. In each of these cases, the study sample mean was significantly below that of the normative sample.

Table 1

*Comparison of Scale and Subscale Means*

Scale/Subscale	<i>M1</i>	<i>SD1</i>	<i>M2</i>	<i>SD2</i>	<i>t</i>	<i>p</i>
Total Stress Score	2.4	0.5	2.7	0.6	-6.0	.000
Bureaucratic Restrictions	2.6	0.9	2.7	0.9	-1.0	.335
Emotional-Fatigue Manifestations	2.0	0.6	2.5	0.8	-8.5	.000
Time and Workload Management	3.6	0.7	3.6	0.8	-0.4	.698
Instructional Limitations	2.2	0.7	2.6	0.7	-5.3	.000
Biobehavioral Manifestations	1.4	0.5	1.6	0.6	-3.4	.001
Lack of Professional Supports	2.5	0.8	2.9	0.8	-5.0	.000

*Note.*  $N = 97$ . *M1* and *SD1* represent the study sample, while *M2* and *SD2* represent the normative sample.

A single sample  $t$ -test was also used to identify any existing differences between the participants and the normative means on individual survey items. Analysis revealed that the normative mean was significantly higher on 26 of the 48 items ( $p < .01$ ), as summarized in Table 2. These results indicate that the participants in this study experience less stress than the normative sample as measured by these specific items. However, as Table 3 indicates, the sample mean was significantly greater ( $p < .01$ ) on 3 of the 48 items, suggesting that these participants experience more stress in these areas. These three items pertained to caseload size, salary, and the use of prescription drugs.

*Research question 1b: Are there differences according to selected demographic variables?* Participants were asked to provide demographic information including their location, gender, ethnicity, years of experience, school level, caseload size, the number of sites at which they provide services, and the three most common special education disability categories of students they encounter in their practice.

A majority of participants reported working in urban areas ( $n = 65, 67.0\%$ ), while approximately 1/3 indicated that they work primarily in rural locations ( $n = 30, 30.9\%$ ). The proportion of participants employed in rural vs. urban settings is displayed in Table 4.

As Table 5 highlights, there appeared to be little to no difference between the mean Total Stress and subscale scores of participants employed in rural or urban settings. An independent samples  $t$ -test was used to confirm this observation. As demonstrated in Table 6, there were no significant differences found between the Total Stress scores of rural and urban participants,  $t(93) = -.23, p > .05$ . The analysis also failed to reveal any significant differences between rural and urban participants on any of the six subscales.

Table 2

*Comparison of Item Means<sup>a</sup>*

Item	<i>M1</i>	<i>M2</i>	<i>SD</i>	<i>t</i>
#2 I have little time for personal priorities.	3.0	3.4	1.2	-2.9
#5 I lack opportunities for promotion or advancement.	2.7	3.5	1.4	-5.7
#6 I lack recognition.	2.6	3.4	1.4	-5.6
#10 I lack professional improvement opportunities.	2.0	2.4	1.1	-3.6
#13 I have no time to relax.	3.1	3.6	1.2	-3.8
#14 I think about other things while working.	2.1	2.5	1.1	-3.2
#15 I feel that administrative policies limit my effectiveness.	2.7	3.1	1.2	-3.2
#16 I feel administrative policies limit my professional growth.	2.4	2.8	1.3	-4.1
#17 I feel that my needs are unmet at work.	2.4	2.8	1.1	-4.0
#18 I feel that my professional life is not contributing to my personal life.	2.2	2.5	1.3	-2.4
#20 I feel insecure.	1.6	2.5	1.0	-9.0
#21 I feel unable to cope.	1.7	2.5	0.9	-9.4
#22 I feel depressed	1.7	2.7	1.0	-10.2
#23 I feel anxious.	2.0	3.2	1.1	-10.0
#26 I get angry.	1.7	2.1	0.9	-4.7
#28 I use alcohol.	1.1	1.3	0.4	-4.5
#29 I experience heart pounding or racing.	1.4	1.7	0.7	-4.5
#32 I sleep more than usual.	1.6	2.1	1.0	-5.4
#34 I feel students are poorly motivated.	2.4	3.2	1.1	-7.0
#36 I feel that my students make little progress.	2.3	2.8	1.0	-5.0
#38 I experience inflexible scheduling.	2.9	3.3	1.2	-3.2

Table 2 (continued)

Item	<i>M1</i>	<i>M2</i>	<i>SD</i>	<i>t</i>
#42 I lack opportunities to consult with other professionals.	2.2	2.9	1.2	-5.7
#43 I feel that my students are not improving.	1.9	2.9	0.9	-10.3
#45 I do not feel like a member of the school.	2.1	2.5	1.1	-3.3
#47 I experience poor professional interactions.	1.7	2.1	1.0	-3.9
#48 I feel that the public does not value my work.	2.6	3.2	1.2	-5.3

*Note.*  $N = 97$ .

<sup>a</sup>This table represents the items where the means of the study sample were greater than the means of the normative sample.

Table 3

*Comparison of Item Means<sup>a</sup>*

Item	<i>M1</i>	<i>M2</i>	<i>SD</i>	<i>t</i>
#4 My caseload is too big.	3.9	3.5	1.1	3.1
#7 I receive an inadequate salary.	3.8	3.4	1.2	3.7
#25 I use prescription or over-the-counter drugs.	1.7	1.3	1.3	3.2

*Note.*  $N = 97$ .

<sup>a</sup>This table represents the items where the means of the normative sample were greater than the means of the study sample.

Table 4

*Location: Rural vs. Urban*

Location	<i>N</i>	%
Rural	30	30.9
Urban	65	67.0
Unknown	2	2.1
Total	97	100.0

Table 5

*Total Stress and Subscale Means for Rural vs. Urban Participants*

Scale/Subscale	Location	<i>M</i>	<i>SD</i>
Total Stress Score	Rural	2.4	0.5
	Urban	2.4	0.6
Bureaucratic Restrictions	Rural	2.6	0.8
	Urban	2.6	0.9
Emotional-Fatigue Manifestations	Rural	2.0	0.5
	Urban	2.0	0.6
Time and Workload Management	Rural	3.6	0.7
	Urban	3.6	0.8
Instructional Limitations	Rural	2.2	0.7
	Urban	2.3	0.7
Biobehavioral Manifestations	Rural	1.3	0.4
	Urban	1.5	0.6
Lack of Professional Supports	Rural	2.5	0.8
	Urban	2.5	0.8

*Note. n = 95.*

Table 6

*Significance of Differences Between Rural and Urban Participants*

Scale/Subscale	<i>t</i>	<i>p</i>
Total Stress Score	-.23	.82
Bureaucratic Restrictions	.20	.84
Emotional-Fatigue Manifestations	-.51	.61
Time and Workload Management	.07	.94
Instructional Limitations	-.22	.83
Biobehavioral Manifestations	-1.59	.12
Lack of Professional Supports	.14	.89

*Note.*  $n = 95$ .

The vast majority of the respondents were Caucasian females, as indicated in Tables 7 and 8. Because there was very little variability among the participants with respect to gender and ethnicity, no further analysis was conducted to test for differences.

Table 7

*Participants by Gender*

Gender	<i>N</i>	%
Female	91	93.8
Male	4	4.1
Unknown	2	2.1
Total	97	100

Table 8

*Participants by Ethnicity*

Ethnicity	<i>N</i>	%
African-American	1	1
Asian	1	1
Caucasian	90	92.8
Hispanic	2	2.1
Unknown	3	3.1
Total	97	100

The mean number of years of experience among the participants was 13.1 ( $n = 94$ ,  $SD = 9.4$ ). A Pearson correlation coefficient was calculated for the relationship between subjects' years of experience and their Total Stress and subscale scores. As shown in Table 9, the analysis indicated a weak positive correlation between years of experience and Time and Workload Management score ( $r = .22$ ,  $p < .05$ ). However, the data failed to show significant relationships between years of experience and any other scale or subscale score.

A Pearson correlation coefficient was also calculated to determine the relationship between the number of sites at which subjects provide services ( $M = 2.10$ ) and their Total Stress and subscale scores. As Table 10 shows, the analysis failed to support a significant relationship between number of sites and Total Stress score ( $r = .16$ ,  $p = .142$ ) or scores on any of the six subscales.

Table 9

*Correlations Coefficients for Years of Experience and Total Stress and Subscale Scores*

Scale/Subscale	<i>r</i>	<i>p</i>
Total Stress Score	.10	.36
Bureaucratic Restrictions	.17	.10
Emotional-Fatigue Manifestations	.07	.48
Time and Workload Management	.22	.03
Instructional Limitations	-.09	.38
Biobehavioral Manifestations	.08	.47
Lack of Professional Supports	.04	.68

*Note.*  $n = 94$ .

Table 10

*Correlations Coefficients for Number of Sites and Total Stress and Subscale Scores*

Scale/Subscale	<i>r</i>	<i>p</i>
Total Stress Score	.16	.14
Bureaucratic Restrictions	.14	.19
Emotional-Fatigue Manifestations	.11	.32
Time and Workload Management	.11	.31
Instructional Limitations	.08	.48
Biobehavioral Manifestations	.12	.24
Lack of Professional Supports	.13	.21

*Note.*  $n = 94$ .

Participants were asked to report the number of students they serve per day by selecting one of seven predetermined categories, represented in the data analysis by numbers one through seven. The mean of the responses was 5.1 ( $n = 92$ ), indicating that the average number of students served fell between categories 5 (21-25 students/day) and 6 (26-30 students/day). A Spearman rho correlation coefficient was calculated for the relationship between number of students served per day and Total Stress score. Only an extremely weak, nonsignificant relationship was found ( $r = .02, p > .05$ ). The number of students served per day does not appear to be related to Total Stress score. Spearman rho correlation coefficients were also calculated for the relationship between number of students served per day and scores on each of the six subscales. As Table 11 indicates, no significant relationships were found.

Table 11

*Correlations Coefficients for Number of Students Served and Total Stress and Subscale Scores*

Scale/Subscale	<i>r</i>	<i>p</i>
Total Stress Score	.02	.87
Bureaucratic Restrictions	-.06	.56
Emotional-Fatigue Manifestations	.06	.60
Time and Workload Management	.12	.27
Instructional Limitations	.08	.43
Biobehavioral Manifestations	.08	.46
Lack of Professional Supports	-.09	.38

*Note.*  $n = 94$ .

Finally, Pearson correlation coefficients were calculated to assess the relationships between estimated salary ( $M = \$44,466.00$ ) and Total Stress score, Lack of Professional Supports score, and item #7 score (“I receive an inadequate salary”). This item falls under the Lack of Professional Supports subscale. As Table 12 shows, only very weak, nonsignificant relationships were found between salary and Total Stress score ( $r = .04, p > .05$ ) and salary and Lack of Professional Supports score ( $r = .05, p > .05$ ). A very weak negative correlation was found between salary and rating on item #7, which was also nonsignificant ( $r = -.07, p > .05$ ).

Table 12

*Correlations Coefficients for Estimated Salary and Selected Variables*

Scale/Subscale/Item	$r$	$p$
Total Stress	.04	.71
Lack of Professional Supports	.05	.66
Item #7: “I receive an inadequate salary.”	-.07	.51

*Note.*  $n = 85$ .

An independent samples  $t$ -test was used to test for differences among participants whose estimated salaries fell in the first (salary  $< \$35,970.00$ ) and fourth (salary  $> \$52,614.00$ ) quartiles. As Table 13 shows, the mean Total Stress score of participants in both of these groups was 2.45, revealing no significant differences. Differences between the Lack of Professional Support scores and item #7 ratings of these two groups were also insignificant.

Table 13

*Comparisons by Salary: First vs. Fourth Quartiles*

Scale/Subscale/Item	Location	<i>M</i>	<i>t</i>	<i>p</i>
Total Stress	Q1	2.45	.01	.99
	Q2	2.45		
Lack of Professional Supports	Q1	2.58	-.03	.97
	Q2	2.59		
Item 7: "I receive an inadequate salary."	Q1	4.05	.48	.63
	Q2	3.88		

*Note.*  $n = 45$ .

As the survey instructed, participants with multiple work sites indicated all school levels at which they provide services. As a result, the number of responses to this item varied a great deal across participants, and specific variables could not be isolated. This ambiguity and lack of uniformity precluded meaningful data analysis, and therefore such analysis was not conducted. Additionally, because subjects reported serving multiple disability categories, specific variables again could not be isolated, and the overlap compromised meaningful data analysis.

*Research question 1c: What factors appear to most significantly impact stress?* In order to identify which factors appear to be most related to participants' Total Stress scores, Pearson correlation coefficients were calculated for the relationship between Total Stress score and scores on each of the six subscales. Strong correlations ( $r > .70$ ) were found between the Total Stress score and the Bureaucratic Restrictions ( $r = .79$ ), Emotional-Fatigue Manifestations ( $r = .82$ ), Instructional Limitations ( $r = .72$ ), and Lack of Professional Supports ( $r = .86$ ) scores. Modest correlations ( $0.3 < r < 0.7$ ) were found between the Total Stress score and Time and Workload

Management ( $r = .61$ ) and Biobehavioral Manifestations scores ( $r = .63$ ). All were significant at the .001 level. Table 14 lists the six subscales in order of their relationship (strongest to weakest) to the Total Stress score.

Table 14

*Correlation Coefficients for Total Stress Score and Subscale Scores*

Scale/Subscale	<i>r</i>
Lack of Professional Supports	.86
Emotional-Fatigue Manifestations	.82
Bureaucratic Restrictions	.79
Instructional Limitations	.72
Biobehavioral Manifestations	.63
Time and Workload Management	.61

*Note.*  $N = 97$ .

Pearson correlation coefficients were also computed for the Total Stress scores and scores on each of the 48 survey items. All of the survey items showed significant positive correlations with the Total Stress Score, with one exception. The relationship between the Total Stress score and item #18 (“I use alcohol”) was not found to be significant ( $r = .15, p > .05$ ). Only a weak ( $r < 0.3$ ) significant correlation was found between the Total Stress score and item #39 (“I lack adequate training”),  $r = .25, p < .05$ . A strong positive correlation ( $r = .80, p < .001$ ) was found between the Total Stress score and item #17 (“I feel that my needs are unmet at work”). The analysis yielded moderate positive correlations between the Total Stress score and the remainder

of the survey items. Table 15 lists the ten items most strongly correlated with the Total Stress score, all of which are significant at the .001 level.

Table 15

*Correlation Coefficients for Items Most Strongly Correlated with Total Stress score*

Item	<i>r</i>
#17 I feel that my needs are unmet at work.	.80
#41 I lack support.	.63
#18 I feel that my professional life is not contributing to my personal life.	.63
#44 I feel that other professionals do not understand my work.	.63
#16 I feel administrative policies limit my professional growth.	.62
#6 I lack recognition.	.62
#21 I feel unable to cope.	.61
#38 I experience inflexible scheduling.	.60
#45 I do not feel like a member of the school.	.60
#9 I lack emotional and intellectual stimulation.	.60

*Note.*  $N = 97$ .

### *Attrition: Reasons for Leaving*

#### *Return Rate of Survey*

A list of the special education directors of each of Utah's 40 school districts had been compiled during previous years of this study. All 40 of the listed individuals were again asked to participate; all 40 responded to the survey.

Survey materials, including an informed consent letter, questionnaire, and a self-addressed, stamped envelope, were sent via regular mail to the 40 participants. Two days later, electronic versions of the surveys were sent via email. Three weeks following the initial mailing, 26 districts had responded, for a response rate of 65%. A follow-up letter was then sent via email to the remaining participants. After an additional week, six more responses were received, increasing the response rate to 80%. Finally, districts from which responses had not yet been received were contacted via telephone. Responses from the remaining participants were received within two weeks, bringing the response rate to 100%.

#### *Data Analysis of Research Questions*

*Research question 2a: What percent of speech-language pathologists working in Utah's public schools left their positions during the 2004-2005 school year?* Special education directors were asked to provide the total number of speech-language pathologists employed in their districts and the number of individuals that left their positions during the 2004-2005 school year. Of the 461.57 speech-language pathologists employed in Utah's 40 school districts (decimals reflect part-time employees), 67 were reported to have left their positions, for a total of 14.5%.

*Research question 2b: What are the most common reasons for these professionals leaving their positions?* If known, special education directors were also asked to indicate the reason that each employee left their position by each choosing from 11 predetermined categories. As Table

16 shows, the most common reason for leaving was “Moved” (28.4%), followed by “Children/Pregnancy” (23.9%). These two reasons accounted for over 50% of individuals who left their positions. Additional reasons included “Changed District Within State” (16.4%), “Retired” (9.0%), “Left Education” (7.5%), “Leave of Absence” (4.5%), “Illness” (4.5%), “Marriage” (3.0%), and “Other” (3.0%).

*Research question 2c: What are the average numbers of years in the position and years of experience associated with each reason for leaving?* Finally, special education directors were asked to list, if known, the number of years each professional who left had been employed in their position and the cumulative number of years of experience they had as a speech-language pathologist, which may have been recorded on employment applications, salary contracts, or other records. The mean number of years in the position as well as the mean number of years of experience was calculated for each reason. Table 17 summarizes the results, which show that individuals with seven or fewer years of experience are more likely to leave due to moving, children/pregnancy, changing districts, leaving education, or marriage. Individuals with more experience, on the other hand, are more likely to leave as a result of retirement, illness, leaves of absence, or other reasons.

Table 16

*Reasons for Leaving*

Reason	<i>N</i>	%
Moved	19	28.4
Children/Pregnancy	16	23.9
Changed District Within State	11	16.4
Retired	6	9.0
Left Education	5	7.5
Leave of Absence	3	4.5
Illness	3	4.5
Marriage	2	3.0
Other	2	3.0
Total	67	100.2

Table 17

*Mean Number of Years in Position and Years of Experience by Reason*

Reason	Years in Position	<i>N</i>	Years of Experience	<i>N</i>
Moved	4.7	19	4.7	17
Children/Pregnancy	3.2	16	3.2	14
Changed District Within State	2.5	11	5.3	7
Retired	25.3	6	28.6	5
Left Education	2.9	5	4.2	4
Leave of Absence	13.7	3	13.0	2
Illness	6.7	3	13.1	3
Marriage	7.0	2	7.0	2
Other	11.0	2	18.5	2

## *University Survey*

### *Return Rate of Survey*

Contact information for the directors of Utah's three speech-language pathology graduate programs was obtained by visiting the websites of each university (Brigham Young University (BYU), Utah State University (USU), and University of Utah (UU)). Each of the three directors was asked to participate in this study, and all three responded.

Survey materials including an informed consent letter and questionnaire were sent to each participant. After one week, two of the three participants responded, for a return rate of 66.7%. A follow-up letter was emailed after one week to the remaining participant, who still had not responded after an additional week. A final follow-up letter was sent at this time, and two days later the final questionnaire was returned. Thus, the final response rate was 100%.

### *Data Analysis of Research Questions*

The third research question asked, "How well are Utah universities preparing speech-language pathologists for the schools based on the number of students admitted, graduated, and employed by schools as well as program flexibility?" Participants were asked to provide some general information about their graduate level speech-language pathology programs over the past three years, beginning with the number of students who applied to the program. The mean total number of applicants over the three-year period was 186.0 per year. Of these applicants, the mean number of students accepted was 111.3 per year, or 60.0%. Table 18 lists the percentage of students that were accepted for each year during the three-year time period.

Table 18

*Percentage of Accepted Applicants Over Three-Year Period by Program*

	Program	Applicants	Accepted	% Accepted
2003-2004	BYU	42	14	33
	USU	43	17	40
	UU	73	59	81
	Total	158	90	57
2004-2005	BYU	29	14	48
	USU	74	34	46
	UU	90	75	83
	Total	193	123	64
2005-2006	BYU	59	18	31
	USU	51	17	33
	UU	97	86	89
	Total	207	121	58

Next, participants were asked to report their total program capacity for each of the school years indicated. Utah State University reported their program capacity for first-year students, which corresponded directly to the number of students they accepted into the program each year, thus putting them at 100% capacity for the three-year period. The University of Utah reported their capacity to be 30 first-year students, which is well below the number of students accepted per year, presumably putting them at 100% capacity or more. They did indicate, however, that the students who are accepted “don’t all enter the program.”

Rather than reporting their capacity for first-year students only, Brigham Young University indicated their total program capacity, which was reported to be 40 students for each year in the three-year period. A total of 31 students were reported during the 2003-2004 school year, placing the program at 77.5% capacity. A total of 32 students were reported during the 2004-2005 school year, placing the program at 80.0% capacity, and 42 students were reported during the 2005-2006 year, placing it at over 100% capacity.

Both Brigham Young University and Utah State University reported that 100% of their students who complete internships do so in school settings. The University of Utah reported that “almost all” of their students intern in schools, although specific data were not provided.

The mean number of students graduating from all three programs over the three-year period was 67 per year. As Table 19 shows, the total number of graduates increased from 58 during the 2003-2004 school year to 73 during the 2005-2006 school year. The mean number of students graduating per year was relatively similar across programs, with a mean of 24 per year from Brigham Young University, 22 from Utah State University, and 21 from the University of Utah.

Table 19

*Number of Graduates Over Three-Year Period*

	Total	BYU	USU	UU
<i>M</i>	67	24	22	21
2003-2004	58	23	14	21
2004-2005	70	16	35	19
2005-2006	73	33	17	23

Neither Utah State University nor the University of Utah was able to supply information regarding the number of graduates who are now employed in school settings. Brigham Young University was unable to provide data for the 2003-2004 school year, but reported that approximately 6 of the 16 graduates from the 2004-2005 school year (37.5%) and 10 of the 33 graduates from the 2005-2006 school year (30.3%) are now working in schools. Only Utah State University reported having students enrolled who worked in school settings on letters of authorization; 20 students during the 2003-2004 year, 22 during the 2004-2005 year, and 22 during the 2005-2006 year.

Finally, participants were asked to complete three open-ended questions regarding the compatibility of their program with full-time employment. As far as typical program length, responses from each of the participants were relatively similar. Brigham Young University reported their typical program length to be 2 years; the University of Utah described it as 2 academic years plus 1 summer, and Utah State University described it as 5 semesters. However, Utah State University also reported that they have an outreach program, that requires 7 semesters, 4 of which are part-time. The reported number of students accepted and graduated during the 2004-2005 school year includes pupils who were enrolled in this program.

Both Brigham Young University and the University of Utah reported that individuals working full-time would be unable to participate in their programs. Utah State University, on the other hand, indicated that their outreach program is structured specifically to accommodate full-time school employees, with much of the coursework being completed during the summer. While Utah State University reported that the outreach program allows for flexible scheduling, they indicated that their on-campus program “does not make adjustments for students working in the schools.” Brigham Young University and the University of Utah also reported that students

are unable to reduce the number of credits taken per semester or prolong their enrollment to accommodate employment.

## DISCUSSION

### *Limitations and Cautions*

#### *Stress of Speech-Language Pathologists*

A limitation of this study is the fact that the sample was comprised only of speech-language pathologists currently practicing in Utah schools. This may introduce an element of bias, as individuals with particularly high levels of stress and burnout may be more likely to leave their positions. Thus, while practitioners experiencing very low levels of stress were likely to be included in the sample, those with very high levels may have been excluded.

Another limitation of the study is the fact that only a 42.2% return rate was attained. The 97 respondents represented only 18.0% of Utah's 539 school-based speech-language pathologists as recorded by the Utah State Office of Education. Thus, the results of this study cannot be generalized to represent all of Utah's school-based speech-language pathologists with a high degree of confidence.

Third, survey responses may have been impacted by social desirability. Several of the questions on the survey pertained to sensitive matters, such as the use of alcohol. Despite measures taken to protect confidentiality and anonymity, some participants may have been hesitant to fully disclose information about sensitive personal matters.

Finally, the use of email as a sole means of sending and receiving responses appeared to be somewhat problematic. Several people reported difficulties with opening the attachment, completing the survey electronically, and returning it via email. Relying solely on electronic means may have deterred individuals who are less familiar with the process of email from participating.

### *Attrition: Reasons for Leaving*

One major limitation of this study is that special education directors provided the reasons that other individuals had for leaving their positions, rather than the individuals themselves. People who left their positions may not have been forthcoming with their supervisors about their reasons for leaving, and thus these reasons may not have been accurately reported. It is also possible that former employees did not provide directors with specific reasons, leaving them to respond to survey items based on their own assumptions.

Additionally, participants were asked to report the total number of speech-language pathologists employed in their district currently, while they were asked to report the number of speech-language pathologists who left their positions during the 2004-2005 school year. Because the total number of employed professionals and the total number of those who left were not reported for the same academic year, percentages might not be entirely accurate.

### *University Survey*

A limitation of this portion of the research was the lack of uniformity among responses, which may have been caused by a lack of clarity in the survey questions. For example, when reporting program capacity, two participants reported the capacity for first year students, while the other respondent indicated their total program capacity. Likewise, two programs reported their program length in years, while the other used semesters. Greater specificity on survey questions and thus greater consistency among responses may have allowed for more accurate comparisons.

Another limitation for this portion of the research is the fact that individuals may have applied to more than one of the three university programs in a given year. Thus, the reported

number of applicants summed across the three programs may overestimate the actual number of applicants, and reported percentages may be affected as a result.

### *Discussion of Results*

#### *Stress of Speech-Language Pathologists*

The results of this research suggest that Utah's school-based speech-language pathologists actually experience less overall stress than a national sample. Even with lower overall stress levels, however, the results indicated that Utah's practitioners are at a heightened risk for stress related to caseload and salary and are more likely to manifest stress through the use of prescription drugs. These results are similar to those found by Florida's State Department of Education (2001), which identified caseload and salary as two major factors that dissuaded professionals from practicing in schools, significantly contributing to their shortage.

Caseload, as previously stated, has been found to be a significant contributor to stress and burnout. As Wisniewski and Gargiulo (1997) noted, speech-language pathologists are especially vulnerable to "high levels of occupational stress, tension, and negative attitudes due to their large caseloads" (p. 338). Additionally, the fact that there was a significant, although weak, correlation between Time and Workload Management score and years of experience suggests that factors such as caseload and time management become more stressful the longer professionals remain in the field.

However, addressing the issue of increasing caseload sizes in order to reduce Utah's shortage of school-based speech-language pathologists is a difficult task, since the shortage itself may be a significant contributor to larger caseloads. One possible solution may be increasing the availability of aides and support personnel. As previously stated, Peters-Johnson (1998) found

that although such staff are not widely used, they can significantly reduce professionals' workload.

As earlier indicated, the findings on the job satisfaction of speech-language pathologists working in rural vs. urban settings have been mixed (Blood et al., 2002). This particular study found no significant differences among the stress levels of professionals working in rural and urban locations. Participants' Total Stress score also did not appear to be related to the number of sites at which they provide services or the number of students they serve per day, even though caseload was one of the few areas on which participants scored significantly higher than the normative sample.

Total Stress Score was, however, highly correlated with the Lack of Professional Supports score. Indeed, many of the individual survey items most strongly related to Total Stress score fell under this subscale. Perceived lack of support, recognition, belonging, and understanding appear to be significantly related to speech-language pathologists' perceived stress. These findings are similar to those found elsewhere in the literature, which indicate that lack of support from administration is one of the most common causes of attrition among special educators (Brownell & Smith, 1992).

Ensuring administrative support, then, may be a key strategy for reducing professionals' perceived stress and reducing burnout. Simple strategies such as involving speech-language pathologists in school activities, offering professional development on their roles and functions, providing mentors and opportunities for collaboration, and presenting formal recognition and appreciation during assemblies or school meetings may serve to increase the perceived level of support which appears to so significantly impact perceived stress.

Salary also falls under the Lack of Professional Supports subscale. As previously mentioned, the mean sample score on the item “I receive an inadequate salary” was significantly higher than that of the normative sample. While estimated salary was not significantly correlated with Total Stress score or Lack of Professional Supports score, these results may have been somewhat confounded. The salaries of Utah’s school-based professionals are directly related to their years of experience, and Blood et al. (2002) demonstrated that school-based speech-language pathologists become increasingly more satisfied with their jobs the longer that they remain in the field. Additionally, even the salaries of individuals with more experience are relatively low when compared with the salaries of individuals working in other states or in private settings, and therefore Utah practitioners in general may be dissatisfied with pay.

Brownell and Smith (1992) indicated that districts in the top salary range have been much more successful in retaining special education personnel. Thus, increasing salaries may be a key strategy for preventing attrition. Reducing the gap between salaries in the private and public sectors may also entice a greater number of graduates to seek employment in schools rather than in other settings.

#### *Attrition: Reasons for Leaving*

As previously indicated, the top two reasons that speech-language pathologists in Utah left their positions (moved, children/pregnancy) accounted for over 50% of those who left. It is important to note that “moved” does not include those who moved to another district within the state. While moving and children/pregnancy may appear to be unpreventable causes of attrition, certain systemic variables may be contributing to these phenomena. For example, professionals may choose to move to areas that offer higher salaries and lower caseloads. Additionally, practitioners who might otherwise leave their positions for reasons related to children or

pregnancy may consider remaining in their jobs if supports such as maternity leave or job-sharing were in place, which are not available in many of Utah's districts. Examining controllable factors that may play a role in individuals' decisions to leave for reasons of moving or children/pregnancy may serve to significantly reduce attrition of speech-language pathologists in Utah.

Changing districts within the state was perhaps the least concerning reason that individuals left their positions. Because these individuals presumably continue in their functions as service providers in other Utah schools, this is likely not a significant contributor to overall attrition rates in Utah. Retirement also may not be a significant concern, since it indicates that professionals remained in education for a prolonged period of time. More concerning is the fact that 7.5% of those who left their positions left education altogether. As previously discussed, many professionals are enticed into the private sector by lower caseloads and higher salaries, again highlighting the importance of addressing these two critical issues (Rosa-Lugo et al., 1998). As the results of the Speech-Language Pathologist Stress Inventory suggested, increasing administrative supports might also be a key factor in preventing school-based professionals from leaving their positions in education.

The final reasons for attrition include leave of absence, illness, marriage, and "other." Again, leaves of absence and illness may not be preventable causes of attrition; however, ensuring that supports are available to individuals who leave for these reasons may increase their ability to return to their positions and resume their responsibilities. Individuals who leave as a result of marriage may also be persuaded to remain in their positions rather than relocating to accommodate a spouse's job, for example, if salaries were more competitive.

Not surprisingly, individuals who retired carried the highest number of years of experience. Individuals who left as a result of illness, leaves of absence, and “other” were also relatively experienced. The remaining reasons for leaving, including leaving education, appeared to primarily impact new professionals with seven or fewer years of experience. This echoes the findings of Blood et al. (2002) and indicates that increasing job satisfaction early in employees’ professional careers may be an important step in reducing attrition and addressing the shortage of personnel.

#### *University Survey*

The average number of students completing graduate-level speech-language pathology programs in Utah over the past three years was 67 per year. During the 2004-2005 school year, the total number of graduates was 70. Although little data were available as to the proportion of graduates who chose to work in schools, the numbers reported by Brigham Young University for the 2004-2005 and 2005-2005 school years suggest that it is only about 30.3 to 37.5%. Assuming these percentages are accurate, approximately 21-26 of the 70 graduates in 2004-2005 would take positions in the schools, far fewer than would be needed to replace the 67 speech-language pathologists who left their positions that same year. These results indicate that the number of professionals entering Utah’s public school sector is far below the number of professionals leaving the field.

Approximately 40% of students applying to Utah’s graduate-level speech-language pathology programs over the three-year period were not accepted. Accepting more students would obviously allow each of these programs to increase the number of students they graduate; however, all three of the programs indicated that they had reached 100% capacity by the 2005-2006 school year. Perhaps Utah State University’s outreach program models the most practical

solution for this problem. Similar to the consortium program developed by Rosa-Lugo et al. (1998), Utah State University's program significantly increased the number of program slots available and made the program accessible to working individuals. This resulted in a 2004-2005 graduating class that was over twice the size of the 2003-2004 class. If the number of professionals entering the field was to double and the number choosing to work in schools increased proportionally, the shortage of school-based speech-language pathologists in Utah could be at least partially alleviated.

#### *Future Research*

The Speech-Language Pathologist Stress Inventory (SLPSI) identified two sources of stress in which the study sample scored higher than the normative sample: caseload and salary. Future research might examine the effectiveness of aids and support personnel in reducing speech-language pathologists' caseloads and therefore stress. Because the results of SLPSI indicated that stress related to time and workload management appeared to increase with experience, future research examining the effectiveness of support staff in reducing the stress of more experienced professionals may be particularly valuable. Additionally, research that examines the effect of Utah's recent salary increase for educators may further elucidate the role of salary in stress and attrition.

Perceived lack of professional supports appeared to be the most significant factor in professionals' overall stress. Thus, future research may examine administrative measures and strategies that are effective in increasing perceived support, understanding, belonging, and appreciation of school-based speech-language pathologists. As previously mentioned, strategies to further investigate may include involving speech-language pathologists in school activities, offering professional development on their roles and functions, providing mentors and

opportunities for collaboration, and presenting formal recognition and appreciation during assemblies or school meetings.

While this study identified reasons that Utah's speech-language pathologists leave their positions, future research that examines the "why" behind these reasons may provide even greater insight into factors that impact attrition. For example, participants may have moved as the result of a conflict with an administrator, or may have left education as a result of an inadequate salary. Directly surveying individuals who left their positions may identify some critical factors contributing to attrition.

This research identified some factors at the university level that may be contributing to Utah's shortage of speech-language pathologists. Further research is needed to identify strategies for recruiting graduates into public education. Tuition reimbursement, loan cancellation, and signing bonuses may all be areas where further investigation is warranted. Additionally, researching the steps to effective implementation of outreach programs, such as the one adopted by Utah State University, may guide efforts to increase the number of qualified professionals entering the workforce.

### *Summary*

Like many other states, Utah has suffered from a critical shortage of school-based speech-language pathologists for many years. With the demand for these professionals expected to increase, identifying factors that may be contributing to the current shortage is of critical importance. Issues such as stress/burnout, attrition, and factors at the university level all deserve continued attention as strategies for retaining and recruiting personnel are examined.

This study found that a sample of Utah's school-based speech-language pathologists experienced greater stress pertaining to caseload and salary than a normative sample, and that

large caseloads become increasingly more stressful the longer that professionals remain in the field. This study also found that overall stress was most related to a perceived lack of support, including perceived lack of belonging, recognition, and understanding. Thus, efforts to reduce the stress levels of these professionals should be aimed at increasing the available supports. Providing support staff may serve to reduce the burdens of large caseloads, and salary increases may increase practitioners' sense of value as well as entice a greater number of professionals into the public school sector.

Sixty-seven professionals left their positions during the 2004-2005 school year, representing 14.5% of Utah's school-based speech-language pathologists. The two most frequently cited reasons for leaving were "moved" and "children/pregnancy," which accounted for over 50% of those who left. Other reasons, in order of most to least common, included changed district within state, retired, left education, leave of absence, illness, marriage, and other. Individuals with seven or fewer years of experience were more likely to have left as a result of moving, children/pregnancy, changing districts, leaving education, or marriage, while individuals with more experience were more likely to have left as a result of retirement, illness, leaves of absence, or other reasons. Although some of these reasons may not seem preventable, examining other factors that may be contributing (i.e., salary) may serve reduce the attrition rate of Utah's professionals.

Finally, the results of this study suggested that only 30 to 40% of individuals graduating from Utah's graduate-level speech-language pathology programs choose to work in public schools, meaning that the number of professionals who leave their positions each year likely exceeds the number of professionals entering the field. Approximately 40% of individuals who applied to these programs were not accepted as a result of limited program capacity. However,

Utah State University was able to expand their program capacity significantly through the adoption of an outreach program, allowing working students to enroll and more than doubling the number of graduates over a one-year period. Such outreach programs could serve to significantly increase the number of professionals entering the workforce and deserve further investigation.

This research identified some key factors that may be contributing to Utah's shortage of school-based speech-language pathologists. It is imperative that these and other factors receive continued attention in order to identify measures that can effectively address the current shortage.

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## APPENDIX A

**Consent to be a Research Subject**

**Introduction:** This research is being conducted by Stephanie Harris, an Education Specialist student in School Psychology at Brigham Young University, to examine the current stress levels of speech-language pathologists working in Utah's schools and to identify job characteristics that appear to be particularly stressful.

**Procedures:** You are asked to complete the attached questionnaire. You will be asked to provide demographic information and rate 48 items according to their stressfulness.

**Risks/Discomforts:** There are minimal risks for participants in this study. Participation in this research will require some of your time and input. You may experience some slight emotional discomfort due to the nature of the questions being asked.

**Benefits:** The benefits of this study may not have direct relation to you as a participant. However, results of this study, through your participation, will lead to more information on factors contributing to critical shortages of speech-language pathologists employed in school settings. This could lead to more research and advancement on this topic.

**Confidentiality:** All information will remain confidential. The information will not identify certain individuals, but instead, will be categorized as group data. All questionnaires will only be accessible to those directly involved with the research.

**Compensation:** A \$5.00 gift certificate to Blockbuster Video will be mailed to the **first 100** participants who return the complete survey via email.

**Participation:** Participation in this research is completely voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy or penalty.

**Questions about the Research:** If you have any questions regarding this study, you may contact Stephanie Harris at [sharris@byu.net](mailto:sharris@byu.net) or Dr. Mary Anne Prater at [prater@byu.edu](mailto:prater@byu.edu). If you have questions you do not feel comfortable asking the researcher, you may contact Dr. Renea Beckstrand, IRB Chair, 422-3873, 422 SWKT, [renea\\_beckstrand@byu.edu](mailto:renea_beckstrand@byu.edu).

The return of the attached survey is your consent to participate in the research.

## Speech-Language Pathologist Stress Inventory

*All survey responses are confidential.*

**Please rate the items below from 1 to 5 based on the following scale:**

- 1**—No strength, not noticeable
- 2**—Some strength, somewhat noticeable
- 3**—Moderate strength, moderately noticeable
- 4**—Considerable strength, considerably noticeable
- 5**—Major strength, extremely noticeable

**Please underline your response for each item.**

- |  |           |
|--|-----------|
| 1. I have little time to prepare adequately.                                     | 1 2 3 4 5 |
| 2. I have little time for personal priorities.                                   | 1 2 3 4 5 |
| 3. I have too much work to do.   | 1 2 3 4 5 |
| 4. My caseload is too big.   | 1 2 3 4 5 |
| 5. I lack opportunities for promotion or advancement.                            | 1 2 3 4 5 |
| 6. I lack recognition.   | 1 2 3 4 5 |
| 7. I receive an inadequate salary.   | 1 2 3 4 5 |
| 8. I lack control over programmatic decisions.                                   | 1 2 3 4 5 |
| 9. I lack emotional and intellectual stimulation.                                | 1 2 3 4 5 |
| 10. I lack professional improvement opportunities.                               | 1 2 3 4 5 |
| 11. I have no time to get things done.   | 1 2 3 4 5 |
| 12. I am easily overcommitted.   | 1 2 3 4 5 |
| 13. I have no time to relax.   | 1 2 3 4 5 |
| 14. I think about other things while working.                                    | 1 2 3 4 5 |
| 15. I feel that administrative policies limit my effectiveness.                  | 1 2 3 4 5 |
| 16. I feel administrative policies limit my professional growth.                 | 1 2 3 4 5 |
| 17. I feel that my needs are unmet at work.                                      | 1 2 3 4 5 |
| 18. I feel that my professional life is not contributing to my<br>personal life. | 1 2 3 4 5 |
| 19. I work with too many severely involved clients.                              | 1 2 3 4 5 |
| 20. I feel insecure.   | 1 2 3 4 5 |
| 21. I feel unable to cope.   | 1 2 3 4 5 |
| 22. I feel depressed.  | 1 2 3 4 5 |
| 23. I feel anxious.  | 1 2 3 4 5 |
| 24. I often call in sick.  | 1 2 3 4 5 |
| 25. I use prescription or over-the-counter drugs.                                | 1 2 3 4 5 |
| 26. I get angry.   | 1 2 3 4 5 |
| 27. I experience rapid and shallow breathing.                                    | 1 2 3 4 5 |
| 28. I use alcohol.   | 1 2 3 4 5 |
| 29. I experience heart pounding or racing.                                       | 1 2 3 4 5 |

30. I experience stomach pain.	1	2	3	4	5
31. I feel fatigued.	1	2	3	4	5
32. I sleep more than usual.	1	2	3	4	5
33. I procrastinate.	1	2	3	4	5
34. I feel students are poorly motivated.	1	2	3	4	5
35. I experience discipline problems.	1	2	3	4	5
36. I feel that my students make little progress	1	2	3	4	5
37. I have too much paperwork.	1	2	3	4	5
38. I experience inflexible scheduling.	1	2	3	4	5
39. I lack adequate training.	1	2	3	4	5
40. I lack sufficient resources.	1	2	3	4	5
41. I lack support.	1	2	3	4	5
42. I lack opportunities to consult with other professionals.	1	2	3	4	5
43. I feel that my students are not improving.	1	2	3	4	5
44. I feel that other professionals do not understand my work.	1	2	3	4	5
45. I do not feel like a member of the school.	1	2	3	4	5
46. I lack adequate space.	1	2	3	4	5
47. I experience poor professional interactions.	1	2	3	4	5
48. I feel that the public does not value my work.	1	2	3	4	5

***Please complete the demographic information on the following page.***



Address to send gift certificate: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## APPENDIX B

We want to thank you for your time and your continuing participation in the Utah State Office of Education Special Educator Attrition Study. This study was previously conducted by the Department of Special Education and Rehabilitation at Utah State University and is now carried out by the Department of Counseling Psychology and Special Education at Brigham Young University.

For the past six years you or someone in your office has been asked for information about special education personnel attrition for each school year. We are now asking for your help in gathering information for the 2004-2005 school year. In making the process of collecting this data easy for you, we are offering two ways for you to submit your district's information to us. **Please select ONE of the following methods of reporting your attrition information.**

### **Submission Method 1: Complete the forms provided in this packet**

You can choose to submit your district's attrition information by using the data collection surveys provided in this packet. These forms are the same as those from previous years and include the following:

- 1 **Form 1** (blue) is a cover sheet asking for demographic information from your district.
- 2 **Form 2** (yellow) is a data sheet requesting information about special education teachers who left their positions in the 2004-2005 school year.
- 3 **Form 3** (green) is a data sheet requesting information about school psychologists who left their positions in the 2004-2005 school year.
- 4 **Form 4** (purple) is a data sheet requesting information about speech and language pathologists who left their positions during the 2004-2005 school year.

You may complete the forms and return them in the enclosed business reply envelope.

### **OR Submission Method 2: Submit an email**

We will send you an email which should arrive at about the same time as this packet. This email contains an attachment with electronic forms for you to complete. These forms are the same as those provided in this packet. You may complete the electronic forms and return them as attachments. If you do not receive an email and wish to submit your information in this manner, please email Stephanie Harris at [sharris@byu.net](mailto:sharris@byu.net) to request the forms.

We hope that having these options available will make it easier for you to provide us with this important information. Please provide your district's information in the manner that is most convenient for you. Your help in the past has been invaluable. It has helped us gain knowledge about critical personnel leaving their positions. We know your time is valuable and appreciate your help in collecting this information. Enclosed you will find a small gift of appreciation.

Thank you so much for your time and effort. As soon as the results are compiled we will send a copy to you.

Please contact us if you have questions about the forms, online submission, email, or the information requested in this survey. Thank you again for your time.

Sincerely,  
Stephanie Harris, B.S.  
Graduate Assistant

Lisa Dickison, B.S.  
Graduate Assistant

Mary Anne Prater, Ph.D.  
Department Chair

## Consent to be a Research Subject

### **Introduction**

This research study is being conducted by Dr. Mary Anne Prater at Brigham Young University at the request of the Utah State Office of Education. The purpose is to collect statewide data on how many special educators, school psychologists and speech-language pathologists left the profession during the 2004-2005 school year and why they left.

### **Procedures**

You will be asked to complete the enclosed questionnaire indicating who left your district and why. In addition you will be asked to provide some demographic information on each in order to describe the population of teachers who left the profession. You may mail or e-mail your responses as described in the enclosed letter.

### **Risks/Discomforts**

There are minimal risks for participation in this study. You may feel discomfort at guessing why someone left your district. If you submit your responses through e-mail, there is minimal risk of someone else accessing this information. There is a possibility that individuals could be identified based on demographic information.

### **Benefits**

Following completion of this study your district will be sent a summary of your district data as well as statewide data.

### **Confidentiality**

All information provided will remain confidential and will only be reported as group data with no identifying information. All data, including questionnaires, will be kept in a locked drawer and only those directly involved with the research will have access to them. After the research is completed, the questionnaires will be destroyed.

### **Compensation**

There is no compensation for your participation.

### **Participation**

Participation in this research study is voluntary. You have the right to withdraw at anytime or refuse to participate entirely without any jeopardy.

### **Questions about the Research**

If you have questions regarding this study, you may contact Dr. Mary Anne Prater at 801-422-1592 or [prater@byu.edu](mailto:prater@byu.edu).

### **Questions about your Rights as Research Participants**

If you have questions you do not feel comfortable asking the researcher, you may contact Dr. Renea Beckstrand, IRB Chair, 422-3873, 422 SWKT, [renea\\_beckstrand@byu.edu](mailto:renea_beckstrand@byu.edu).

### **Check here:**

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study and represent my district.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Your e-mail address \_\_\_\_\_

APPROVED      EXPIRES  
SEP 29 2005      SEP 28 2006

**List of Items to be Returned****If submitting through mail:**

Consent to be a Research Subject	checked, signed and dated
Form 1 (blue) District Information	completed
Form 2 (yellow) Special Education Teachers	completed
Form 3 (green) School Psychologists	completed
Form 4 (purple) Speech-Language Pathologists	completed

**If submitting through e-mail:**

Consent to be a Research Subject	checked, dated, e-mail address provided
Form 1 (blue) District Information	completed
Form 2 (yellow) Special Education Teachers	completed
Form 3 (green) School Psychologists	completed
Form 4 (purple) Speech-Language Pathologists	completed

## Current Demographic Information

District Name: \_\_\_\_\_

Total number of current special education teachers employed in your district:

Early Childhood \_\_\_\_\_

Mild/Moderate \_\_\_\_\_

Severe \_\_\_\_\_

Total number of current SLPs employed in your district: \_\_\_\_\_

Total number of current school psychologists: \_\_\_\_\_

Number of current special education teachers employed on letters of authorization:

Early Childhood \_\_\_\_\_

Mild/Moderate \_\_\_\_\_

Severe \_\_\_\_\_

Did you need to restructure positions in your district to account for special education teacher needs?      Yes                  No



## APPENDIX C

Dear Professor:

We want to thank you for your participation in this valuable study. As you are aware, for several years Utah's schools have suffered from a critical shortage of special education personnel, including speech-language pathologists. The purpose of this study is to gather information that may help us understand and develop solutions for this chronic problem.

It will take you approximately 3-5 minutes to answer the following eleven questions. This valuable data may assist the state in identifying strategies for overcoming the critical shortage of speech language pathologists employed in educational settings. The risk is considered minimal and your participation is voluntary.

This research is being completed by Stephanie Harris, Mary Anne Prater, Melissa Allen, and Tina Dyches. The latter three persons are chair and associate professors of the Counseling Psychology and Special Education department at Brigham Young University in Provo, Utah. If you have concerns, you may contact me at (801) 787-5716 or by e-mail at [sharris@byu.net](mailto:sharris@byu.net). You may contact Dr. Prater at [prater@byu.edu](mailto:prater@byu.edu).

Thank you for your help with this important research.

Sincerely,

A handwritten signature in cursive script that reads "Stephanie Harris".

Stephanie Harris

## Consent to be a Research Subject

**Introduction:** This research is being conducted by Stephanie Harris, an Education Specialist student in School Psychology at Brigham Young University, to examine factors at the university level that may contribute to Utah's critical shortage of speech-language pathologists employed in school settings.

**Procedures:** You are asked to complete the attached questionnaire. You will be asked to respond to ten questions regarding your Master's level program in Speech-Language Pathology and submit your responses via email.

**Risks/Discomforts:** There are minimal risks for participants in this study. Participation in this research will require some of your time and input.

**Benefits:** The benefits of this study may not have direct relation to you as a participant. However, results of this study, through your participation, will lead to more information on factors contributing to critical shortages of speech-language pathologists employed in school settings. This could lead to more research and advancement on this topic.

**Confidentiality:** Due to the public nature of the data, there are no risks associated with confidentiality.

**Compensation:** There is no compensation for your participation.

**Participation:** Participation in this research is completely voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy or penalty.

**Questions about the Research:** If you have any questions regarding this study, you may contact Stephanie Harris at [sharris@byu.net](mailto:sharris@byu.net) or Dr. Mary Anne Prater at [prater@byu.edu](mailto:prater@byu.edu). If you have questions you do not feel comfortable asking the researcher, you may contact Dr. Renea Beckstrand, IRB Chair, 422-3873, 422 SWKT, [renea\\_beckstrand@byu.edu](mailto:renea_beckstrand@byu.edu).

The return of the attached survey is your consent to participate in the research.

## Speech-Language Pathology Program Survey

The following questions are regarding your school's Master's program in Speech-Language Pathology. Please **fill in the blanks** for each question.

	2003-2004	2004-2005	2005-2006
Number of applicants			
Number of students accepted			
Number of students your program could support			
Number of students completing internships			
Number of students completing internships in schools			
Number of graduates from program			
Number of graduates currently employed in school settings (if known)			
Number of students working in schools on letters of authorization			

What is the typical length of your program?

---

Are classes scheduled in such a way that would allow full-time public school employees to participate in your program? Please explain.

---

Do you allow students who are currently working in schools, if any, to reduce the number of credits taken per semester or prolong their enrollment? Please explain.

---

**Please email response to Stephanie Harris**

**[sharris@byu.net](mailto:sharris@byu.net)**

**Thank you for your participation**