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Minnesota Paraeducators' Perceptions Of The Barriers To Becoming Licensed Special Education Teachers

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MINNESOTA PARAEDUCATORS' PERCEPTIONS OF THE BARRIERS TO
BECOMING LICENSED SPECIAL EDUCATION TEACHERS

by

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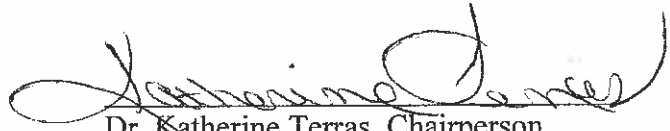

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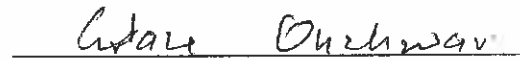
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This dissertation, submitted by Joni M. Burris in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This dissertation is being submitted by the appointed advisory committee as having met all of the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

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PERMISSION

Title   Minnesota Paraeducators' Perceptions of the Barriers to
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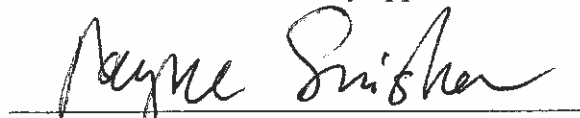   In presenting this dissertation in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my dissertation work or, in her absence, by the Chairperson of the department or the the dean of the School of Graduate Studies. It is understood that any copying or publication or other use of this dissertation or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my dissertation.

                                    Joni Burris
                                      November 1, 2014

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ACKNOWLEDGEMENTS

Dedicated to my parents, my first teachers,
John & Adorine Scheving

ABSTRACT

Public schools across the country are facing a critical shortage of licensed special education teachers. For many reasons, paraeducators have been considered strong teacher candidates and have been recruited into the teaching profession intermittently for decades. Paraeducators who decide to obtain their teaching license often experience obstacles to this endeavor: money, time, family obligations, navigating the university system, and academics.

This research study examined and analyzed Minnesota paraeducators' perceptions of the barriers to obtaining their special education teaching license. It also assessed the perceptional differences between Minnesota paraeducators who have completed at least a bachelor's degree and those who have not. In addition, the study sought to determine a relationship between the paraeducators' demographic information and their perceptions to the barriers of obtaining their special education teaching license. The findings of this study revealed that Minnesota paraeducators perceived the barrier of time to be the most problematic, followed by the money barrier. The barrier of academics was the least concerning to them. Quantitative analyses indicated there was no evidence of a difference between those with at least their bachelor's degree and those without, in terms of their perceptions of the barriers. In addition, none of the demographic variables was a strong predictor of the barrier index, although the standardized coefficients were found to be higher for several of the factors.

Based on the findings, two broad-based conclusions were made. First, paraeducators in Minnesota are a strong potential source of future special education teachers. Second, paraeducators face several significant barriers while on their pathway to obtaining their special education teaching license.

CHAPTER I

INTRODUCTION

Visit any public school in the United States today and you will most likely find paraeducators in the classroom assisting students and teachers. According to the National Center for Education Statistics [NCES], an estimated 710,000 paraeducators are employed full-time across the country (2013). Roughly half of these staff members are working with students who have an Individualized Education Program (National Resource Center for Paraprofessionals [NRCP], 2010). Sometimes called *paraprofessionals, instructional assistants,* or *teachers' aides*, these individuals play an integral role in the instruction of our students.

Typically hired by a school district as support staff for students with exceptionalities, paraeducators wear many hats, depending on the needs of the students for whom they were hired. Some job responsibilities of paraeducators include escorting students to buses and different learning environments, instructing individual or small groups of students following lesson plans developed by the teacher, and implementing behavior plans for individual students developed by teachers (Pickett, 1999). Other duties include assisting students with personal and hygienic care, collaborating with general and special education teachers, and modifying curriculum and instructional activities, under the direction of licensed teachers (Daniels & McBride, 2001; Downing, Ryndak, & Clark, 2000; Riggs & Mueller, 2001).

Due to paraeducators' numerous and varied responsibilities, it is sometimes difficult to encompass their role in a single job description. In fact, in a paraeducator study conducted by Riggs and Mueller (2001), almost half of the respondents reported not receiving a job description when hired. Those who did receive a job description stated it "focused on logistics, such as time and hours needed, salary, and benefits" (p. 58). Even when job descriptions were provided, many paraeducators felt they did not adequately describe their diverse job responsibilities.

Few requirements, in terms of education, are mandated for paraeducators. The minimum qualifications for paraeducators in the State of Minnesota are as follows:

- must have the equivalency of a high-school diploma; and
- must meet a state-approved local assessment that evaluates their knowledge of and ability to assist in instructing reading, writing, and math (Revisor of Statutes, 2014).

In addition, within the first 60 days of employment, local school districts are required to provide paraeducator training in emergency procedures, confidentiality, vulnerability, reporting obligations, discipline policies, roles and responsibilities, as well as a building orientation (Revisor of Statutes, 2014).

In *A State of the Art Report on Paraeducators in Education and Related Services,* the authors describe paraeducators as follows:

School employees who (1) work under the supervision of teachers and other licensed/certified professionals who have responsibility for (a) identifying learner needs, (b) developing and implementing programs to meet learner needs, (c) assessing learner performance, and (d) evaluating the effectiveness of

education programs and related services, and (2) assist with the delivery of instructional and other direct services for learners as assigned and developed by certified/licensed professional practitioners. (Pickett, Likins, & Wallace, 2002, p. 7)

Despite the fact that paraeducators are supposed to work under the supervision of licensed teachers to assist them and their students, they are sometimes tasked with lesson planning and curriculum modification, which is the certified teacher's responsibility (Fisher & Pleasants, 2012; French, 2003; Pickett, 1994). Comer and Maholmes (1999) found that teaching duties often fall to paraeducators, who typically have the least amount of formal education of anyone who works with the student. This likely leaves the paraeducator feeling frustrated and lost, as they usually do not have the educational training to plan instruction (Marks, Schrader, & Levine, 1999).

There are, however, paraeducators who fulfill some of the same functions as a licensed teacher, and they do so willingly and with pride, believing that their daily experiences with students qualifies them to take on this role (Marks et al., 1999). They have a working knowledge of educating individuals with disabilities, they enjoy working with students, and their goal is to help learners succeed (Genzuk, 1997; Genzuk & French, 2002; Haselkorn & Fideler, 1996; McGowan & Brandick, 1999; White, 2004). They have many of the qualities of an excellent special education teacher, but they do not have a teaching license. Numerous studies have examined the benefits of recruiting paraeducators into the special education teaching profession to alleviate the teacher shortage (Brandick, 2001; Clewell & Villegas, 2001; Eubanks, 2001; Sandoval-Lucero & Chopra, 2010; Wallace, 2003; White, 2004).

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An abundance of professional literature speaks to the continual shortage of special education personnel in our nation's public schools (Billingsley, 2004; Cortez, 2001; Darling-Hammond, 2000; Office of Special Education Programs [OSEP], 2009; Sindelar & Brownell, 2001; Thornton, Peltier, & Medina, 2007; U.S. Department of Education [ED], 2013). The attempt to recruit paraeducators into the teaching profession is not a new concept. Federal funds supported the Career Opportunities Program (COP), "the first and most ambitious effort at paraeducator recruitment" over 40 years ago (White, 2004, p. 215), which was regarded as successful, albeit short-lived, as it "faded along with other War On Poverty programs" (Kaplan, 1977, p. 135). Since that time, other efforts have risen and fallen based on teacher supply and demand concerns and on the political and economic climates. As a result of the critical special education teacher shortage nationwide, the potential strategy of enlisting paraeducators into the teaching profession has once again caught the attention of educational stakeholders (White, 2004, p. 215).

Due to a lack of appropriately-licensed applicants, sometimes teachers who do not hold licensure in special education are hired to fill special education teacher vacancies (McLeskey & Billingsley, 2008). This is not an uncommon phenomenon. According to the American Association for Employment in Education (2010), there are critical shortages in qualified special education personnel, and in 2001-2002, approximately 12% of teachers of students with disabilities were not licensed for their positions (ED, n.d.). Data released from the Minnesota Department of Education's (MDE) Teacher Supply and Demand Legislature Report (2013) revealed that during the 2011-2012 school year, districts in the state hired "3447 teachers who lacked the necessary license," about 41% of them filling special education positions (p. 2). A study of Minnesota superintendents

found that "71% of them used temporary licenses and waivers to place teachers" (Growing Gap, 2007, p. 12). Although the teachers hired are licensed in some area other than special education, they oftentimes have no university coursework or training in teaching students with disabilities.

While paraeducators are not required to have a college degree, let alone a teaching license, nationally 32% of them have obtained an associate's degree or higher (Council for Exceptional Children [CEC], n.d; Education Commission of the States, 2005), but for various reasons have not secured a job in their area of training. Thirty-eight percent have taken a few college courses (CEC, n.d.); however, they have not finished their degree. Some have not gone to college, but have years of on-the-job experience working with students who have disabilities (Downing, Ryndak, & Clark, 2000; Riggs & Mueller, 2001).

Statement of the Problem

There is a chronic, critical shortage in the number of licensed special education teachers at the national level (Boe & Cook, 2006; Boyer & Gillespie, 2000; ED, 2013; McLeskey & Billingsley, 2008; NCES, 2013; OSEP, 2009); this scarcity is felt within the state of Minnesota as well (MDE, 2013). For many reasons, paraeducators are a likely pool of potential future teachers (Clewell & Villegas, 2001; Genzuk & Baca, 1998; Haselkorn & Fideler, 1996; Rueda, Monzo, & Higareda, 2004; White, 2004). This study examined Minnesota paraeducators' perceptions of the barriers they face when obtaining their special education licensure. The results can inform educational stakeholders at the local, state, and higher education levels, as they take steps to help ameliorate these challenges.

Purpose of the Study

One of the purposes of this research study was to investigate Minnesota paraeducators' perceptions of the barriers to attaining their special education teaching license. What was unknown prior to the study was how paraeducators viewed the barriers and whether their barriers were similar to other paraeducators in the state. A second purpose of this study was to assess any difference in the paraeducators' perceptions of the barriers among those who have already obtained at least a bachelor's degree and those who have not. The hypothesis was that pareducators who have earned at least a bachelor's degree would perceive the barriers to be lower than those who have not obtained a degree. This study further sought to determine if there were demographic variables that together influence the paraeducators' perceptions of the barriers.

Theoretical Framework

The National Resource Center for Paraprofessionals (NRCP) is an organization founded in 1979, with funding from the Bureau of Education for the Handicapped (currently, the U.S. Department of Education's Office of Special Education Programs [OSEP]). Their mission is to "address policy questions and other needs of the field, provide technical assistance and share information about policy questions, management practices, regulatory procedures, and training models that will enable administrators and staff-developers to improve the recruitment, deployment, supervision, and career development of paraeducators" (NRCP, n.d.). The NRCP organization houses a comprehensive bibliography on the topic of paraeducator career development programs and models. These studies were conducted by the top researchers in the field, and have

helped to inform what is known about paraeducator professional development and paraeducator-to-teacher pathways.

Recruiting New Teacher (RNT) is a national, non-profit organization formed in 1986. Its goals are to "raise esteem for teaching, expand the pool of prospective teachers, and improve the nations' teacher recruitment, development, and diversity policies and practices" (RNT, 2000, p. i). Recruiting New Teachers is involved in examining current educational issues and trends, researching and publishing, and advocating for best practices in education (Education Commission of the States, 2005)

The underpinnings for this research investigation consisted of a national study of paraeducator-to-teacher programs conducted by Recruiting New Teachers (2000), and supported by the NRCP. This study, entitled *A Guide to Developing Paraeducator-to-Teacher Programs* examined how these programs across the country are "working to create a more qualified and diverse teaching force" for schools in the United States, by utilizing paraeducators (RNT, 2000, p. 2). This national study investigated the obstacles that paraeducators face as they pursue their teaching license; the findings identified the following five barriers:

1. Money: the "prospect of giving up salary and benefits to attend college full-time and/or fulfill student teaching requirements while having to pay for tuition, fees, books, and related costs" was determined to be the greatest obstacle (RNT, 2000, p. 7).

2. Time: research shows that most paraeducators enroll in teacher education programs part time; they need a flexible schedule that allows them to continue to work (RNT, 2000).

3. Family Obligations: very often paraeducators have obligations to children and other family members; the notion of managing a household while working full time and attending college is a daunting task (RNT, 2000).

4. Navigating the University System: paraeducators, like any college student, need competent academic advising and assistance (RNT, 2000).

5. Academics: many paraeducators feel the stress of obtaining a minimum SAT or ACT score for admission into a teacher education program, particularly if they have been out of school for several years; they need tutoring and a review of basic academic subjects (RNT, 2000).

Data from a questionnaire (see Appendix A) disseminated to Minnesota paraeducators in the Spring of 2013 by the Personnel Preparation Partnership (PPP) group supported these findings. The respondents identified four of the five barriers listed above; only *Academics* was not perceived to be an obstacle, according to Minnesota paraeducators. This PPP group consisted of stakeholders from the Personnel Improvement Center, the National Association of State Directors of Special Education, the Minnesota Department of Education, Institutions of Higher Education, as well as special education administrators (including this researcher) and teachers from around the state. Their charge was to create and implement an action plan that would address the shortage of fully-licensed special education personnel in Minnesota (Personnel Improvement Center [PIC], 2012). Although the findings from the Spring 2013 questionnaire yielded beneficial data to the Minnesota PPP group, there was a desire amongst the group members to elicit more information. The team welcomed and

encouraged this researcher's interest in examining this further and was instrumental in the development and dissemination of the survey used in this study.

The formulation of the indicators found on the survey was guided by the findings from Recruiting New Teachers' national study, which identified five barriers: *money, time, family obligations, navigating the University system,* and *academics* (2000). The results of the Minnesota paraeducator questionnaire supported these findings, identifying four of the five barriers: *money, time, family obligations, and navigating the university system*. Although Minnesota paraeducators did not identify *academics* as a barrier, this fifth construct was included in the survey used in this current study, due to the national study's findings.

Research Questions

1. What are Minnesota paraeducators' perceptions of the *money* barrier, as it relates to the cost of the university program and living expenses while in school?

2. What are Minnesota paraeducators' perceptions of the *time* barrier, as it relates to a flexible schedule?

3. What are Minnesota paraeducators' perceptions of the *family obligations* barrier, as it relates to having responsibility for others?

4. What are Minnesota paraeducators' perceptions of the academic institution barrier, as it relates to *navigating the university system*?

5. What are Minnesota paraeducators' perceptions of the *academics* barrier, as it relates to being prepared for college-level instruction?

6. Are there perceptional differences between Minnesota paraeducators who have completed at least a bachelor's degree and those who have not?

7. Are there demographic variables that together influence the paraeducators' perceptions of the barriers?

Significance of the Study

The results of this study are highly significant for educational stakeholders in Minnesota and across the nation. Numerous sources speak to the continual shortage of special education personnel in our nation's public schools (Cortez, 2001; Darling-Hammond, 2000; ED, 2013; OSEP, 2009; Sindelar & Brownell, 2001). The need for special educators is not only evident at the national level. A significant special education teacher shortage exists in Minnesota, as identified by almost half of all Minnesota superintendents in a recent study (Growing Gap, 2007). Data suggests "potential increases in this shortage in the near future," due to a "6.7% increase in the enrollments of students with special needs and fewer licenses being issued in this area" (MDE, 2013, p. 67). One of the recommendations endorsed in the Growing Gap (2007) study was to "increase recruitment of new teachers from other professions by using paraprofessionals" (p. 16).

The existing literature on this topic identifies the benefits of utilizing the staff already working in the school:

Community—paraeducators often live in the community in which they work and are not planning to move away. This reduces the high cost of teacher turnover;

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Culture—paraeducators are familiar with the culture of the community and the

school, and often share the same culture with many of the students and their

families. Rapport has been established;

Knowledge of the job—paraeducators are working in the often-difficult

educational environment and realize the demands of the teaching profession. They

have daily opportunities to witness excellent instructional and behavioral

management techniques modeled by teachers in their schools;

Passion for seeing children succeed—paraeducators often work in the schools for

the same reasons teachers do: they enjoy young people and want to make a

difference in their lives (Clewell & Villegas, 2001; Genzuk & Baca, 1998;

Haselkorn & Fideler, 1996; Rueda et al., 2004; White, 2004).

The findings from this study yield valuable information for representatives from

state education agencies, local education agencies, and institutions of higher education.

By working together, these educational stakeholders have the ability to potentially reduce

the significance of the barriers paraeducators face, thereby making the pathway-to-

teacher licensure more accessible, with the ultimate goal being increasing the number of

licensed special education teachers in the state.

Recruitment Efforts in Minnesota

According to the U. S. Department of Education (2013), there is currently a

shortage of fully-licensed special education personnel in Minnesota. Educational

stakeholders throughout the state have recognized this need and are taking steps to

address this issue. The MDE applied for technical assistance in "recruiting, hiring, and

retaining new and existing qualified personnel" from the Personnel Improvement Center

(PIC) at the National Association of State Directors of Special Education, and was

awarded PIC services for the 2011-2012 school year (PIC, 2012). A PIC service provider

then collaborated with state leaders at the MDE to establish goals "for improving state

efforts in attracting, developing and supporting fully qualified special education

personnel" (PIC, 2012, p. 1).

The goals included:

1. To identify strategies for mentoring teachers in rural areas;

2. To identify strategies for providing effective professional development to teachers in rural areas;

3. To identify strategies for effectively recruiting and hiring special education teachers;

4. To identify strategies for retaining special education teachers; and

5. To identify strategies for supporting special education teachers (PIC, 2012, p. 1).

The MDE was also awarded PIC services in the development and implementation

of "preparation program partnership (PPP) plans between state education agencies

(SEAs), local education agencies (LEAs) and institutions of higher education (IHEs) to

meet local needs for special education, Part C and related services personnel" (PIC, 2012,

p. 1). One of the goals of this team was to "address urban and rural personnel needs in the

state" (PIC, 2012, p. 1). An action plan was developed, which included creating an

electronic questionnaire to be disseminated to paraeducators across the state to "gather

information on their interest for a teacher pipeline" (Minnesota Preparation Program

Partnership [MN PPP] Action Plan, 2012, p. 2). This questionnaire was modeled after a

similar questionnaire distributed to paraeducators in Utah in 2009 (Morgan, 2012), and then sent to all Minnesota paraeducators electronically in April of 2013. Although the results of the questionnaire yielded pertinent findings, Minnesota educational stakeholders desired more in-depth data pertaining to the reasons paraeducators pursue their special education teaching license and the barriers they face as they do so.

Currently, there are no initiatives in place in Minnesota to facilitate the transitioning of paraeducators to licensed teachers. Several other states have established successful paraeducator-to-teacher programs, including Utah, Colorado, North Carolina, and California (Bernal & Aragon, 2004; Blair, 1999; Brandick, 2001; Clewell & Villegas, 2001; Genzuk & Baca, 1998; McGowan & Brandick, 1999; White, 2004). At this time, Minnesota stakeholders have not made a commitment to create a statewide paraeducator-to-teacher program, but are exploring the development of "Grow Your Own" programs in the State (MN PPP Action Plan, 2012, p.4). They are also investigating the possibility of alternative programs for special education teacher licensure. Additionally, personnel from the MDE are examining the feasibility of forming cohorts of interested paraeducators by geographic region or license area interest, and then connecting those cohorts with teacher preparation programs at nearby colleges and universities (M. Lindell, personal communication, September 18, 2013). Ideally, the results of this study will inform the MDE personnel and other stakeholders of the ways in which they could support Minnesota paraeducators who are interested in obtaining their special education teacher license, with the ultimate goal being to increase the number of licensed special education personnel in the state.

State Paraeducator-to-Teacher Programs

Due to the national teacher shortage, many states have established successful paraeducator-to-teacher programs, including Utah, Colorado, North Carolina, and California (Bernal & Aragon, 2004; Blair, 1999; Brandick, 2001; Clewell & Villegas, 2001; Genzuk & Baca, 1998; McGowan & Brandick, 2001; White, 2004). One successful example is the Paraeducators Teacher Training Program (PTTP), a state-funded paraeducator career ladder program in California through the Commission on Teacher Credentialing (CCTC), which ultimately leads to a teaching credential. Paraeducators who participate may be undergraduates, or they may already have a bachelor's degree but not in teacher education. Program participants receive assistance with college/university tuition, fees, and books, as well as other support services to boost success in the program (CCTC, 2012).

Increasingly, state education agencies, local education agencies, and institutions of higher education across the nation are working collaboratively to develop paraeducator to-teacher programs, due to the many benefits of recruiting paraeducators into the teaching profession (Clewell & Villegas, 2001; Genzuk & Baca, 1998; Haselkorn & Fideler, 1996; RNT, 2000; Rueda et al., 2004; White, 2004). In Hayward, California, the Hayward Education Association, Hayward school district, Chabot Community College, California State University - Hayward, and other local associations have teamed together to assist paraeducators who are working toward a teaching license. Through state funding, and with matching district funds, the program provides assistance with college tuition, fees, and books, as well as ongoing support for paraeducators employed at least half-time

by the district (California Teacher Corps, n.d,; National Education Association [NEA], n.d.).

Recognizing that the shortage of special education teachers in Minnesota is chronic and severe (MDE, 2013), some educational stakeholders in Minnesota have begun assisting paraeducators on the pathway to teacher licensure. In Spring 2013, personnel from Northeast Metro Intermediate District 916 approached the University of Minnesota College of Education and Human Development (CEHD), and together created a program to help paraeducators who already had a bachelor's degree obtain special education licensure and a master's degree at the same time.

This program, approved by the state Board of Teaching in April of 2014, requires participants to complete 36 credit hours, attend weekly seminars, and work with a university instructor embedded in the school classrooms where they already work. This instructor would observe the paraeducator-student and provide feedback (McGuire, 2014). Upon completion of the program, the participant will be eligible for Emotional/Behavioral Disorder (EBD) licensure in Minnesota, which is the category that experiences one of the most critical teacher shortages (Center on Personnel Studies in Special Education [COPSSE], 2004; Katsiyannis, Zhang, and Conroy, 2003; McLeskey, Tyler, and Flippin, 2004). Four other school districts in and around the metro area are participating in this program, as well.

In addition, MDE personnel, staff from Winona State University, and special education directors from the southeast corner of Minnesota are currently discussing the development of an alternative license for those wanting to become special education teachers. They are in the preliminary stages at this time and are hoping to have an outline

for this program within the next few months (C. Wernau, personal communication, October 30, 2014).

Research suggests that well-prepared paraeducator-to-teacher program graduates bring a wealth of community and student knowledge to their practice (Genzuk & Baca, 1998; Haselkorn & Fideler, 1996; Nittoli & Giloth, 1997; Rueda & DeNeve, 1999). Paraeducator-to-teacher programs that are well-developed and implemented are beneficial in many ways:

- They bring "mature individuals with extensive classroom experience" into the professional ranks, especially in a critical-need area, such as special education (Brandick, 2001; Clewell & Villegas, 2001; RNT, 2000, p. 4). These programs attract highly-motivated individuals already familiar with challenging classroom environments;

- They have far lower rates of attrition than many traditional teacher education programs (Clewell & Villegas, 2001; RNT, 2000; White, 2004). These programs provide participants with the tuition assistance, academic advisement, and support they need to succeed.

- They "strengthen the connections among classrooms, colleges, and communities" (Brandick, 2001; RNT, 2000, p. 5). These programs make higher education more accessible, more affordable, and more relevant to participants.

- They "affirm the positive impact that educational and workplace opportunity programs can have on individual and society as a whole" (McGowan &

Brandick, 1999; RNT, 2000, p. 5). These programs make it possible for

paraeducators to achieve their goal of obtaining their teaching license.

Career ladder programs make important contributions to the preparation of future

teachers and to paraeducators' professional and academic development. They are

designed to help paraeducators overcome the barriers they face by providing a number of

support services, such as tuition assistance, flexible course scheduling, academic support

and advisement, and the opportunity to learn with a cohort (Genzuk & Baca, 1998;

Sandoval-Lucero & Chopra, 2010). Although the types of programs and the assistance

they offer to paraeducators vary, there are key components of effective paraeducator-to-

teacher programs, as documented by several studies (Clewell & Villegas, 1999, 2001;

Dandy, 1998; Eubanks, 2001; RNT, 2000). These elements include:

1. Strong collaboration between a local school district that employs

   paraeducators and a nearby university that provides the coursework and

   academic support for participants. Universities must often commit to adapting

   or changing curriculum, revising admissions standards, and/or providing

   financial support. School districts must often commit to giving paraeducators

   release time, guaranteeing teaching jobs to graduates, and/or providing

   financial support to program participants.

2. A recruitment and selection process that gives an active role to partnering

   school districts. School district personnel play an active role in the

   identification and recruitment of participants which helps to ensure a large and

   diverse applicant pool.

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3. Teacher preparation admissions criteria that blend traditional and non-traditional measures. Many paraeducator-to-teacher programs consider a wide variety of criteria for admissions to teacher preparation beyond test scores and grades. These include principal and teacher recommendations, job performance results, extensive personal interviews, years of work experience, motivation to succeed, maturity, and other criteria.

4. Teacher preparation curriculum that fits the needs of program participants. This includes changing when and where courses are offered, such as at the school site or on weekends. It also includes a teacher preparation curriculum with emphasis on cultural diversity and on valuing the strength and capacity that urban students bring to the learning process.

5. Comprehensive academic and social support for participants. Academic progress is closely monitored and participants are offered a variety of supports including tutorial programs, access to special learning centers, workshops to develop study and test-taking skills, and assistance developing individualized education plans. Many programs also offer childcare services and workshops for spouse and other family members.

6. Tuition and other financial assistance. Many programs offer scholarships and grants from funds made available by private foundations or government agencies. Others offer "forgivable loans" that are erased when graduates teach in partner school districts. Still other programs offer emergency loans or grants for books, supplies or even personal needs such as rent. (Eubanks, 2001, pp. 3-4)

Definitions of Terms

Autism: a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences (Code of Federal Regulations [C.F.R], 2014).

Blind or Visual Impairment: an impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness (C.F.R., 2014).

Career Ladder Programs: a well-defined pathway from one profession to another that includes the following: increasing levels of skill and knowledge, increasing levels of responsibility, increasing levels of compensation, and support and guidance (Brandick, 2001).

Cohort: learning communities where students can take courses together and develop supportive relationships, both academically and socially, with other participants. (Sandoval-Lucero & Chopra, 2010, p. 3).

Developmental Adapted Physical Education: a special education service that provides educational support for students with disabilities who cannot safely or successfully participate in the general physical education program (MDE, 2013).

Deaf-blindness: concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs

that they cannot be accommodated in special education programs solely for children with deafness or children with blindness (C.F.R., 2014).

Deafness: a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification that adversely affects a child's educational performance (C.F.R., 2014).

Developmental Cognitive Disability: a condition that results in intellectual functioning significantly below average and is associated with concurrent deficits in adaptive behavior that require special education and related services (MDE, 2013).

Developmental Delay: a measurable delay in development according to diagnostic instruments and procedures; this category is reserved for a child up to age seven (MDE, 2013).

Emotional or Behavioral Disorders: a wide range of complex and challenging emotional or behavioral conditions. Medical, biological and psychological conditions as well as genetic dispositions can affect these students' ability to learn and function in school (MDE, 2013).

Individualized Education Program (IEP): a written document for each child with a disability that is developed, reviewed, and revised in a meeting in accordance with the laws governing special education (U.S. Department of Education [ED], 2004).

Minnesota Educational Stakeholders: for the purpose of this study, MN Educational Stakeholders include representatives from state education agencies, local education agencies, and institutions of higher education (MN PPP Action Plan, 2012).

Minnesota Regional Low Incidence Facilitator: an individual hired by one of the eleven designated regions in the state to address identified gaps and needs in special

education programs and related services for students identified with any low incidence disability. Coordination of these activities is accomplished through planning and collaboration between the low incidence facilitators that cover all eleven regions of the state (Minnesota Low Incidence Projects, n.d.).

Multiple Disabilities (Severely Multiply Impaired): concomitant impairments (such as developmental/cognitive-blindness or developmental/cognitive-orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments (C.F.R., 2014).

Other Health Impairment (Disabilities): having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that--(i) Is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and (ii) Adversely affects a child's educational performance (C.F.R., 2014).

Paraeducator: a school employee who works alongside and under the supervision of a licensed or certified educator to support and assist in providing instructional and other services to children, youth, and their families. (National Education Association [NEA] Paraeducator Handbook, 2005, p. 5).

Part C: Early intervention services for infants and toddlers (birth-age 3) with disabilities. (National Dissemination Center for Children with Disabilities [NICHCY], 2013).

Physically Impaired: medically diagnosed, chronic, physical impairment, either congenital or acquired, that may adversely affect physical or academic functioning and result in the need for special education and related services. Examples of diagnoses that may meet these criteria are cerebral palsy, spina bifida, muscular dystrophy, spinal cord injury, otegenesis imperfecta and arthrogryposis (MDE, 2013).

Related Services Personnel: individuals who provide services, which help children with disabilities, benefit from their special education by providing extra help and support in needed areas, such as speaking or moving (NICHCY, 2013).

Special Education: individualized instruction designed to address the unique educational needs of a child, due to his or her disability. (NICHCY, 2013).

Specific Learning Disability: a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. The disability may be exhibited as an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. This also includes conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia (MDE, 2013).

Speech or Language Impairment: a communication disorder such as stuttering, impaired articulation, language impairment or a voice impairment that adversely affects a student's educational performance (MDE, 2013).

Traumatic Brain Injury: an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. Traumatic brain injury applies to open or closed head injuries resulting in impairments in one or

more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. Traumatic brain injury does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma (MDE, 2013).

Summary

Public schools across the country, specifically in Minnesota, are facing a critical shortage of licensed special education teachers. For decades, attempts have been made to recruit paraeducators into the teaching profession (White, 2004). A national study, (RNT, 2000) identified five barriers that paraeducators face as they pursue their teaching license: *money, time, family obligations, navigating the university system, and academics*. This research study examined and analyzed Minnesota paraeducators' perceptions of the barriers to obtaining their special education teaching license. It also assessed the perceptional differences between Minnesota paraeducators who have completed at least a bachelor's degree and those who have not. In addition, it sought to determine if there were demographic variables that together influence the paraeducators' perceptions of the barriers. With these findings, Minnesota stakeholders can be in a better place to assist paraeducators on the pathway to teaching.

This study has been organized into four chapters. Chapter I provides an introduction to the study, the purpose of the study, the theoretical framework, research questions, limitations of the study, and definitions of terms. In addition, the chapter contains information regarding recruitment efforts in Minnesota, as well as state paraeducator-to-teacher programs. Chapter II provides the methodology, research design

and procedures, data analysis, delimitations and legitimation of the study. Chapter III presents the results of the study through quantitative means. Chapter IV presents a discussion of the findings, recommendations, and conclusions. In this study, the literature is not presented in a stand-alone chapter, but is embedded throughout.

CHAPTER II

METHODOLOGY

A critical shortage of licensed special education teachers exists both nationally (Cortez, 2001; Darling-Hammond, 2000) and specifically in Minnesota (Office of Special Education Programs [OSEP], 2009; U.S. Department of Education [ED], 2013). For many reasons, paraeducators have been considered to be a likely source of future teachers. They typically enjoy helping students, they live in the community and identify with the culture, and they have an understanding of the special educator's role (Haselkorn & Fideler, 1996). The overall goal of this study was to increase the number of licensed special education teachers in Minnesota by identifying ways to assist paraeducators as they transition from support staff to licensed personnel. The catalyst for this investigation was this researcher's own experience as a Minnesota special education administrator. While in that role, this researcher experienced first hand the lack of licensed special educators applying for open positions and recognized the potential pool of candidates in the district's paraeducators.

Educational stakeholders in the state, including special education workforce specialists from the Minnesota Department of Education (MDE), special education directors, and representatives from institutions of higher education, realized the benefits of recruiting paraeducators into the teaching field and formed a Personnel Preparation Partnership group. This team worked together to develop a plan to assist paraeducators

who were interested in this endeavor, with the hope of increasing the number of licensed special education teachers in the state. These stakeholders created and disseminated a questionnaire to all Minnesota paraeducators in the Spring of 2013, asking them if they were interested in becoming a licensed special education teacher, and if so, what were the barriers preventing them from attaining that goal (see Appendix A).

The data to those questions were summarized by adding the responses for each barrier question, and four main factors were identified as impediments: *money, time, family obligations, and navigating the university system*. A national study conducted in 2000 by Recruiting New Teachers (RNT), confirmed these four barriers and added a fifth barrier: *academics*. This national study was also supported by the National Resource Center for Paraprofessionals (NRCP) and underpinned this research study. The five identified barriers paraeducators face as they pursue their teaching license are as follows:

- Financial: the "prospect of giving up salary and benefits to attend college full-time and/or fulfill student teaching requirements while having to pay for tuition, fees, books, and related costs" was determined to be the greatest obstacle (RNT, 2000, p. 7).

- Time Commitment: research shows that most paraeducators enroll in teacher education programs part time; they need a flexible schedule that allows them to continue to work (RNT, 2000).

- Family Responsibilities: very often paraeducators have obligations to children and other family members; the notion of managing a household while working full time and attending college is a daunting task (RNT, 2000).

- College Advising: paraeducators, like any college student, need competent academic advising and assistance navigating the university system (RNT, 2000).

- Basic Skills Testing: many paraeducators feel the stress of obtaining a minimum SAT or ACT score for admission into a teacher education program, particularly if they have been out of school for several years (RNT, 2000).

These five barriers formed the research questions for this study:

1. What are Minnesota paraeducators' perceptions of the *money* barrier, as it relates to the cost of the university program and living expenses while in school?

2. What are Minnesota paraeducators' perceptions of the *time* barrier, as it relates to a flexible schedule?

3. What are Minnesota paraeducators' perceptions of the *family obligations* barrier, as it relates to having responsibility for others?

4. What are Minnesota paraeducators' perceptions of the academic institution barrier, as it relates to *navigating the university system*?

5. What are Minnesota paraeducators' perceptions of the *academics* barrier, as it relates to being prepared for college-level instruction?

6. Are there perceptional differences between Minnesota paraeducators who have completed at least a bachelor's degree and those who have not?

7. Are there demographic variables that together influence the paraeducators' perceptions of the barriers?

Research Design

This quantitative study was conducted utilizing a survey designed by this researcher, with input from special education workforce specialists from the MDE, to investigate Minnesota paraeducators' perceptions of the barriers to becoming licensed special education teachers. The survey was reviewed by the University of North Dakota's Institutional Review Board (IRB-201405-463) to ensure the protection of human subjects. Results from the pilot study did not substantiate changes to the survey.

The survey was created using Qualtrics Research Suite®, "a powerful online survey tool available to all faculty, staff, and students at the University of North Dakota for academic purposes" (Qualtrics, n.d.). The survey instrument included five constructs pertaining to paraeducators' perceptions to the barriers to special education teacher licensure: perception of the barrier of *money*; perception of the barrier of *time*; perception of the barrier of *family obligations*; perception of the barrier of *navigating the university system*; and perception of the barrier of *academics*.

Participants

All paraeducators who work with students with special needs in Minnesota public schools were sent an electronic questionnaire by their Regional Low Incidence Facilitator in April of 2013, to identify those paraeducators who either were, or might be, interested in becoming licensed special educators. This questionnaire asked for demographic information, including home mailing address, with the intent of contacting those interested in becoming licensed special educators. Out of nearly 800 responses to the questionnaire, 444 indicated they were interested or may be interested, but needed more

information. All of the paraeducators who answered either "yes" or "maybe" were given the opportunity to participate in this study.

In June 2014, a postcard (see Appendix B) was sent to the home mailing addresses of the 444 paraeducators who indicated an interest, with a survey Uniform Resource Locator (URL) printed on the postcard. These postcards were addressed and mailed out by personnel from the MDE. The paraeducators voluntarily completed the anonymous survey online, at a location of their choice. A reminder postcard was mailed to paraeducators two weeks after the initial one.

While this researcher was one of the stakeholders in the Minnesota Personnel Preparation Partnership group, access to the names and addresses of any of the paraeducators who completed the initial questionnaire were not given to anyone other than the MDE personnel who are working on this initiative.

Instrumentation

The survey instrument (see Appendix C) collected demographic data and included 20 indicators related to the seven research questions. The MDE specifically requested six additional indicators which were related to the reason behind the paraeducators' desire to obtain their special education teaching license. The demographic data collected included age, gender, ethnicity, computer/internet access, number of years as a special education paraeducator, and interest in obtaining a special education teacher license. The survey also contained a question regarding paraeducators' interest in a cohort, as requested by the MDE, with the notion they could have a role in creating these cohorts in the future if an interest was determined. The 26 indicators were included in a Likert-type scale, a summated rating scale that typically includes statements to which subjects respond,

indicating the "extent to which they agree or disagree with each statement" (Hatcher, 1994, p. 130).

The first six indicators in the Likert scale chart were specifically requested by the MDE, to help them determine the reasons a paraeducator would like to become a special education teacher and were not analyzed by this researcher for this study. These six indicators were as follows:

1. I would like to be a special education teacher because it seems rewarding.

2. I would like to be a special education teacher because I want to work the same hours as my children.

3. I would like to be a special education teacher because I have had positive experience(s) with someone with a disability.

4. I would like to be a special education teacher because I want to work with a team of other caring professionals.

5. I would like to be a special education teacher because I have something to offer kids with disability.

6. I would like to be a special education teacher because I will have job security.

The final 20 indicators were based on *A Guide to Developing Paraeducator-to-Teacher Programs*, a national study which served as the framework for this research investigation (RNT, 2000). This study identified the five barriers paraeducators face as they pursue their special education teaching license. Existing literature, as well as the data from the 2013 Minnesota questionnaire, supported the findings from the national study (Abbate-Vaughn & Paugh, 2009; Genzuk & French, 2002). These studies formed the substructure for the five constructs in this investigation.

These 20 indicators were part of a five-construct framework; each construct contained four indicators, which were grouped together within the survey, according to the identified barrier to special education teacher licensure: *money*, as it relates to cost of the program and to living expenses while a student (indicators 7-10); *time*, as it relates to a flexible schedule (indicators 11-14); *family obligations*, as it relates to having responsibility for others (indicators 15-18); *institutional*, as it relates to navigating the college/university system (indicators 19-22); and *academics,* as it relates to being prepared for college-level instruction (indicators 23-26). Figure 2 depicts the five barriers and the four indicators under each barrier construct.

After each indicator, the paraeducator chose from the following six options: (1) strongly disagree, (2) disagree, (3) somewhat disagree, (4) somewhat agree, (5) agree, and (6) strongly agree. The six-point Likert-type scale allowed for differentiation between agree and disagree with the constructs being measured. Responses of 1-3 were considered some form of disagreement and responses of 4-6 were considered some form of agreement.

Pilot Study

After designing a survey instrument to answer the aforementioned research questions, the researcher arranged to meet with a group of Minnesota paraeducators and conduct a field pretest, or pilot study. According to Fowler (2009), it is considered best practice to execute a field pretest of an instrument and procedures, "to find out how the

BARRIERS

MONEY	TIME	FAMILY OBLIGATIONS	ACADEMIC/ INSTITUTIONAL	ACADEMICS/ BASIC SKILLS
Indicator 7: Financially, I would need to continue to work full time while I earn my degree.	**Indicator 11:** University courses for this degree need to be offered after 3PM.	**Indicator 15:** My family obligations would make obtaining this degree challenging.	**Indicator 19:** I need assistance enrolling in University courses.	**Indicator 23:** I need a review of basic academic subjects in order to be prepared for college-level instruction.
Indicator 8: The financial cost of this degree would be a hardship for me.	**Indicator 12:** University courses for this degree need to be offered on the weekend.	**Indicator 16:** Balancing home, work, and University courses would be difficult.	**Indicator 20:** Completing the required University admission paperwork is confusing.	**Indicator 24:** I need academic skill development in order to do well in college-level courses.
Indicator 9: Paying for tuition, books, and fees would be difficult for me.	**Indicator 13:** University courses for this degree need to be offered online.	**Indicator 17:** I have responsibilities to my family that leave me with little time for coursework.	**Indicator 21:** I need assistance in determining what courses to take.	**Indicator 25:** I need academic tutoring in order to do well in college-level courses.
Indicator 10: Financially, my current salary is needed for my family's expenses.	**Indicator 14:** A flexible course schedule is necessary for me to complete this degree.	**Indicator 18:** It would be challenging to find time to complete University coursework and care for my family.	**Indicator 22:** I need assistance from an academic advisor.	**Indicator 26:** I need tutoring on how to prepare for tests at the college level.

Figure 1. Survey constructs.

data collection protocols and the survey instruments work under realistic conditions"

(p. 122). Dillman and Redline (2004) suggested pilot study survey administrators ask

three questions to participants: (a) Were the instructions clear? (b) Were the questions

clear? and (c) Were there any problems in understanding what kind of answers were expected or in providing answers to the questions as they were stated? (p. 316).

An Institutional Review Board (IRB) approved pilot study was conducted sampling 25 paraeducators from a northwest Minnesota school district regarding their perceptions of the five barriers of *money, time, family obligations, navigating the university system,* and *academics*, identified in the national study (RNT, 2000) and in the 2013 Minnesota questionnaire (see Appendix A). The survey was distributed to the 25 paraeducators in person in one of the school district's classrooms.

The 26-item, Likert-type paper and pencil survey was developed using a five-construct framework *(perceptions of each of the following: money, time, family obligations, navigating the university system, and academics)* comprising four indicators each. The additional six statements, requested by the MDE, were included to determine paraeducators' reasons for wanting to become a special education teacher. The paraeducators were asked to indicate the extent to which they agree or disagree with each statement. Demographic checklist-type items (i.e., age, gender, ethnicity, computer/internet access) were also included in this survey.

An exploratory analysis, including a Cronbach's Alpha calculation to measure internal consistency, was conducted on the data from the pilot study. According to Dunn-Rankin, Knezek, Wallace, and Zhang (2004), "Cronbach's alpha is most commonly used to determine reliability of a set of categorical ratings" (p. 11). Reliability coefficients close to 1.00 are considered very good and represent strong internal consistency (Cronk, 2008). The responses demonstrated strong reliability coefficients (Nunnally, 1978) within the constructs; there were no findings that warranted change to

the survey. Table 1 depicts the Cronbach's alpha levels for each of the barriers. This researcher solicited feedback from the participants regarding survey design and structure, as suggested by Dillman and Redline (2004); no suggestions for change were given.

Table 1. Pilot Study's Cronbach's Alpha Levels.

	Cronbach's Alpha	N of Items
Money	.967	4
Time	.908	4
Family Obligations	.976	4
Navigating the University system	.912	4
Academics	.980	4

Research Procedures

Following the creation of the survey instrument on Qualtrics®, approval from the University of North Dakota's Institutional Review Board was sought and obtained (IRB-201405-463). For the pilot study, the researcher met with the 25 paraeducators in person at a northwest Minnesota school district. This researcher provided a verbal explanation of the reason for this study to the paraeducators and was present to answer questions about the survey while it was administered. No questions were asked about the survey by any participant. The data from the pilot study were analyzed for internal consistency using a Cronbach's alpha, and no changes to the survey were warranted.

An invitational postcard, which included the survey Uniform Resource Locator (URL), was created and sent electronically to the MDE personnel, who addressed the postcards and mailed them out to 444 paraeducators across the state. These paraeducators

participated in the 2013 questionnaire and indicated either "yes" or "maybe" when asked

if they were interested in becoming licensed special education teachers. Because this

researcher did not have access to the paraeducators' names, addresses, nor emails, the

MDE agreed to disseminate the invitational postcards. This researcher supplied

brightly-colored card stock for the postcards, with the intent of getting the paraeducators'

attention when they received the invitation in the mail to respond to the survey

(Dillman, 2007).

Two weeks after mailing out the invitation postcard, the MDE dispersed another

postcard, reminding paraeducators of their opportunity to respond to the survey. Dillman

(2007) suggested a follow-up postcard as a way to increase the response rate. The survey

was open to paraeducators for five weeks total. The paraeducators voluntarily completed

the anonymous survey online, at a location of their choice. No compensation was

provided to participating paraeducators. The results were gathered and stored

electronically in Qualtrics®.

Data Analysis

Data analysis for this study incorporated both descriptive and inferential statistics.

Using the survey instrument code sheet (see Appendix D), quantitative data were entered

into a Microsoft Excel spreadsheet. IBM Statistical Package for the Social Sciences

(SPSS) Statistics (v22, Chicago, IL) via University of North Dakota's Citrix was used to

import and analyze the quantitative spreadsheet data. Descriptive statistics were

computed to determine frequencies, means, and standard deviations for responses to each

of the survey questions. Cronbach's alpha was computed to determine reliability of

survey items within constructs and measure internal consistency. Parametric inferential

procedures included Gosset's (Student's) independent samples *t* test, General Linear

Models Analysis of Variance (ANOVA), Pearson bivariate product-moment coefficients

of correlation, and General Linear Models regression analysis. This researcher chose to

use the currently conventional probability level of .05.

One of the purposes of this study was to investigate Minnesota paraeducators'

perceptions of the barriers to attaining their special education teaching license. To answer

research questions 1-5 (Minnesota paraeducators' perceptions of the barriers of *money,*

time, family obligations, navigating the university system, and academics), percentage of

agreement and disagreement for each indicator was calculated by summing the

individuals' responses. Responses of 1-3 were considered some form of disagreement and

responses of 4-6 were considered some form of agreement.

A second purpose of this study was to assess any difference in these factors

between those who have already obtained at least a bachelor's degree and those who have

not. To address research question 6, "Are there perceptional differences between

Minnesota paraeducators who have completed at least a bachelor's degree and those who

have not?", independent samples *t* test and ANOVA were used on the five constructs to

assess the means of the two groups, those with at least a bachelor's degree and those

without, to determine if there was a statistical difference.

The independent samples *t* test compares the means of two independent samples

(Pyrczak, 2004), in this study, specifically, those with at least a bachelor's degree and

those without. Because there were five barrier constructs (*money, time, family obligations,*

navigating the university system, and academics) being compared, the ANOVA was used.

It compares the means of two or more groups, using variance, in a single statistical test

and thereby avoids inflation of the p value due to multiple comparisons. Conducting

multiple *t* tests inflates the Type 1 error rate and increases the chance of drawing

inappropriate conclusions (Cronk, 2008, p. 65).

To address research question 7, "Are there demographic variables that together

influence the paraeducators' perceptions of the barriers?", Pearson correlations and

regression analysis were used. Because the data for this study met the following

assumptions, the Pearson bivariate coefficient of correlation was appropriate:

1. Interval-level measurement: Both variables should be assessed on

   interval/ratio-level of measurement.

2. Random sampling: Each subject in the sample will contribute one score on the

   predictor variable, and one score on the criterion variable. Theses pairs of

   score should represent a random sample drawn from the population of interest.

3. Linearity: The relationship between the criterion variable and the predictor

   variable should be linear, not curvilinear.

4. Bivariate normal distribution: The pairs of scores should follow a bivariate

   normal distribution; scores on the criterion variable should form a normal

   distribution at each value of the predictor variable (Hatcher, 1994, pp. 563-

   564).

The Pearson correlations quantifies the degree to which two variables are linearly

related. This researcher also chose to conduct regression analysis because it is used when

one wants to determine how a number of variables together are influencing another

variable. It is used to make predictions on *Y*, based on values of *X* (Pyrczak, 2004). In this

study, for this particular question, it was selected to assess if the demographic variables

were predictors of the barrier index. The barrier index was calculated by using the following method: the Likert scores for each indicator of the five constructs were summed to calculate composite construct-specific barrier indices for each respondent. With that information, each individual's construct-specific barrier indices were summed to calculate an overall composite barrier index.

Delimitations of the Study

A delimitation of this study was that it was focused solely on a sample of Minnesota paraeducators who work in the public school setting with students with special needs in 2013. Only paraeducators who responded either "yes" or "maybe" when asked on a 2013 questionnaire if they were interested in obtaining their special education teaching license were invited to take part in this study.

Legitimation

According to Benge, Onwuegbuzie, and Robbins (2012), a study is "limited by the legitimation of its findings and/or interpretations" (p. 66). It is of the utmost importance that researchers reflect upon the limitations of their study throughout the research process and take steps to increase both internal and external validity. To ensure validity in the conclusions derived from this study, this researcher employed the following methods:

1. This researcher was a member of the Preparation Program Partnership group, consisting of representatives from the MDE, local education agencies, and institutions of higher education. This team collaborated on the identification of the problem, strategies to increase recruitment of special education personnel,

and the formation and dissemination of the survey instrument (Friend & Cook, 2010).

2. This researcher conducted an extensive review of the professional literature (Creswell, 2009; Huff, 1999).

3. The survey instrument was patterned after the findings from a national study, which served as the conceptual framework for this investigation (Creswell, 2009).

4. The survey instrument was piloted prior to use. Internal consistencies, using Cronbach's alpha, were calculated for all data by this researcher, and checked by a second data analyst/statistician (Cronk, 2008; Fowler, 2009).

5. This researcher analyzed all statistical data, using well-regarded statistical procedures, such as Cronbach's alpha, Gosset's (Student's) independent samples t test, General Linear Model Analysis of Variance (ANOVA), Pearson bivariate coefficient of correlation, and General Linear Model Regression analysis. All findings were checked by a second data analyst/statistician (Cronk, 2008; Pyrczak, 2004).

This researcher has every reason to believe that the respondents to the survey were a fair sample of the population of Minnesota paraeducators who may be interested in obtaining their special education teaching license. All paraeducators who responded either "yes" or "maybe" when asked if they were interested in becoming licensed special education teachers in a 2013 questionnaire were invited to take part in this study. This researcher polled these specific paraeducators via a postcard with a survey URL, sent to them by the MDE, due to a cooperative agreement between this researcher and the MDE.

Because the anonymity and confidentiality of the survey respondents were preserved, and the paraeducators were volunteers who could withdraw from the study at any time without ramifications, it is assumed that the participants answered honestly (Fowler, 2009).

Summary

One of the purposes of this quantitative research study was to investigate Minnesota paraeducators' perceptions of the barriers to attaining their special education teaching license. Additionally, the study investigated if there were perceptional differences between paraeducators who have completed least a bachelor's degree and those who have not. The hypothesis was that those with at least a bachelor's degree would perceive the barriers to be lower than those who have not obtained a degree, based on the five constructs of *money, time, family obligations, navigating the university system, and academics*. The study further sought to determine if there were demographic variables that together influence the paraeducators' perceptions of the barriers.

CHAPTER III

RESULTS

One of the purposes of this study was to investigate Minnesota paraeducators'

perceptions of the barriers to becoming licensed special education teachers. In a national

study, *A Guide to Developing Paraeducator-to-Teacher Programs*, which underpinned

this research study, five barriers were identified: *money, time, family obligations,*

navigating the university system, and academics (Recruiting New Teachers [RNT], 2000).

A second purpose was to assess any difference in these factors between those who have

already obtained at least a bachelor's degree and those who have not. Additionally, this

study sought to determine if there were demographic variables that together influence the

paraeducators' perceptions of the barriers.

The results of the quantitative data analysis for this study are presented in this

chapter. A profile of the respondents is provided first, followed by results for each of the

research questions. A summary of the findings concludes this chapter.

Profile of Respondents

In April of 2013, personnel from the Minnesota Department of Education (MDE),

who were members of the State Personnel Preparation Partnership (PPP) group, sent all

paraeducators who work with students with special needs in Minnesota public schools an

electronic questionnaire (see Appendix A). One of the purposes of that questionnaire was

to identify those paraeducators who either were, or might be, interested in becoming

licensed special educators. The questionnaire also asked the paraeducators to identify any barriers to obtaining their teaching license. Out of nearly 800 responses to the questionnaire, 444 indicated they were interested or may be interested in becoming licensed special education teachers, but needed more information.

Personnel from the MDE mailed a postcard (see Appendix B) with a Uniform Resource Locator (URL) to these 444 paraeducators in June of 2014, inviting them to participate in an anonymous, electronic survey (see Appendix C). This survey included demographic questions: age, gender, ethnicity, computer/internet access, and region of employment/residence. Patterned after a national study (RNT, 2000), the survey was comprised of 20 indicators related to the five identified barriers to becoming a special education teacher: *money, time, family obligations, navigating the university system, and academics*. Six additional statements, requested by the MDE, were included to determine paraeducators' reasons for wanting to become a special education teacher. The paraeducators were asked to indicate the extent to which they agree or disagree with each statement.

Of the 444 survey invitations sent, the MDE received four back, marked "Return to Sender." Two of them had new addresses listed, so those recipients received the reminder postcard two weeks later. The other two had no forwarding address, so they did not have the opportunity to participate. The electronic survey was available to paraeducators for a total of five weeks. Forty surveys were completed; the response rate was 9%.

Of the completed surveys, 93% expressed an interest in obtaining a special education teacher license. Currently, 40% have a bachelor's degree or higher. At the time,

10% reported being enrolled in a teacher preparation program. Eighty-five percent

indicated an interest in completing a program with a cohort. All respondents (100%)

reported having access to a computer and high-speed Internet in their homes (see Table 2).

Table 2. Frequency and Percentage of Factors Relating to Licensure by Respondents.

	Yes	%	No	%
Interest in special education licensure	37	93	3	7
Currently have bachelor's degree or higher	16	40	24	60
Currently enrolled in teacher prep program	4	10	36	90
Interest in cohort	34	85	6	15
Access to computer in home	40	100	0	0
High-speed internet access in home	40	100	0	0

The 40 completed surveys included 36 female and four male respondents. The

majority (90%) identified as female (see Table 3).

Table 3. Frequency and Percentage of Gender by Respondents.

	N	%
Female	36	90
Male	4	10

When asked to indicate their age, 8% of the respondents reported being under the age of 30. Fifteen percent indicated they were between 30-39. Half of the respondents reported being between 40-49. One quarter were between 50-59 years of age, and 2% were older than 60. The majority of the respondents indicated they were between the ages of 40-49 (see Table 4).

Table 4. Frequency and Percentage of Age by Respondents.

	N	%
<30	3	8
30-39	6	15
40-49	20	50
50-59	10	25
>60	1	2

The paraeducators were asked how many adults lived in their home. Of the respondents, 70% reported living in a two-adult household. Just over 12% indicated one adult lived in the home. The same number reported three adults resided in their home (see Figure 2).

When asked how many dependents lived in their home, 38% indicated that they had zero dependents in their household. Twenty-three percent reported having three dependents living in their home. Of the respondents, 21% reported having one dependent living in their home. Fifteen percent indicated they had two dependents living in their home (see Figure 3).
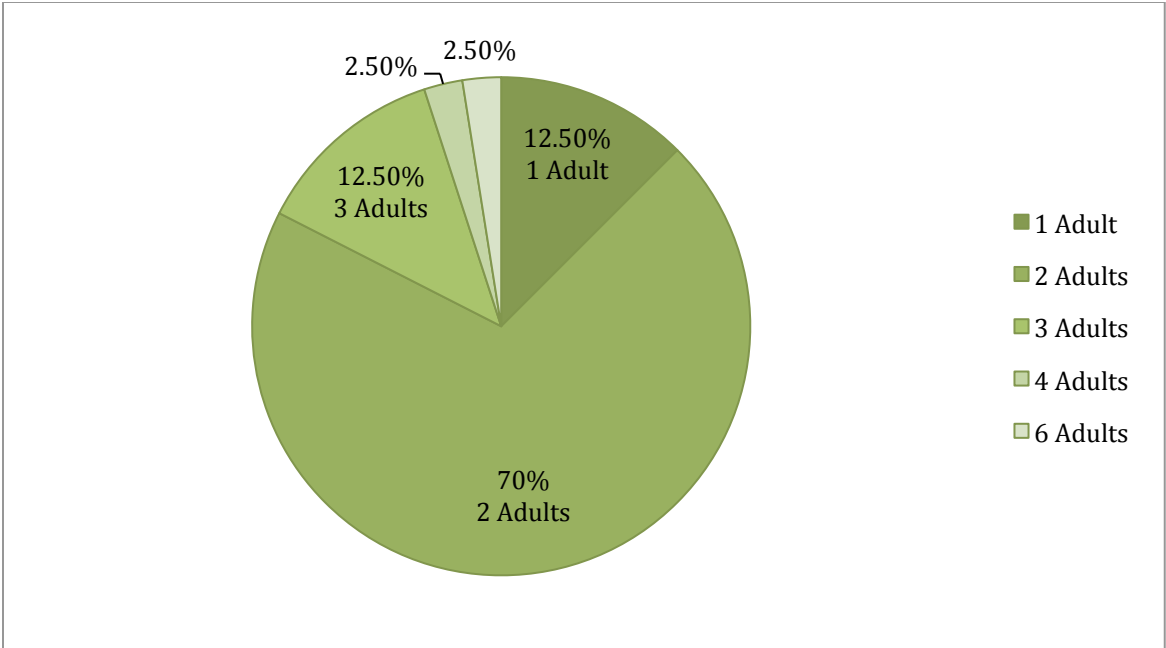
Figure 2. Number of adults living in home.
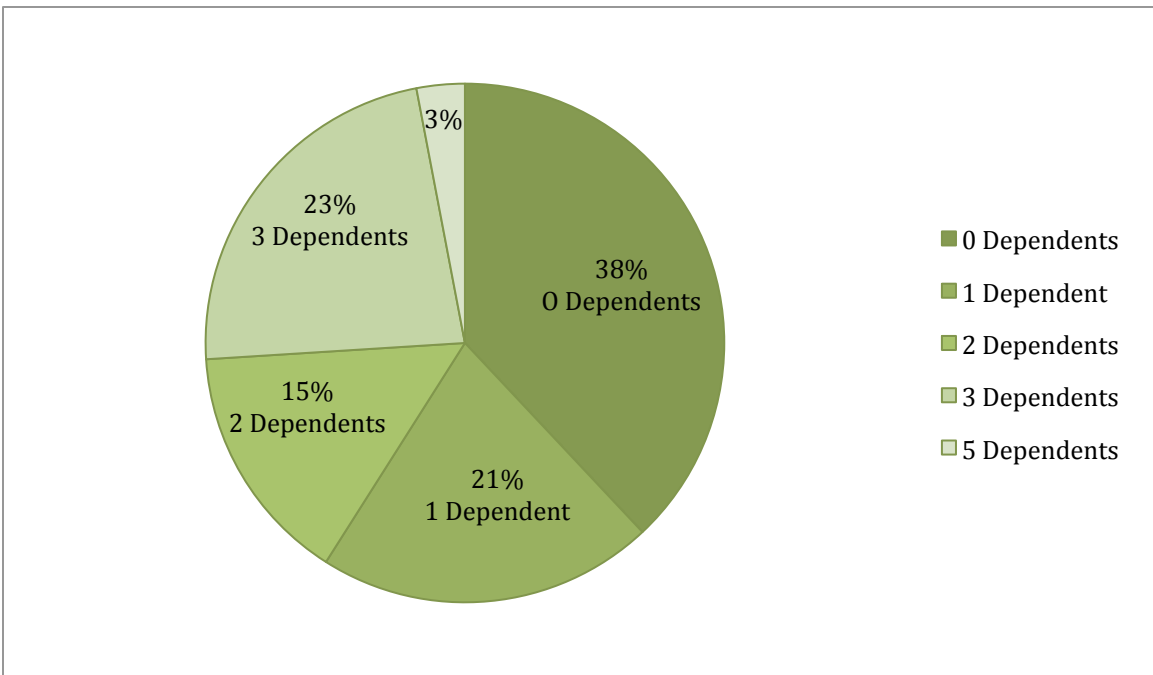
Figure 3. Number of dependents living in home.

Of the 40 respondents, 95% reported their ethnicity as White. Just over 2% reported their ethnicity as African-American. The same number identified their ethnicity as Asian. No one who responded to the survey reported his/her ethnicity as Black, Latino, Native Hawaiian, or American Indian. The majority of respondents identified their ethnicity as White (see Table 5).

Table 5. Frequency and Percentage of Ethnicity by Respondents.

	N	%
White	38	95
African-American	1	2.5
Black	0	0
Latino	0	0
Asian	1	2.5
Native Hawaiian or other Pacific Islander	0	0
American Indian or Alaska Native	0	0
Other	0	0

When asked the number of years the respondents had been a special education paraeducator, 43% reported 0-5 years; 20% reported 6-10 years; 15% reported 11-15 years; 15% reported 16-20 years; and 7% reported over 20 years (see Figure 4).
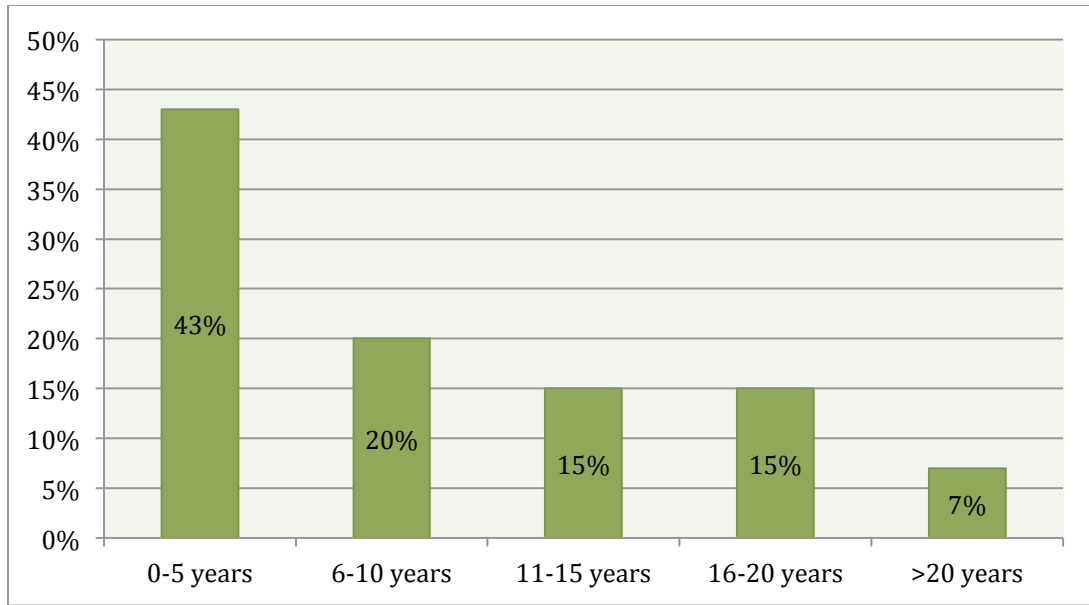
Figure 4. Number of years as a special education paraeducator.

The respondents were asked to identify the special education disability category of the students they most served. The categories have been defined by Federal law and adopted by the State of Minnesota (Code of Federal Regulations [C.F.R.], 2014; Minnesota Department of Education [MDE], 2013). In this study, the most common disability areas served by paraeducators were Emotional or Behavioral Disorders (44%) and Autism Spectrum Disorders (23%). After these two disability areas, the following categories were reported: Developmental Cognitive Disability (13%); Developmental Delay (10%); Specific Learning Disability (8%); Speech or Language Impairment (2%). Table 6 indicates frequency totals for the disability categories reported by all survey respondents.

Respondents were asked to identify the population of their residence. The majority (33%) indicated they resided in a city with a population between 2500 and 9999.

Twenty-three percent reported residing in a city with a population between 500 and 2499.

Figure 5 shows a further breakdown of the responses to population of residence.

Table 6. Frequency and Percentage of Special Education Category Served by Respondents.

	N	%
Autism Spectrum Disorder	9	23
Blind/Visually Impaired	0	0
Deaf/Blind	0	0
Deaf/Hard of Hearing	0	0
Developmental Adapted Physical Education	0	0
Developmental Cognitive Disability	5	13
Developmental Delay (Ages 3-6)	4	10
Emotional or Behavioral Disorders	17	44
Other Health Disabilities	0	0
Physical Impairment	0	0
Severely Multiply Impaired	0	0
Specific Learning Disability	3	8
Speech or Language Impairment	1	2
Traumatic Brain Injury	0	0

When asked to identify their region of residence and region of employment, the majority of the respondents (over 40%) reported living and working in Regions 5 and 7. The second most common response was Region 10. Figure 6 is a map indicating the

educational regions in Minnesota. Figure 7 depicts the identified Regions of residence

and employment, as reported by the respondents.
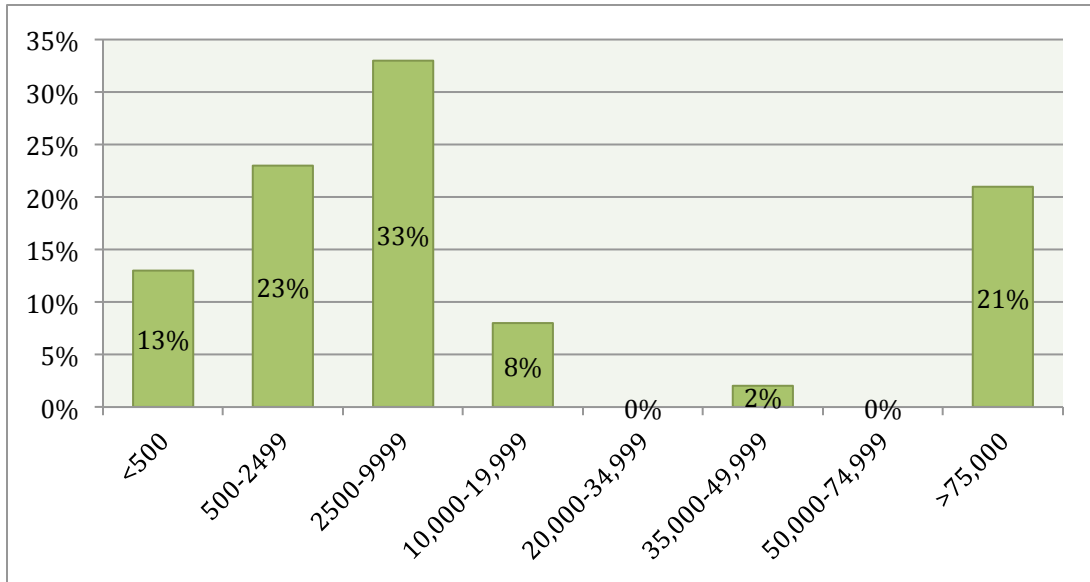
Figure 5. Population of residence of respondents.

Figure 6. Minnesota educational regions.
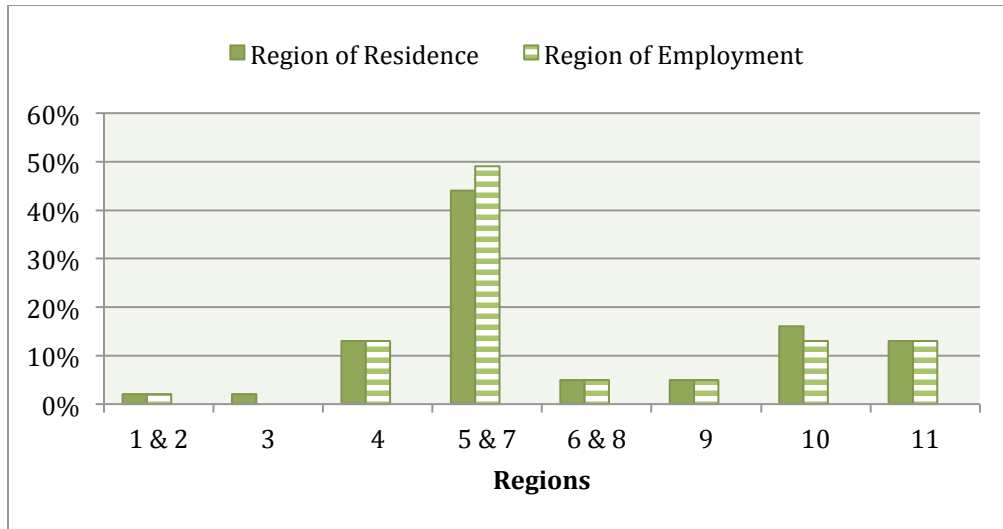
Figure 7. Regions of residence and employment by respondents.

Research Question One

The first research question asked Minnesota paraeducators about their perceptions of the barrier of *money*, as it relates to the cost of the university program and living expenses while in school. The composite mean was determined using indicators 7 through 10. Indicator 7: *Financially, I would need to continue to work full time while I earn my degree;* Indicator 8: *The financial cost of this degree would be a hardship for me;* Indicator 9: *Paying for tuition, books, and fees would be difficult for me;* and Indicator 10: *Financially, my current salary is needed for my family's expenses.* Percentage of agreement and disagreement for each indicator was calculated by summing the individuals' responses. Responses of 1-3 were considered some form of disagreement and responses of 4-6 were considered some form of agreement. Overall, 89% of the respondents perceived *money* to be a barrier to obtaining their special education teacher license. Table 7 depicts the percentage of agreement and disagreement for the indicators related to money. The responses for the individual indicators are in Appendix E

Table 7. Percentage of Agreement and Disagreement for Money Indicators.

Indicator		Disagree	Agree
7	Need to continue to work full time	13%	87%
8	Financial cost of degree a hardship	8%	92%
9	Difficult to pay for tuition, books, fees	13%	87%
10	Current salary is needed for family expenses	10%	90%

Research Question Two

The second research question asked Minnesota paraeducators about their perceptions of the barrier of *time*, as it relates to a flexible schedule. The composite mean was determined using indicators 11-14. Indicator 11: *University courses for this degree need to be offered after 3PM;* Indicator 12: *University courses for this degree need to be offered on the weekend;* Indicator 13: *University courses for this degree need to be offered online;* and Indicator 14: *A flexible course schedule is necessary for me to complete this degree.* Percentage of agreement and disagreement for each indicator was calculated by summing the individuals' responses. Responses of 1-3 were considered some form of disagreement and responses of 4-6 were considered some form of agreement. Overall, 96% of the respondents perceived *time* to be a barrier to obtaining their special education teacher license. Table 8 depicts the percentage of agreement and disagreement for the indicators related to time. The responses for individual indicators are in Appendix F.

Table 8. Percentage of Agreement and Disagreement for Time Indicators.

Indicator		Disagree	Agree
11	Courses need to be offered after 3 PM	5%	95%
12	Courses need to be offered on the weekend	8%	92%
13	Courses need to be offered online	2%	98%
14	A flexible course schedule is necessary	0%	100%

Research Question Three

The third research question asked Minnesota paraeducators about their perceptions of the barrier of *family obligations*, as it relates to having responsibility for others. The composite mean was determined using indicators 15-18. Indicator 15: *My family obligations would make obtaining this degree challenging;* Indicator 16: *Balancing home, work, and University courses would be difficult;* Indicator 17: *I have responsibilities to my family that leave me with little time for coursework;* and Indicator 18: *It would be challenging to find time to complete University coursework and care for my family.* Percentage of agreement and disagreement for each indicator was calculated by summing the individuals' responses. Responses of 1-3 were considered some form of disagreement and responses of 4-6 were considered some form of agreement. Overall, 72% of the respondents perceived *family obligations* to be a barrier to obtaining their special education teacher license. Table 9 depicts the percentage of agreement and disagreement for the indicators related to family obligations. The responses for individual indicators are in Appendix G.

Table 9. Percentage of Agreement and Disagreement for Family Obligations Indicators.

Indicator		Disagree	Agree
15	Challenging because of family obligations	26%	74%
16	Difficulty balancing home, work, and school	15%	85%
17	Family leaves little time for coursework	38%	62%
18	Challenging to complete coursework with family	33%	67%

Research Question Four

The fourth research question asked Minnesota paraeducators about their perceptions of the barrier of the academic institution, as it relates to *navigating the university system*. The composite mean was determined using indicators 19-22. Indicator 19: *I need assistance enrolling in University courses;* Indicator 20: *Completing the required University admission paperwork is confusing;* Indicator 21: *I need assistance in determining what courses to take;* and Indicator 22: *I need assistance from an academic advisor.* Percentage of agreement and disagreement for each indicator was calculated by summing the individuals' responses. Responses of 1-3 were considered some form of disagreement and responses of 4-6 were considered some form of agreement. Overall, 71% of the respondents perceived *navigating the university system* to be a barrier to obtaining their special education teacher license. Table 10 depicts the percentage of agreement and disagreement for the indicators related to navigating the university system. The responses for individual indicators are in Appendix H.

Table 10. Percentage of Agreement and Disagreement for Navigating the University System Indicators.

Indicator		Disagree	Agree
19	Need assistance enrolling in courses	37%	63%
20	Completing admission paperwork is confusing	50%	50%
21	Need assistance in determining courses to take	18%	82%
22	Need assistance from an academic advisor	10%	90%

Research Question Five

The fifth research question asked Minnesota paraeducators about their perceptions of the barrier of *academics*, as it relates to being prepared for college-level instruction. The composite mean was determined using indicators 23-26. Indicator 23: *I need a review of basic academic subjects in order to be prepared for college-level instruction;* Indicator 24: *I need academic skill development in order to do well in college-level courses;* Indicator 25: *I need academic tutoring in order to do well in college-level courses;* and Indicator 26: *I need tutoring on how to prepare for tests at the college level.* Percentage of agreement and disagreement for each indicator was calculated by summing the individuals' responses. Responses of 1-3 were considered some form of disagreement and responses of 4-6 were considered some form of agreement. Overall, 36% of the respondents perceived *academics* to be a barrier to obtaining their special education teacher license. Table 11 depicts the percentage of agreement and disagreement for the indicators related to academics. The responses for individual indicators are in Appendix I.

Table 11. Percentage of Agreement and Disagreement for Academic Indicators.

Indicator		Disagree	Agree
23	Need review of basic academic subjects	54%	46%
24	Need academic skill development	67%	33%
25	Need academic tutoring	72%	28%
26	Need tutoring on test preparation	62%	38%

Research Question Six

The sixth research question sought to determine if there are perceptional differences between Minnesota paraeducators who have completed at least a bachelor's degree and those who have not, based on their perceptions of the barriers of *money, time, family obligations, navigating the university system, and academics*. Table 12 depicts the means and standard deviations per indicator between those with at least a bachelor's degree and those without. Figure 8 graphically depicts the means of the two groups by indicator.

Gosset's (Student's) Independent Samples t-test

A Gosset's (Student's) independent samples *t* test (two-tailed) was conducted to assess the mean difference of the two groups, those with at least a bachelor's degree and those without, to determine if there was a difference, in regards to their perceptions of each of the indicators. For 17 of the 20 indicators, no significant difference was found when comparing the two groups. A significant difference was found between the means of those with at least their bachelor's degree and those without for three of the indicators:

55

Table 12. Bachelor's/No Bachelor's Indicator Means and Standard Deviations.

Indicator	Bachelor	N	Mean	Std. Deviation
7. Need to work full time	Yes	15	4.47	1.407
	No	23	5.26	1.096
8. Financial cost of degree is a hardship	Yes	15	5.13	1.060
	No	24	5.17	1.049
9. Difficult to pay for tuition, books, fees	Yes	15	5.00	1.134
	No	24	5.04	1.197
10. Current salary needed for family expenses	Yes	15	4.87	1.457
	No	23	5.09	1.240
11. Courses need to be offered after 3PM	Yes	15	5.40	.986
	No	24	5.17	.917
12. Courses need to be offered on the weekend	Yes	15	4.80	1.146
	No	24	5.21	.779
13. Courses need to be offered online	Yes	15	5.27	.961
	No	24	5.42	.717
14. Flexible course schedule is necessary	Yes	15	5.53	.743
	No	24	5.46	.658
15. Challenging due to family obligations	Yes	15	4.13	1.356
	No	24	4.42	1.381
16. Difficulty balancing home, work, & school	Yes	15	4.47	1.060
	No	24	4.50	1.142
17. Family leaves little time for coursework	Yes	15	3.80	1.373
	No	24	3.71	1.233
18. Challenging to complete coursework with family	Yes	15	4.13	1.407
	No	24	3.67	1.090
19. Need assistance enrolling in courses	Yes	14	3.07	1.730
	No	24	4.25	1.595
20. Completing admission paperwork is confusing	Yes	14	2.57	1.555
	No	24	3.79	1.444
21. Need assistance determining courses to take	Yes	15	4.40	1.183
	No	24	4.54	1.587
22. Need assistance from an academic advisor	Yes	15	4.33	1.175
	No	24	4.96	.999
23. Need review of basic academic subjects	Yes	15	2.67	1.447
	No	24	3.63	1.377

Table 12 cont.

Indicator	Bachelor	N	Mean	Std. Deviation
24. Need academic skill development	Yes	15	2.60	1.404
	No	24	3.25	1.189
25. Need academic tutoring	Yes	15	2.67	1.496
	No	24	3.04	1.233
26. Need test prep tutoring	Yes	15	2.80	1.521
	No	24	3.17	1.435
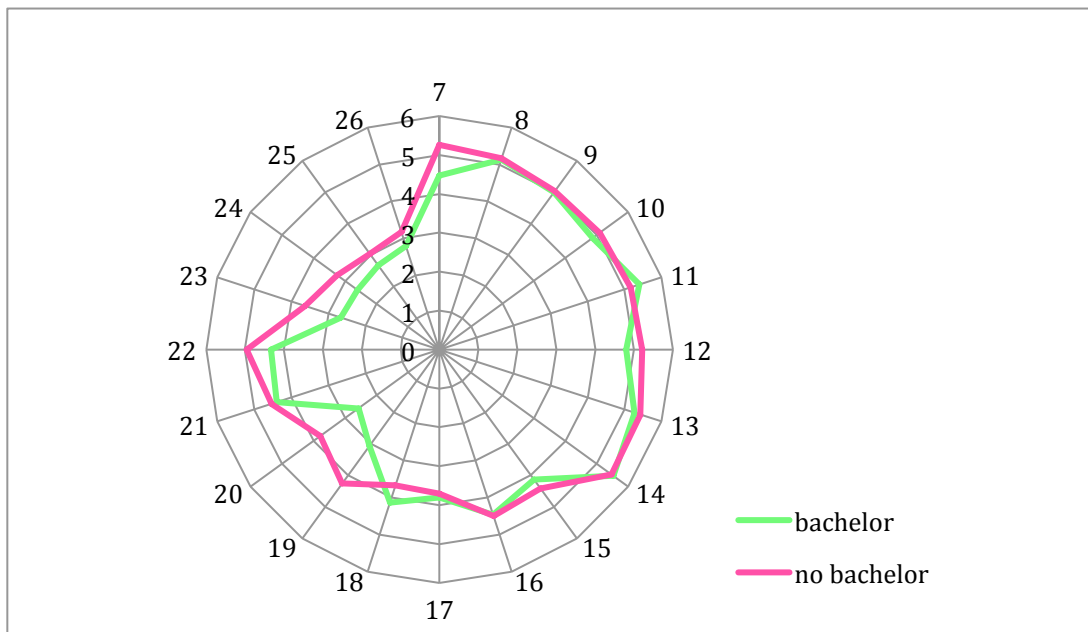
Figure 8. Indicator response comparing bachelor's/no bachelor's degree.

Indicator 19: *I need assistance enrolling in University courses*; Indicator 20: *Completing the required University admission paperwork is confusing*; and Indicator 23: *I need a review of basic academic subjects in order to be prepared for college-level instruction*.

The mean of those with at least a bachelor's degree was significantly lower ($m = 3.07$, $sd = 1.730$) than the mean of those without ($m = 4.25$, $sd = 1.595$) for indicator 19: *I*

need assistance enrolling in University courses. An independent-samples *t* test comparing the mean scores of those with at least a bachelor's degree and those without found a significant difference between the means of the two groups for indicator 19: ($t(36) = -2.130, p < .05$).

The mean of those with at least a bachelor's degree was significantly lower ($m = 2.57, sd = 1.555$) than the mean of those without ($m = 3.79, sd = 1.444$) for indicator 20: *Completing the required University admission paperwork is confusing*. An independent-samples *t* test comparing the mean scores of those with at least a bachelor's degree and those without found a significant difference between the means of the two groups for indicator 20: ($t(36) = -2.443, p < .05$).

The mean of those with at least a bachelor's degree was significantly lower ($m = 2.67, sd = 1.447$) than the mean of those without ($m = 3.63, sd = 1.377$) for indicator 23: *I need a review of basic academic subjects in order to be prepared for college-level instruction*. An independent-samples *t* test comparing the mean scores of those with at least a bachelor's degree and those without found a significant difference between the means of the two groups for indicator 23: ($t(37) = -2.073, p < .05$). See Table 13.

Barrier Composite Means

A composite score for each construct was calculated by determining the mean for each indicator and then averaging the means of the four indicators within each of the five constructs. The General Linear Models Analysis of Variance (ANOVA) was then used to compare the means of the two groups, those with at least a bachelor's degree and those without, in relation to the five constructs (*money, time, family obligations, navigating the university system, and academics*). Cronk (2008) considers the ANOVA to be "one of the

Table 13. Value of *t*, Degrees of Freedom, and Significance Level.

Indicator	Equal Variances Assumed	t-test for Equality of Means		
		t	df	Sig. (2-tailed)
7. Money		-1.951	36	.059
8. Money		-.096	37	.924
9. Money		-.108	37	.915
10. Money		-.500	36	.620
11. Time		.751	37	.457
12. Time		-1.327	37	.193
13. Time		-.557	37	.581
14. Time		.330	37	.744
15. Family		-.628	37	.534
16. Family		-.091	37	.928
17. Family		.216	37	.830
18. Family		1.162	37	.253
19. Navigating		-2.130	36	.040
20. Navigating		-2.443	36	.020
21. Navigating		-.297	37	.768
22. Navigating		-1.776	37	.084
23. Academics		-2.073	37	.045
24. Academics		-1.550	37	.130
25. Academics		-.851	37	.400
26. Academics		-.759	37	.453

most useful and adaptable statistical techniques available" (p. 65). The ANOVA

provides a single answer that indicates if any group varies from any other group.

No significant differences were found between Minnesota paraeducators with at

least their bachelor's degree and those without with regard to the composite barriers. The

results are presented in Table 14.

Table 14. ANOVA Summary Table Comparing Those With at Least a Bachelor's Degree and Those Without on Perceptional Constructs.

		Sum of Squares	df	Mean Square	F	Sig.
Money Composite	Between Groups	.065	1	.065	.040	.842
	Within Groups	61.108	38	1.608		
	Total	61.173	39			
Time Composite	Between Groups	.211	1	.211	.188	.667
	Within Groups	42.625	38	1.122		
	Total	42.836	39			
Family Composite	Between Groups	.650	1	.650	.398	.532
	Within Groups	62.123	38	1.635		
	Total	62.773	39			
Navigating Composite	Between Groups	3.118	1	3.118	1.691	.201
	Within Groups	70.068	38	1.844		
	Total	73.186	39			
Academics Composite	Between Groups	1.955	1	1.955	1.057	.311
	Within Groups	70.318	38	1.850		
	Total	72.273	39			

For the barrier of *money*, indicators seven, eight, nine and ten were averaged. The mean for all participants was 5.0. The mean composite score for those with at least a bachelor's degree was 4.9, and the mean composite score for those without a bachelor's degree was 5.1. The difference was 0.2. This was not statistically significant, ($F(1,38)$ = .040, p > .05). The composite means of indicators seven through ten for those with at least a bachelor's degree and those without are in Figure 9. The responses for individual indicators are in Appendix I.

Figure 9. Composite mean for the barrier of money.

For the barrier of *time*, indicators 11, 12, 13, and 14 were averaged. The mean for all participants was 5.3. The mean composite score for those with at least a bachelor's degree was 5.3, and the mean composite score for those without a bachelor's degree was 5.3. The difference was 0.0. ($F(1,38) = .188$, p > .05). The composite means of indicators 11-14 for those with at least a bachelor's degree and those without are in Figure 10. The responses for individual indicators are in Appendix K.
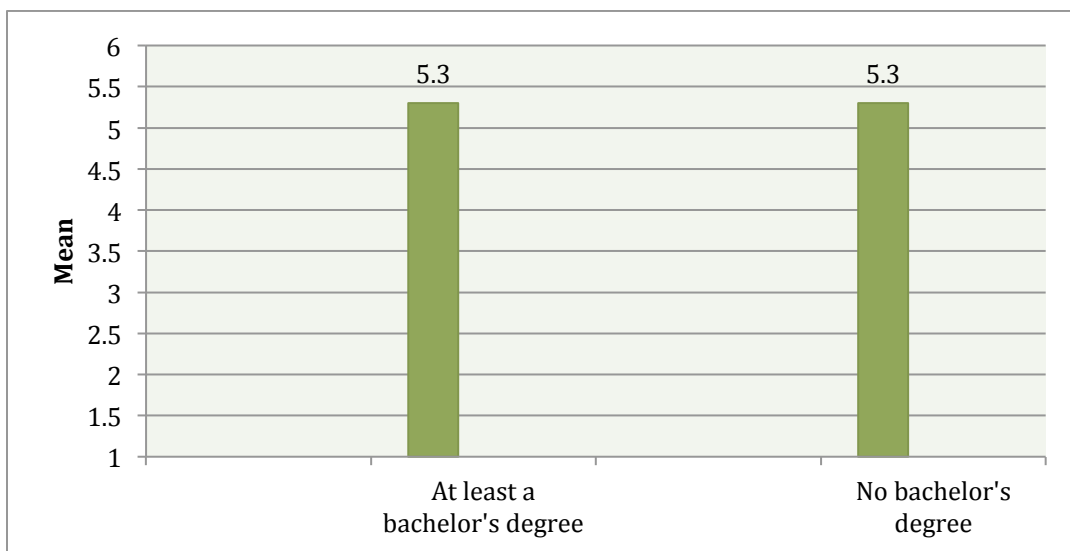
Figure 10. Composite mean for the barrier of time.

For the barrier of *family obligations*, indicators 15, 16, 17, and 18 were averaged. The mean for all participants was 4.1. The mean composite score for those with at least a bachelor's degree was 4.1, and the mean composite score for those without a bachelor's degree was 4.1. The difference was 0.0. ($F(1,38) = .398$, p > .05). The composite means of indicators 15-18 for those with at least a bachelor's degree and those without are in Figure 11. The responses for individual indicators are in Appendix L.
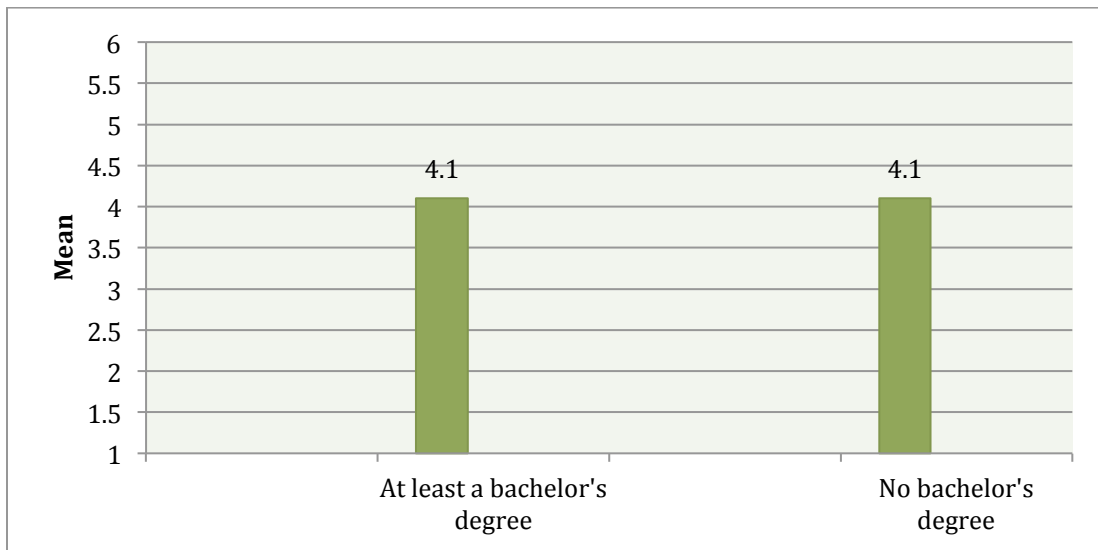
Figure 11. Composite mean for the barrier of family obligations.

For the barrier of *navigating the university system*, indicators 19, 20, 21, and 22 were averaged. The mean for all participants was 4.1. The mean composite score for those with at least a bachelor's degree was 3.6, and the mean composite score for those without a bachelor's degree was 4.4. The difference was 0.8. This was not statistically significant, ($F(1,38) = 1.691$, p > .05). The composite means of indicators 19-22 for those with at least a bachelor's degree and those without are in Figure 12. The responses for individual indicators are in Appendix M.

For the barrier of *academics*, indicators 23, 24, 25, and 26 were averaged. The mean for all participants was 2.8. The mean composite score for those with at least a bachelor's degree was 2.7, and the mean composite score for those without a bachelor's degree was 3.3. The difference was 0.6. This was not statistically significant, ($F(1,38) = 1.057$, $p > .05$). The composite means of indicators 23-26 for those with at least a bachelor's degree and those without are in Figure 13. The responses for individual indicators are in Appendix N.
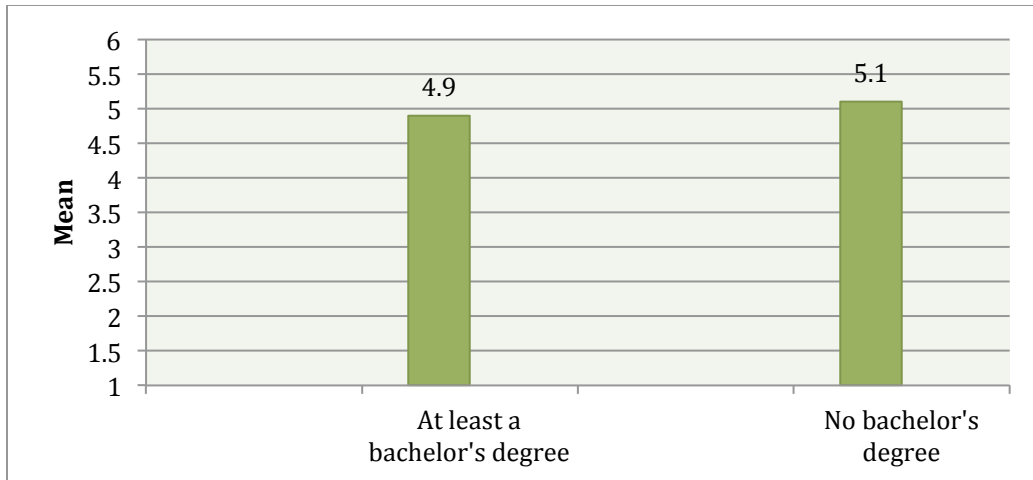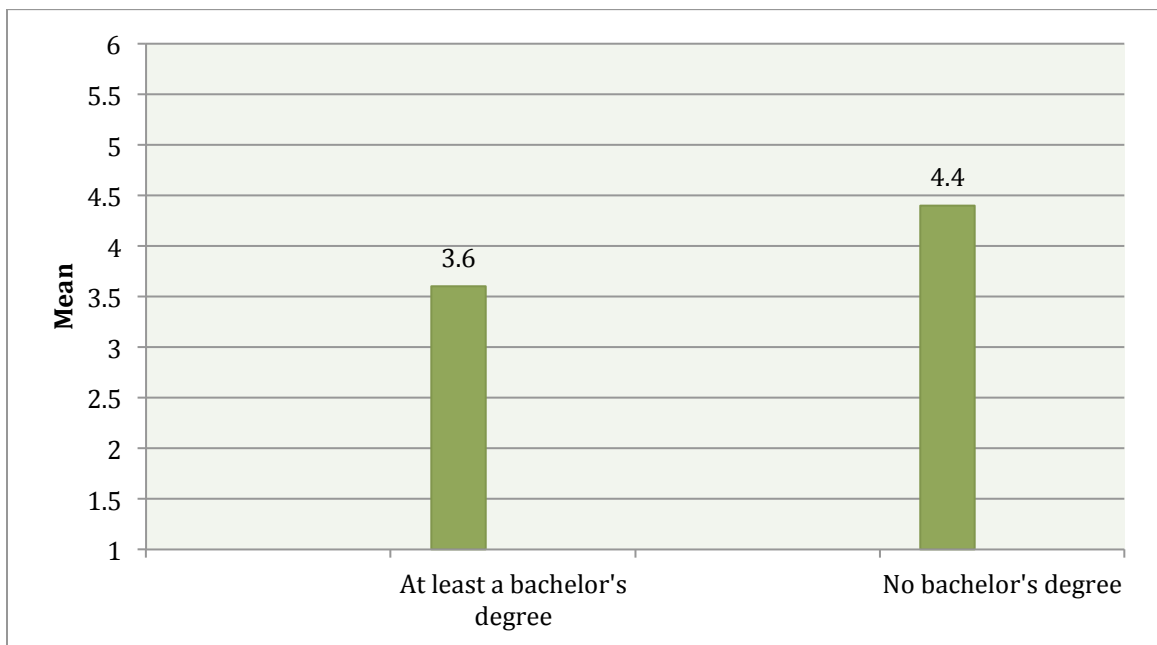

Figure 12. Composite mean for the barrier of navigating the university system.

The results showed that there is no evidence of a difference between those paraeducators with at least a bachelor's degree and those without, based on the composite barriers means of *money, time, family obligations navigating the University system*, and *academics*. Figure 14 graphically depicts the composite means of the two groups.
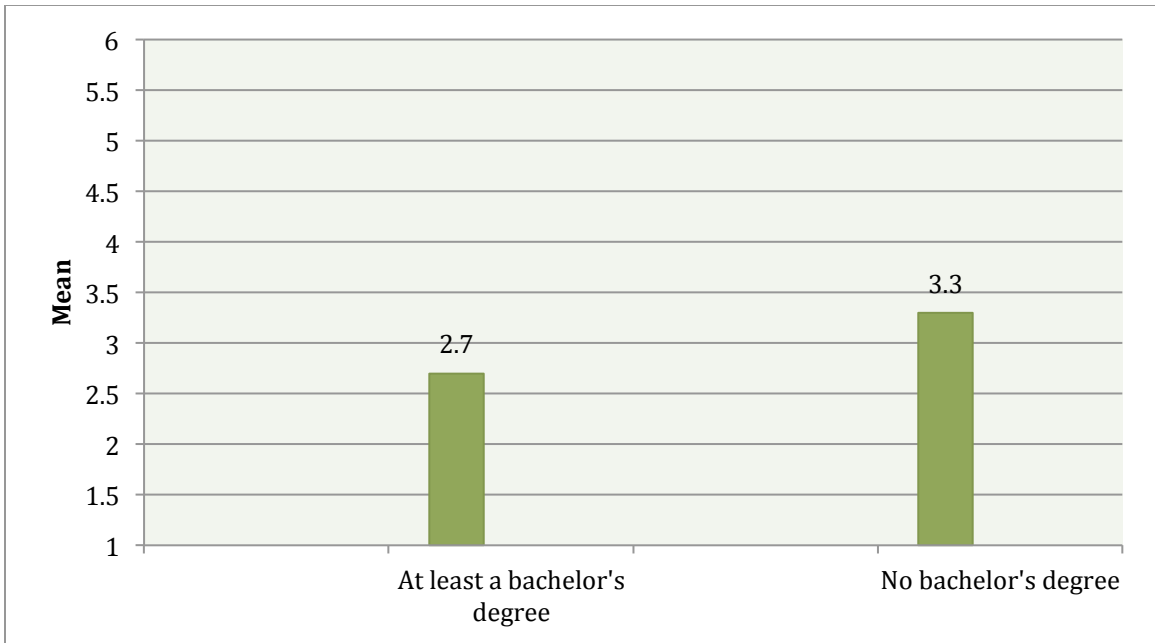
Figure 13. Composite mean for the barrier of academics.
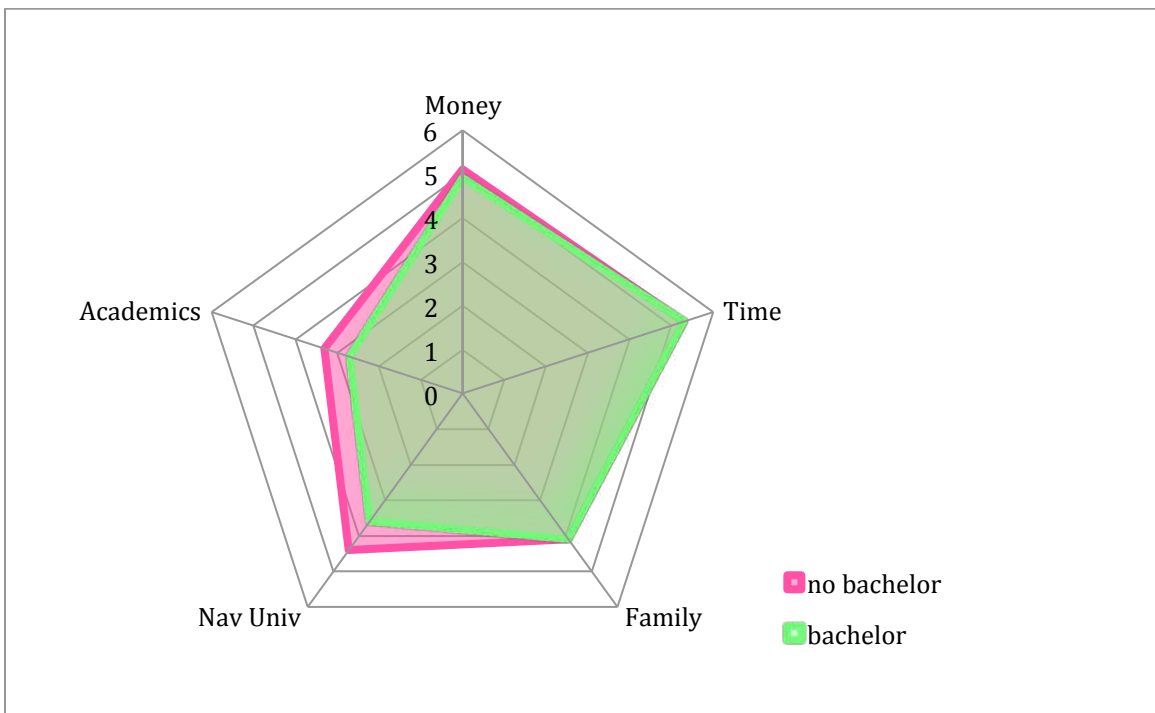
Figure 14. Composite means comparing bachelor's/no bachelor's degree.

Research Question Seven

The seventh research question sought to determine if there were demographic variables that together influence the paraeducators' perceptions of the barriers of *money, time, family obligations, navigating the university system, and academics.* In order to address this research question, Pearson bivariate product-moment coefficients of correlation, Cronbach's alpha, and General Linear Models regression analysis were used.

Correlations and Reliability Within Constructs

In order to ascertain the validity of the indicators within each construct, the items were analyzed using the Pearson correlations to determine if they provided internally consistent measurements and to determine the strength of the relationship among the scale items. The criterion established for correlation coefficients was .10 as weak, .30 as moderate, and .50 as strong, as recommended by Jacob Cohen, a notable statistician and psychologist (Meyers, Gamst, & Guarino, 2006). Cronbach's alpha, a "general formula for scale reliability based on internal consistency" (Hatcher, 1994, p. 132) with the reliability criterion of .70 or greater (Nunnally, 1978) was conducted to determine if the items within each scale provided an internally consistent measurement.

Barrier One – Money. For the barrier of *money* (indicators 7-11), the correlation coefficients ranged from .311 to .936. Based on Cohen's guidelines, the four indicators had a moderate to strong relationship with each other. The Cronbach's alpha was .83 for these indicators. Table 15 depicts the correlation matrix for the indicators related to money.

Barrier Two – Time. For the barrier of time (indicators 11-14), the correlation coefficients ranged from .193 to .721. Based on Cohen's guidelines, the four indicators

Table 15. Correlations for the Money Indicators.

		Indicator 7	Indicator 8	Indicator 9	Indicator 10
Indicator 7	Pearson Correlation	1	.351[*]	.311	.468[**]
	Sig. (2-tailed)		.031	.058	.003
	N	38	38	38	38
Indicator 8	Pearson Correlation	.351[*]	1	.936[**]	.649[**]
	Sig. (2-tailed)	.031		.000	.000
	N	38	39	39	38
Indicator 9	Pearson Correlation	.311	.936[**]	1	.672[**]
	Sig. (2-tailed)	.058	.000		.000
	N	38	39	39	38
Indicator 10	Pearson Correlation	.468[**]	.649[**]	.672[**]	1
	Sig. (2-tailed)	.003	.000	.000	
	N	38	38	38	38

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

had a weak to strong relationship with each other. The Cronbach's alpha was .74 for these indicators. Table 16 depicts the correlation matrix for the indicators related to time.

Barrier Three – Family Obligations. For the barrier of family obligations (indicators 15-18), the correlation coefficients ranged from .625 to .886. Based on Cohen's guidelines, the four indicators had a strong relationship with each other. The Cronbach's alpha was .92 for these indicators. Table 17 depicts the correlation matrix for the indicators related to family obligations.

Barrier Four – Navigating the University System. For the barrier of *navigating the university system* (indicators 19-22), the correlation coefficients ranged from .408 to .857. Based on Cohen's guidelines, the four indicators had a moderate to strong relationship with each other. The Cronbach's alpha was .86 for these indicators.

Table 16. Correlations for the Time Indicators.

		Indicator 11	Indicator 12	Indicator 13	Indicator 14
Indicator 11	Pearson Correlation	1	.193	.256	.252
	Sig. (2-tailed)		.240	.115	.122
	N	39	39	39	39
Indicator 12	Pearson Correlation	.193	1	.663**	.613**
	Sig. (2-tailed)	.240		.000	.000
	N	39	39	39	39
Indicator 13	Pearson Correlation	.256	.663**	1	.721**
	Sig. (2-tailed)	.115	.000		.000
	N	39	39	39	39
Indicator 14	Pearson Correlation	.252	.613**	.721**	1
	Sig. (2-tailed)	.122	.000	.000	
	N	39	39	39	39

** Correlation is significant at the 0.01 level (2-tailed).

Table 18 depicts the correlation matrix for the indicators related to navigating the university system.

Barrier Five – Academics. For the barrier of academics (indicators 23-26), the correlation coefficients ranged from .748 to .900. Based on Cohen's guidelines, the four indicators had a strong relationship with each other. The Cronbach's alpha was .95 for these indicators. Table 19 depicts the correlation matrix for the indicators related to academics.

Correlations Between Barrier Index and Demographic Variables

Once it was determined that the internal validity of the constructs was strong, a barrier index was calculated by using the following method: the Likert scores for each

Table 17. Correlations for the Family Obligations Indicators.

		Indicator 15	Indicator 16	Indicator 17	Indicator 18
Indicator 15	Pearson Correlation	1	.796**	.762**	.708**
	Sig. (2-tailed)		.000	.000	.000
	N	39	39	39	39
Indicator 16	Pearson Correlation	.796**	1	.714**	.625**
	Sig. (2-tailed)	.000		.000	.000
	N	39	39	39	39
Indicator 17	Pearson Correlation	.762**	.714**	1	.886**
	Sig. (2-tailed)	.000	.000		.000
	N	39	39	39	39
Indicator 18	Pearson Correlation	.708**	.625**	.886**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	39	39	39	39

** Correlation is significant at the 0.01 level (2-tailed).

indicator of the five constructs were summed to calculate composite construct-specific

barrier indices for each respondent. With that information, each individual's construct-

specific barrier indices were summed to calculate an overall composite barrier index.

Pearson bivariate product-moment coefficients of correlation were then calculated to

assess the relationship between the barrier index and the demographic variables.

A moderate negative correlation was found ($r(38) = -.342$, $p < .05$) between the

barrier index and paraeducators' interest in obtaining their special education teaching

license, indicating a significant linear relationship between the two variables. Those who

were not interested in attaining their teaching license tended to perceive the barriers as

less concerning.

Table 18. Correlations for the Navigating the University System Indicators.

		Indicator 19	Indicator 20	Indicator 21	Indicator 22
Indicator 19	Pearson Correlation	1	.857**	.678**	.470**
	Sig. (2-tailed)		.000	.000	.003
	N	38	38	38	38
Indicator 20	Pearson Correlation	.857**	1	.584**	.408*
	Sig. (2-tailed)	.000		.000	.011
	N	38	38	38	38
Indicator 21	Pearson Correlation	.678**	.584**	1	.575**
	Sig. (2-tailed)	.000	.000		.000
	N	38	38	39	39
Indicator 22	Pearson Correlation	.470**	.408*	.575**	1
	Sig. (2-tailed)	.003	.011	.000	
	N	38	38	39	39

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

A strong negative correlation was found ($r(37) = -.509$, $p < .001$) between the barrier index and paraeducators' interest in a cohort, indicating a significant linear relationship between the two variables. Those who stated they were not interested in completing the University courses with a cohort tended to perceive the barriers as less concerning.

No correlations could be computed for the demographic question, "I have access to a computer in my home" because 100% of the respondents reported having home computer access. Table 20 depicts the correlation matrix for the Barrier Index and each demographic variable.

Table 19. Correlations for the Academics Indicators.

		Indicator 23	Indicator 24	Indicator 25	Indicator 26
Indicator 23	Pearson Correlation	1	.900**	.769**	.748**
	Sig. (2-tailed)		.000	.000	.000
	N	39	39	39	39
Indicator 24	Pearson Correlation	.900**	1	.851**	.764*
	Sig. (2-tailed)	.000		.000	.000
	N	39	39	39	39
Indicator 25	Pearson Correlation	.769**	.851**	1	.880**
	Sig. (2-tailed)	.000	.000		.000
	N	39	39	39	39
Indicator 26	Pearson Correlation	.748**	.764**	.880**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	39	39	39	39

** Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

Regression analysis is used when one wants to examine whether a number of predictors "jointly associate with an outcome variable" (Gordon, 2010, p. 7). In this study, for this particular question, it was selected to assess if the demographic variables were predictors of the barrier index. A multivariate linear regression was calculated predicting the barrier index based on the demographic variables. The regression equation was not significant ($F(15,20) = 1.688$, $p > .05$) with an R^2 of .559. None of the demographic variables is a significant predictor of the barrier index.

Table 20. Correlations Between Barrier Index and Demographic Variables.

		Barrier Index
Interest Obtaining Teacher's License	Pearson Correlation	-.342*
	Sig. (2-tailed)	.031
	N	40
Currently Enrolled in Program	Pearson Correlation	.174
	Sig. (2-tailed)	.290
	N	39
Interested in Cohort	Pearson Correlation	-.509**
	Sig. (2-tailed)	.001
	N	39
Bachelor's Degree or Higher	Pearson Correlation	.060
	Sig. (2-tailed)	.713
	N	40
Home Computer	Pearson Correlation	***
	Sig. (2-tailed)	
	N	40
Home High-Speed Internet	Pearson Correlation	.224
	Sig. (2-tailed)	.165
	N	40
Gender	Pearson Correlation	.014
	Sig. (2-tailed)	.933
	N	40
Age	Pearson Correlation	-.302
	Sig. (2-tailed)	.058
	N	40
Number of Adults in Home	Pearson Correlation	.178
	Sig. (2-tailed)	.273
	N	40
Number of Dependents in Home	Pearson Correlation	.194
	Sig. (2-tailed)	.236
	N	39
Ethnicity	Pearson Correlation	.233
	Sig. (2-tailed)	.149
	N	40
Years as a Paraeducator	Pearson Correlation	-.309
	Sig. (2-tailed)	.052
	N	40
Disability Category	Pearson Correlation	-.109
	Sig. (2-tailed)	.509
	N	39
Residence Population	Pearson Correlation	.024
	Sig. (2-tailed)	.885
	N	39
Residence Region	Pearson Correlation	.248
	Sig. (2-tailed)	.128
	N	39
Employment Region	Pearson Correlation	.263
	Sig. (2-tailed)	.106
	N	39

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
***Cannot be computed because at least one of the variables is constant.

No regression could be computed for the demographic indicator, *I have access to a computer in my home* because 100% of the respondents reported having home computer access.

The standardized coefficient was found to be higher for the following six demographic variables than for the others, though not statistically significant: *I am interested in obtaining a special education teacher license* (-.283); *Age* (-.298); *Number of dependents in your home* (.222); *Ethnicity* (.247); *Population of Residence* (-.426); and *Region of Employment* (.453). Table 21 depicts the Regression data for the Barrier Index and each demographic variable.

Summary of Findings

The demographic data of the paraeducators who responded reported being mostly white (95%) women (90%) in their 40's (50%), who had worked with students with special needs for 0-5 years (43%), the most common disability area being Emotional/Behavioral Disorders (44%). They reported living in households with two adults (70%) and zero dependents (38%). Forty percent of the respondents reported having at least a bachelor's degree. Of the respondents, 93% indicated an interest in obtaining their special education teaching license; additionally, 85% were interested in doing so within a cohort. Every respondent (100%) reported having a computer in their home with high-speed Internet access.

In this study, *time* was found to be the largest barrier to obtaining a special education teaching license, as reported by 96% of the respondents. Eighty-nine percent found *money* to be an obstacle. Of those who responded, 72% reported *family obligations*

Table 21. Regression Data Between Barrier Index and Demographic Variables.

	Standardized Coefficient (Beta)
Interest Obtaining Special Education teaching license	-.283
Currently Enrolled in Teaching Preparation Program	.181
Interest in completing program with a Cohort	-.123
Bachelor's Degree or Higher	.115
High-Speed Internet Access at Home	.120
Gender	.088
Age	-.298
Number of Adults in your home	-.151
Number of Dependents in your home	.222
Ethnicity	.247
Years as a Special Education Paraeducator	.020
Disability Category	-.016
Population of Residence	-.426
Region of Residence	.040
Region of Employment	.453

as a barrier. Seventy-one percent perceived *navigating the university system* to be a barrier. Only 36% of the respondents indicated agreement that *academics* was a barrier to obtaining special education teacher licensure.

Prior to conducting this research study, the researcher hypothesized that the paraeducators with at least a bachelor's degree would perceive the barriers to be lower than those without a bachelor's degree. The results showed that there was no evidence of a difference between those paraeducators with at least a bachelor's degree (4.9, 5.3, 4.1, 3.6, and 2.7 composite means) and those without (5.1, 5.3, 4.1, 4.4, and 3.3 composite means), based on the composite means for the barriers of *money, time, family obligations navigating the university system, and academics*. There were, however, statistically-significant differences between the two groups in their responses for Indicator 19: *I need assistance enrolling in University*; Indicator 20: *Completing the required University admission paperwork is confusing*; and Indicator 23: *I need a review of basic academic subjects in order to be prepared for college-level instruction.* For all three indicators, those without a bachelor's degree perceived the barriers to be greater than those who had at least a bachelor's degree.

No correlations or regression could be computed for the demographic question, *I have access to a computer in my home* because 100% of the respondents reported having home computer access.

A multivariate linear regression was calculated predicting the barrier index based on the demographic variables. The regression equation was not significant ($F(15,20) =$ 1.688, $p > .05$) with an R^2 of .559. None of the demographic variables is a significant predictor of the barrier index.

The standardized coefficient was found to be higher for the following six demographic variables than for the others, though not statistically significant: *I am interested in obtaining a special education teacher license* (-.283); *Age* (-.298); *Number*

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of dependents in your home (.222); *Ethnicity* (.247); *Population of Residence* (-.426); and

Region of Employment (.453).

CHAPTER IV

DISCUSSION, RECOMMENDATIONS,
AND CONCLUSIONS

The purpose of this study was to assess Minnesota paraeducators' perceptions of the barriers to obtaining their special education teacher license. This chapter includes an overview of the study, including the purpose of the study, the research problem and questions, survey instrument, data analysis, and profile of respondents. A discussion of the findings and how the findings relate to literature follows the overview. Recommendations for local education agencies, state education agencies, and institutions of higher education, as well as for pareducators and researchers, are given. Finally, conclusions are presented.

Overview

One of the purposes of this study was to investigate Minnesota paraeducators' perceptions of the five identified barriers to obtaining their special education teacher license. A second purpose was to assess any difference in these factors between those who have already obtained at least a bachelor's degree and those who have not. The hypothesis was that paraeducators who have earned at least a bachelor's degree would perceive the barriers to be lower than those who have not obtained a degree. In addition, this study sought to determine if there were demographic variables that together influence the paraeducators' perceptions of the barriers. With the findings from this study, educational stakeholders in Minnesota can determine ways to help paraeducators

ameliorate these challenges, with the ultimate goal being to increase the number of licensed special education personnel in the state (Personnel Improvement Center [PIC], 2012).

Five barriers to teacher licensure were identified by paraeducators in a national study (Recruiting New Teachers [RNT], 2000). The five barriers: *money*, as it relates to cost of the program and to living expenses while a student; *time*, as it relates to a flexible schedule; *family obligations*, as it relates to having responsibility for others; *institutional*, as it relates to navigating the university system; and *academics,* as it relates to being prepared for college-level instruction. Results from a questionnaire disseminated to Minnesota paraeducators in 2013 found the same barriers, minus one. The fifth barrier, *academics*, was not identified by Minnesota paraeducators as a barrier, but included in this study, due to the national study and other literature (Abbate-Vaughn & Paugh, 2009; Bernal & Aragon, 2004; Genzuk & French, 2002; McGowan & Brandick, 1999; RNT, 2000; Wall, Davis, Crowley, & White, 2005; White, 2004).

All paraeducators who work with students with special needs in Minnesota public schools were sent an electronic questionnaire in April of 2013, to identify paraeducators who either were, or might be, interested in becoming licensed special educators. This questionnaire asked for demographic information, including home mailing address, with the intent of contacting those interested in becoming licensed special educators. Out of nearly 800 responses to the questionnaire, 444 indicated they were interested or may be interested, but needed more information. All of the paraeducators who answered either "yes" or "maybe" were given the opportunity to participate in this study.

In June 2014, a postcard was sent to the home mailing addresses of the 444 paraeducators who indicated an interest, with a survey Uniform Resource Locator (URL) printed on the postcard. The survey instrument collected demographic data and included 20 indicators related to the following seven research questions:

1. What are Minnesota paraeducators' perceptions of the *money* barrier, as it relates to the cost of the university program and living expenses while in school?

2. What are Minnesota paraeducators' perceptions of the *time* barrier, as it relates to a flexible schedule?

3. What are Minnesota paraeducators' perceptions of the *family obligations* barrier, as it relates to having responsibility for others?

4. What are Minnesota paraeducators' perceptions of the academic institution barrier, as it relates to *navigating the university system*?

5. What are Minnesota paraeducators' perceptions of the *academics* barrier, as it relates to being prepared for college-level instruction?

6. Are there perceptional differences between Minnesota paraeducators who have completed at least a bachelor's degree and those who have not?

7. Are there demographic variables that together influence the paraeducators' perceptions of the barriers?

Results were analyzed using descriptive and inferential statistics. Descriptive statistics were computed to determine frequencies, means, and standard deviations for responses to the survey questions. Cronbach's alpha was calculated to determine reliability of survey items within constructs and to measure internal consistency.

Parametric inferential procedures included Gosset's (Student's) independent samples *t* test, General Linear Models Analysis of Variance (ANOVA), Pearson bivariate product-moment coefficients of correlation, and General Linear Models regression analysis. This researcher chose to use the currently conventional probability level of .05.

The participants in this research study were predominantly white (95%) women (90%). One-half of the respondents reported being between the ages of 40-49. Of the respondents, 43% had worked with students with special needs for 0-5 years, the most common disability area being Emotional/Behavioral Disorders (44%). The responses indicated that 70% were living in households with two adults, and 38% reported having zero dependents. Ninety-three percent indicated an interest in obtaining their special education teaching license, with 85% interested in doing so within a cohort. Of the respondents, 100% of them reported having a computer in their home with high-speed Internet access.

Discussion

Perceptions of the Barriers

Money. The great majority of the respondents in this study considered *money* to be a major barrier to obtaining their special education teaching license, second only to *time*. This finding differs slightly from Haselkorn and Fideler (1996) whose study participants indicated the financial obstacle to be the most daunting for paraeducators, even more than the time barrier. Full-time, "first-time degree-seeking undergrads in the United States paid an average of $9000" for tuition/fees, books, and supplies at in-state, public universities during the 2013-14 academic year (Ginder, Kelly-Reid, & Mann, 2014, p. 5). Because adding housing, food, and other living expenses would easily double that

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cost, it is not surprising that most paraeducators in this current study revealed the financial cost of a degree to be a hardship for them.

Paraeducators are not well paid, typically earning a yearly starting salary of under $20,000 (National Education Association [NEA], n.d.). According to Bernal and Aragon (2004), paraeducators' wages are typically the lowest of all district employees, often just above minimum wage. As a result, they often have to depend on financial aid, which is not always easily available (Genzuk, 1997), or have to take out loans to pay for tuition and books (Eubanks, 2001; Gordon, 1995; Nicklos & Brown, 1989). These individuals do so with the hope of obtaining a higher-paying teaching job in the future, unfortunately starting that job with school loan debt. It is understandable that those who have financial concerns would be hesitant to take on more indebtedness.

Almost all of the respondents for this study reported needing their current salary for their family's expenses, so taking off time from work to attend classes or student teach is not an option for the majority. In an effort to try to solve this problem, educational stakeholders in North Carolina formed a consortium, consisting of 10 school districts, the North Carolina Department of Public Instruction (DPI), and local institutions of higher education (IHEs). They worked together to reduce the financial strain paraeducators face by partially defraying the cost of tuition and fully covering the cost of books. Several of the districts chose to provide benefits and pay stipends to compensate for the loss of salary to paraeducators while they student taught. Consortium IHEs also made accommodations for experienced paraeducators, such as "waiving an introductory course or two or reducing the required time for student teaching" (RNT, 2000, p. 198).

McGowan and Brandick (1999) told of a career ladder program that was developed in 1994 as a joint project of the Los Angeles Unified School District (LAUSD) and Service Employees International Union (Local 99), after paraeducators expressed an interest in obtaining their teaching license. After surveying the interests and needs of the paraeducators, it was determined that the majority wanted to become teachers, but faced the obstacles of money, time, family obligations, and passing teacher certification tests. One way the program alleviated the financial barrier was by providing "partial tuition reimbursement, so long as the participant received a grade of C or better in all courses leading to an education degree" (p. 10). The longer the student was in the program, the larger percentage of tuition reimbursement he/she received; thus, they had an incentive to complete the program. In exchange for the reimbursement, the paraeducator committed to teach "at least two years in the district once hired" (p. 10).

Time. Almost every respondent in this study perceived *time* to be an obstacle; in fact, it was considered to be the largest obstacle for them. They found it challenging to work full-time, juggle a social/family life, and dedicate time for class and schoolwork. The time barrier was not as significant to the survey respondents in Haselkorn and Fideler's study, who although indicated it was a barrier, perceived it to be less concerning than money, academics, and family obligations (1996). Studies by Abbate-Vauhn and Paugh (2009) and others stated that paraeducators struggled with balancing work, school, and family consequently had little time left over at the end of their day to devote to coursework (Brandick, 2001; McGowan & Brandick, 1999; RNT, 2000).

As previously stated, most paraeducators in this study indicated they would need to continue to work full time while earning a degree, so they acknowledged needing a

flexible course schedule. A similar finding was discovered by Gordon (1995), who recommended course schedules that accommodated adults who were going to college. These accommodated course schedules would include evening and weekend courses (Haselkorn & Fideler, 1996), so that paraeducators could continue to work.

Nearly all of the paraeducators indicated their agreement that university courses need to be offered online. This finding differed from that of Adams and Corbett (2010) who concurred that both traditional and non-traditional students preferred face-to-face classroom learning over online learning, and the second preference was a combination of both online and classroom based. The high number of respondents to this survey who preferred online classes might be lower if there were respondents without a home computer. As previously stated, every respondent disclosed having a home computer with high-speed Internet access. If there were paraeducators in Minnesota who did not complete the survey who do not have a home computer or Internet access, those paraeducators would likely perceive the time barrier to be more problematic, as they would need to secure a computer after work at their school, a nearby college, or the public library (Davis, Deil-Amen, Rios-Aguilar, & Gonzalez Canche, 2012).

In her study, Venegas (2005) found students of low-economic status were less likely to have access to the Internet than those with higher incomes. College-bound adults use the Internet to visit college websites, apply for college admission, seek financial aid and scholarships, and register for classes, thus not having this access proves to be another barrier. The author called for "collaborative efforts between school districts, colleges, and state, local, and federal college-related agencies" to pool their resources to assist those in need (p. 153).

Although the time barrier in this study focused on the logistics of when university courses are offered (i.e., after 3 PM, weekends, online), the time it takes to complete a degree is also an important factor that was not addressed in this survey. According to Eitel and Martin (2009), many students found it took longer to complete their degrees than they originally believed, particularly if required courses were not offered every semester or if they were not given credit for previous coursework (RNT, 2000). This speaks to the need for competent academic advising and articulation agreements between IHEs (Pickett, 2000).

An example of an initiative that was developed to alleviate this issue was the teacher education program for paraeducators implemented by the Navajo Nation in southwestern United States in 1992. One of the characteristics of this program addressed the barrier of the time commitment for teacher licensure that many paraeducators experience. In this program, participants were required to complete their bachelor's degree within three years by attending college part time in fall and spring (evening and weekend classes) and full time in the summer. Additionally, all credits from community colleges within the consortium transferred to four-year institutions (RNT, 2000; Rude & Gorman, 1996).

Family obligations. Most of the respondents in this study perceived *family obligations* to be a barrier, the majority of them being women. Genzuk and French (2002) contended that women typically shoulder family responsibilities. In a study by Abbate-Vaughn and Paugh (2009), "half of the research participants identified time management related to family responsibilities as being the greatest barrier to completing coursework"

(p. 18). While a considerable portion of the paraeducators in this survey indicated they had other adults living in their home, there were a few who revealed being the only adult in their home caring for dependents. In *Unmarried Parents in College*, the authors attested to single parents being "among the Americans least likely to attend college" (Goldrick-Rab & Sorensen, 2010, p. 180), due to familial responsibilities. Additionally, degree completion rates were lower for single parents than for other college students for various reasons, such as part-time enrollment, financial, and academic concerns. In their study, Eitel and Martin (2009) also found that single parents are typically enrolled in college part time, thereby extending the time of degree completion, which can lead to higher drop-out rates.

Goldrick-Rab and Sorensen (2010) addressed the positive and negative consequences of parents obtaining their degree. One of the benefits is that parents serve as role models to their own children, demonstrating the importance of education and the value of working toward a goal. Additionally, while in college, parents often learn skills, even unintentionally, that enable them to improve their parenting abilities. Ideally, the attainment of a degree boosts their earning potential (Pew Research, 2014), which benefits the family. Conversely, attending college reduces the amount of time parents can spend with their children. Also this endeavor often generates economic and emotional stressors, causing discord in the home. In an earlier study Carney-Crompton and Tan (2002) reported conclusions similar to Goldrick-Rab and Sorensen. They found that as roles, demands, and time conflicts increased for college students who are parents, so did higher stress, anxiety, and depression. They also found evidence to the contrary—that as

the number of roles increased, so did the opportunities to experience success, which lead to "an overall sense of personal well-being" (p. 141).

As noted by Genzuk and Baca (1998), paraeducators who receive support from their families are more likely to complete a career ladder program, leading to teacher licensure. An example of this is the Latino Teacher Project (LTP) founded by the Center for Multilingual, Multicultural Research at the University of Southern California (USC), with initial funds from the Ford Foundation. Their objective was to increase the number of teachers, particularly Latinos, by recruiting paraeducators and providing them support. The consortium involved a partnership among four universities, three school districts, the county office of education, and the labor unions representing paraeducators and teachers. Because working full time while attending college part time tends to create family tensions, the Latino Teacher Project initiated various social activities for the families of the participants. These events included hearing motivational speakers, attending mini-sessions on conflict, time, and stress management, and listening to presentations by former paraeducators who obtained their degrees. The activities were intended to "diminish the concerns of spouses and children and address other social pressures encountered by the paraeducators", such as guilt because normal home routines have changed (p. 80). Recipients of this support concluded it was not only effective at educating family members of the benefits of the career ladder program, but it also encouraged the paraeducators and bolstered their resolve (Genzuk & Baca, 1998).

Navigating the university system. The majority of the respondents in this study found *navigating the university system* to be challenging. Because paraeducators are often first-generation college students (Pickett & Gerlach, 2003), they typically need assistance

with completing admission paperwork, determining what courses to take, and enrolling in courses. Competent advising services are important to the success of every higher education student, but are particularly critical for non-traditional students, such as paraeducators, according to Hollis (2009). She posited that although misadvisement can have a negative impact on any student who enrolls in unnecessary or unsuitable courses, the "stakes are higher for non-traditional students who may be already wrestling with guilt, self-doubt, inadequacy, and financial concerns" (p. 34). Their climb up the career/academic ladder is often steeper than the traditional student who attends college right after high school (Hollis, 2009).

Blair (1999) discussed several necessary elements related to advising those in career ladder programs, one of them being an advisor who understands the requirements of graduation. She recollected instances when ill-advised students enrolled in courses not relevant to the completion of their degree, only to be told after the fact that it would take longer to complete the program. This speaks to the need for a "clearly-defined program of study" (p. 3), with only listing the courses that will lead to a teaching degree. Although undergraduate liberal arts programs often offer a wide range of coursework options, most paraeducators do not wish to take unnecessary electives. The third element Blair mentioned is "strong collaboration between faculty members from both undergraduate and graduate programs" (p. 3), since there will be students in both programs obtaining their teaching credentials. Lastly, she believed faculty at IHEs should spend time in the field, at school districts and in contact with other educational agencies, creating a linkage between organizations.

In addition to academic advising, the literature speaks to other support services that are necessary within the university system to aid paraeducators as new students. These services include assistance with financial aid, how/where to purchase textbooks, how/where to pay for tuition, where to park, how to set up/use their university email account, and how to navigate the university's web-based learning management system (Abbate-Vaughn & Paugh, 2009; Sandoval-Lucero & Chopra, 2010; Villegas & Davis, 2007). One of the support mechanisms provided by the aforementioned LAUSD/Local 99 career ladder program was articulation with IHEs to arrange for an on-campus faculty advisor who kept office hours specifically for participants (McGowan & Brandick, 1999). Due to their work schedules, paraeducators often found it difficult to meet with an advisor during their posted faculty office hours (RNT, 2000), so this was particularly helpful. In addition to course advisement, the faculty member provided encouragement and assisted students in solving administrative problems and financial aid issues.

Academics. When asked to list the barriers to teacher licensure in the 2013 questionnaire, Minnesota paraeducators did not indicate the area of *academics* to be a sizable obstacle in their pathway. Those who responded to this survey echoed that perception, with just over one-third of the respondents considering it a limitation. Most did not believe they needed a review of basic academic subjects or any academic tutoring. One possible explanation for this perception is that 40% of the respondents already had at least a bachelor's degree and 10% were currently enrolled in a teacher preparation program. These individuals were either taking courses or had taken college courses; they perceived themselves to have basic skills and potential success in higher education and did not feel the need for remediation.

This notion is not supported by the literature, as numerous studies speak to the need for academic support for paraeducators transitioning to teachers (Brandick, 2001; RNT, 2000; Reyes & McNabb, 1998; Wall et al., 2005). Many paraeducators have never taken a college course, and for others, it has been a number of years, so oftentimes these students feel anxious or uncertain about their ability to succeed at the post-secondary level. One example of assistance in this area relates to a career ladder program in Colorado which provided academic tutorials and developmental English and math classes to help participants improve academically (Bernal & Aragon, 2004). Research results from Haselkorn and Fideler (1996) found basic skills testing to be one of the more difficult barriers paraeducators face. Consequently, many of the programs in their study offered test preparation workshops and individual tutoring for those facing state or national exams.

To address the academic lags some paraeducators experience, the Pathways Program at Armstrong Atlantic State University (AASU) in collaboration with a local school district, offered various services to its participants. These included close monitoring of paraeducators' academic progress, tutorials and other academic supports for those experiencing difficulties in courses, and test-taking preparation for certification exams (Villegas & Davis, 2007, p. 142). This program was deemed highly successful, as several of its graduates went on to obtain their Master's, Education Specialist, and Doctoral degrees (Lau, Dandy, & Hoffman, 2007).

The effects of the *academics* barrier are greatly reduced when paraeducators have the opportunity to be a part of an organized cohort, because it offers an avenue for students to convene and learn from one another. A large majority of the respondents to

this survey indicated an interest in joining a cohort. Cohort members often share resources, form study groups, and keep each other accountable for one's academic success (Haskelkorn & Fideler, 1996; Sandoval-Lucero, 2006). Reyes (1998) confirmed that paraeducators in cohort programs "recognize their own and each other's knowledge" and learn from each other (p. 12). Whether it was checking one another's homework, carpooling to class, or working on a class project, being a part of a cohort was found to contribute to participants' persistence in college, according to Sandoval-Lucero and Chopra (2010).

Perceptional Degree Differences

Prior to conducting this study, this researcher hypothesized that paraeducators with at least a bachelor's degree would perceive the barriers to be less problematic than those without a degree. The findings from this study do not support this hypothesis. The results showed that there is no evidence of a difference between those paraeducators with at least a bachelor's degree and those without, based on the composite barriers means of *money, time, family obligations, navigating the university system,* and *academics*.

Little to no difference was found between the composite means of those with at least a bachelor's degree and those without, based on the composite barriers of *money, time,* and *family obligations*. One might presuppose that *money* would be less of a barrier for those with at least a bachelor's degree, due to the overwhelming evidence that states those graduates earn more (Pew Research, 2014; U.S. Census Bureau, 2011; U. S. Department of Education [ED], 2014). Goldrick-Rab and Sorensen (2010) contended that families headed by college-educated adults are more likely to be economically secure than those headed by adults who have not been to college. However, in this study, having

a degree did not seem to have a positive impact on the paraeducators' perceptions of their financial situations, as the overwhelming majority of all respondents revealed the financial cost of the degree would be a hardship for them.

As stated, the composite means of those with at least a bachelor's degree and those without were exactly the same, based on the barriers of *time* and *family obligations*. Neither group perceived those two barriers to be any more or less problematic than the other. The barrier of *time* can be examined in more than one way; for this study, the indicators were related to when courses were offered and the importance of a flexible class schedule. Had the barrier of *time* been examined as it relates to the amount of time it takes to complete the degree, the results might have been different, as those with at least a bachelor's degree could typically complete another bachelor's or a master's degree in a shorter amount of time, thus perceiving the barrier of *time* to be less problematic.

Regarding the *family obligations* barrier, the majority believed that balancing home, work, and university courses would be difficult. While there was variation in the family structure of the respondents, most reported living in a two-adult household, and almost two-thirds indicated having dependents. This study did not take into consideration the obligations the paraeducators had to family members who did not live in their home. With half of the respondents reporting being between the ages of 40-49, it is possible that there are paraeducators who are providing care for their parents or other elderly relatives outside of their own home (Lau et al., 2007). This presumption is supported by the National Alliance for Caregiving, which stated in a 2009 report that "approximately 50 million Americans provide care to an aging or sick parent, sibling, or other family member" (p. 4). The current study also did not define "dependents". If a paraeducator had

an adult living in their home who needed significant care, is that individual considered an adult or a dependent? This is unknown.

Because college graduates have already navigated the higher education system and performed at an acceptable level academically, one would tend to expect these individuals to have fewer concerns, particularly in these two areas: *navigating the university system* and *academics.* The results of this study confirm this, but not to a statistically-significant degree, and only as related to the following three individual indicators (19, 20, and 23), not the means of the entire four-indicator construct.

Those without a degree did perceive the barrier of *navigating the university system* to be greater than those with at least a bachelor's degree. Indicator 19: *I need assistance enrolling in University courses,* and Indicator 20: *Completing the required University admission paperwork is confusing*, contributed to this construct composite mean. A statistically-significant difference between those with at least a bachelor's degree and those without was found for these two indicators, but not for the entire four-indicator construct of *navigating the university system* (see Figure 1). This suggests that those who do not have at least a bachelor's degree believe they need assistance in the beginning stages of their journey with completing the required university admission paperwork and enrolling in courses. That assumption mirrors Haselkorn and Fideler (1996) and Bernal and Aragon (2004) who determined that paraeducators need the most assistance at the onset of their educational experience, since many are first-generation college students. Once these students experience success, even for one semester, they will likely exhibit more confidence and self-esteem (Hollis, 2009).

A similar finding was revealed between the two means for the *academics* barrier. The mean composite score for those with at least a bachelor's degree was lower than those without a degree, meaning those without a degree did perceive that barrier to be greater. Just one indicator in that four-indicator construct of *academics*, was found to have a statistically-significant difference--Indicator 23: *I need a review of basic academic subjects in order to be prepared for college-level instruction*. Interestingly, much of the literature on career ladder programs recommends academic support, such as tutorials, for paraeducators (Bernal & Aragon, 2004; RNT, 2000; Sandoval-Lucero, 2006; Villegas & Clewell, 1998). The survey did not ask paraeducators if they had an Associate of Arts (AA) degree or if they had taken any college credits without completing a degree. In addition, they were not asked how long it had been since their last college course. The answers to those questions would shed light on the possible reasons for the low mean composite score for those without a bachelor's degree.

As previously stated, one would expect a college graduate to find the barriers of *navigating the university system* and *academics* to be less concerning. They have already been through the processes of completing required admission paperwork and enrolling in university courses. In addition, in order to graduate with a degree, they would have had to have received acceptable grades in their previous coursework, meaning they are less likely to need a review of basic academic subjects or tutoring.

Perceptions of Barriers Based on Demographics

The findings were assessed to determine if the demographic variables in this survey together were predictors of the barrier index. As recommended by Cohen, the criteria established for the correlation coefficients were .10 as weak, .30 as moderate,

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and .50 as strong (Meyers, Gamst, & Guarino, 2006). The four *money* indicators had a moderate to strong relationship with each other, as did the four indicators related to *navigating the university system*. The four indicators related to *family obligations* had a strong relationship with each other, as did the four indicators related to *academics*. The four *time* indicators had a weak to strong relationship with each other. The indicator within the *time* construct that had the weakest relationship with the others was Indicator 11: *University courses for this degree need to be offered after 3 PM.* This is a somewhat unexpected correlation, as the vast majority of the respondents indicated agreement with that statement, and results for indicators 12-14 were each also very high.

A moderate negative correlation was found between the barrier index and paraeducators' interest in obtaining their special education teaching license, indicating a significant linear relationship between the two variables, meaning those who were not interested in attaining their teaching license tended to perceive the barriers as less concerning. This was not surprising, as those who do have an interest in this endeavor have a real understanding of the barriers. They are acutely aware of the obstacles between them and their goal and perceive them to be substantial impediments. Conversely, those who are not interested in obtaining their teaching license do not perceive the barriers to be problematic because they have no investment in the undertaking. Based on extensive review of the literature, there are no current studies to either support or contradict this finding.

A strong negative correlation was found between the barrier index and paraeducators' interest in a cohort, indicating a significant linear relationship between the two variables. Those who stated they were not interested in completing the university

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courses with a cohort tended to perceive the barriers as less concerning. At first glance, this is an unexpected finding, as one would predict completing the teacher education program with a cohort would be desirable. The literature certainly speaks to this (Flores, Clark, Clayes, & Villarreal, 2007; Sandervol-Lucero & Chopra, 2010). For example, Bernal and Aragon (2004) found cohort structures promote "academic achievement, higher self-esteem, motivation to learn, and the development of social and collaborative skills" (p.208). Studies show that higher education students who are part of learning communities are more likely to persist in college (Haselkorn & Fideler, 1996; Kanter, 2010). These networks of support allow students to develop academic and social relationships with others, giving them resources to navigate the challenges of obtaining a college degree (Lau et al., 2007). Upon further analysis, however, it was determined that the paraeducators who indicated they were not interested in going through the teacher preparation program with a cohort were the same individuals who indicated they were not interested in becoming licensed teachers at all. This may indicate that the there was no aversion to cohorts, per se, but rather a lack of interest in obtaining a teacher's license, therefore no interest in joining a cohort. What is known is that the majority of the respondents indicated an interest in taking university courses within a cohort; this supports the related literature, which touts the many benefits to adult learners (Lau et al, 2007; Nunez & Fernandez, 2006; Valenciana, Morin, & Morales, 2005).

Although none of the demographic variables were found to be a significant predictor of the barrier index, the standardized coefficient was found to be higher for the following six demographic variables than for the others, though not statistically significant: *I am interested in obtaining a special education teacher license*; *Age*; *Number*

of dependents in your home; *Ethnicity*; *Population of Residence*; and *Region of*

Employment. This means that these six variables make more of a contribution when

predicting the barrier index. In Figure 15, the bubbles above the barrier index indicate a

positive relationship with the barrier index, and those below a negative one. The bubbles
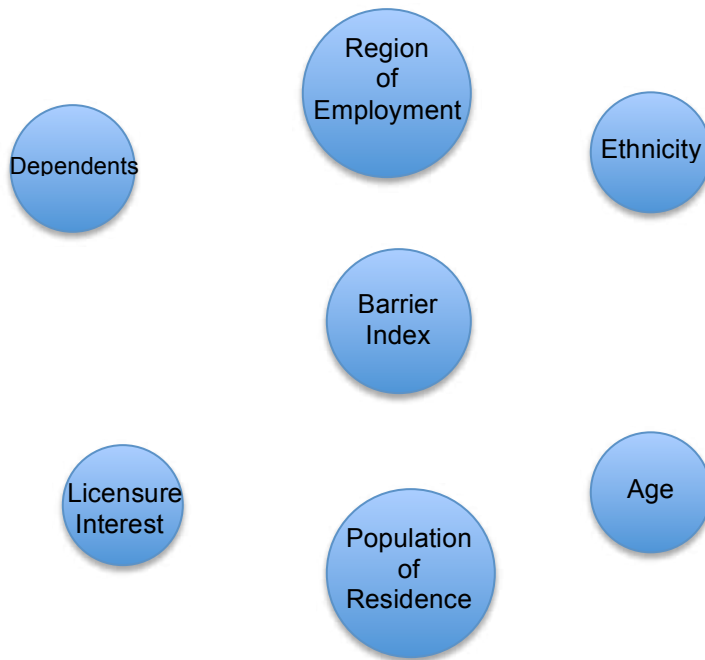
are sized in proportion to their predictive value.

Figure 15. Demographic variables as predictors of the barrier index.

    Some of these findings were predictable. Those paraeducators who were not

interested in obtaining their special education teacher license did not perceive the barriers

to be as problematic as those who were interested. As previously stated, in all likelihood,

these individuals simply were not concerned about the barriers because they were not

interested in overcoming those obstacles in order to become a teacher. They did not

desire the goal, so they did not have to consider the hindrances to that goal.

Additionally, these findings indicated that the older the paraeducators were, the less challenged they were by the barriers. One possible explanation for this result is that a large number of the respondents who already had at least a bachelor's degree reported being over 40 years old. They have already navigated the university system and proven they can be successful academically. It is possible the paraeducators in this current study have had many professional and personal life experiences that would cause them to face the challenge of obtaining their teaching license with positivity. Similarly, in a study by Carney-Crompton and Tan (2002), the authors found that the age of nontraditional students may contribute to their sense of confidence and self-esteem. Generally speaking, the older the student, the "better her psychological and academic status" (p. 148). It should be noted that the mean age for the students in Carney-Compton and Tan's study was "40.29 years" (p. 148) and half of the respondents in this current study reported being in their 40's.

Results indicated that the paraeducators who had a higher number of dependents in their home also perceived the barriers to be more concerning. This is similar to findings by Abbate-Vaughn and Paugh (2009) and the national study (RNT, 2000) which concluded that those with more dependents typically have more family obligations, more expenses, and less free time, as these barriers are related to one another. The findings in this current study validated the work by Genzuk and Baca (1998) and Bernal and Aragon (2004) who suggested these barriers complement and interact with one another. The fact that these three barriers are associated in this way and are connected to the number of dependents would bring about a slightly higher coefficient.

One unforeseen finding was related to the Ethnicity demographic variable. According to the results, paraeducators who self-identified as any ethnicity other than White perceived the barriers to be more problematic. Of the respondents, almost all self-identified as White. The other ethnicities revealed were African-American and Asian. A recent study spoke to the ethnic differences in first-year college students in relation to goal orientation, self-efficacy, and motivation (D'Lima, Winsler, & Kitsantas, 2014). According to their findings, African-American and Caucasian students were more academically self-efficacious than Asian American students. African-American and Asian American students were initially more extrinsically motivated than Caucasian students; however, by the end of the semester, all ethnic groups were similar on extrinsic motivation. Caucasians and minority students shared similar levels of intrinsic motivation. Brock (2010) agreed that persistence and degree completion rates vary significantly by race, and found that Asian students have the highest persistence and completion rates of any racial group.

Steinberg, Dornbusch, and Brown (1992) posited that African-American students do experience "isolation and identity issues from the lack of peer support" toward positive academic success (p. 728); as a result, they found more obstacles on the road to academic achievement. There are studies that indicate Asian American students display higher levels of fear of academic failure (Zusho, Pintrich, & Cortina, 2005), therefore report lower levels of self-efficacy than other minorities (Eaton & Dembo, 1997). These studies could explain, at least in part, the reason for their perceptions of the barriers; however, all of the authors recommend more research be conducted on the phenomenon of ethnic differences.

Findings from this study signified that the higher the population of the paraeducators' residence, the less concerning the barriers were to them. One possible explanation for these results is the number of resources available in larger cities. This survey did not ask about the location of the nearest institution of higher education to the respondents' residences; however, this could certainly be a factor to those who reside in rural areas, with no college or university nearby. Most of the respondents reported living in a community with a population less than 10,000. All of the four-year institutions of higher education in Minnesota are located in cities larger than 10,000 occupants (Minnesota State Colleges and Universities, n.d.; Minnesota State Demographic Center, 2014). In order to take class at a four-year college or university, paraeducators would have to travel, which may be a reason why almost all of the respondents expressed a desire for online courses. For the large majority who stated they need assistance from an academic advisor, it may be necessary for that communication to come in the form of emails, phone calls, or video chatting (Carter, 2007), due to the geographical distance between the paraeducators' homes and the university.

The state of Minnesota is divided into 11 educational regions (Minnesota Department of Education, n.d.). The paraeducators' responses to Region of Employment indicated those working in Regions 9, 10, or 11, in the south-central/southeastern part of the State (see Appendix C), tended to perceive the barriers to be more concerning. The reason for this is unknown. One interesting note is that half of the paraeducators who indicated being currently enrolled in a teacher education program work in these regions. Being that these paraeducators are already on the path to teacher licensure, they might be facing the barriers in a palpable way.

No correlation or regression analyses could be computed for the demographic question, *I have access to a computer in my home,* because every one of the respondents reported having a home computer with high-speed Internet access. What is unknown is how many Minnesota paraeducators do not have a home computer with Internet access, because no one answered the question that way. It is not possible to determine through this study how many paraeducators, if any, relied on public library computers or school computers during the academic year. Had the survey been sent to paraeducators during the school year when all paraeducators are likely to have access to school computers, would the number of respondents been greater? Would there have been respondents who revealed not having a home computer or Internet access? These are unknowns. When interviewing paraeducators for their study, Wall et al. found that while "most had access to computers at work, fewer than half (46%) had a computer at home", and most respondents had no Internet access at home (2005, p. 188).

If there are any Minnesota paraeducators who do not have a home computer with Internet access, these individuals would have a more challenging time obtaining their teaching degree, even if all of their classes met in person, versus online. University coursework requires papers, essays and other assignments that necessitate a word processing program. Most, if not all courses require students to conduct research of some kind, which demands the Internet (Hensen, 2013). In addition, university personnel, including instructors, use e-mail to communicate with students (Davis et al., 2012). While it is possible for an individual without a home computer to use public computers, either at the local library or the college campus, it is certainly more effortful.

Limitations of the Study

A limitation of this study was the time of the year and method of obtaining data from the paraeducators (Benge, Onwuegbuzie, & Robbins, 2012; Fowler, 2009). The survey was disseminated in the summer, when they were away from school, and required the paraeducators to have computer/internet access, which some may not have had in their homes.

Another limitation was that it assumed that the paraeducators would give attention to the postcard they received in the mail, secure a computer, and type in the 52-character link to the survey. Had the researcher had the paraeducators' school email addresses, a live link to the survey could have been sent to them electronically, and the return rate may have been significantly higher (Fowler, 2009). While the sample used was small, it is assumed to be a fair sample of the population (Fowler, 2009).

Recommendations

First and foremost, this researcher recommends the implementation of a paraeducator career ladder program in Minnesota. Although some effort has been made in a handful of school districts within the state, paraeducators face real and significant obstacles when pursuing their special education licensure. In order for this program to be effective, the combined efforts of local education agencies (LEAs), state education agencies (SEAs), and institutions of higher education (IHEs) would be required; therefore, the following are recommendations by this researcher for each of these entities. By working collaboratively, these organizations have the potential to reduce the impact of the barriers paraeducators experience while on the pathway to teacher licensure (Bernal & Aragon, 2004; French, 2003).

Recommendations for Local Education Agencies (LEAs)

One recommendation for local school districts is to seek out state and federal funds that may/may not be required to be matched by the District (NEA, n.d.; RNT, 2000). Depending on the grant requirements, these funds could be used to pay for paraeducators' tuition/fees, books, transportation expenses to attend college classes, and substitutes for paraeducators who need to miss work while pursuing their degree (RNT, 2000; White, 2004). Several districts have maintained paraeducators' salaries and benefits during their student teaching/practicum (Clewell & Villegas, 2001; Haselkorn & Fideler, 1996; Lau et al., 2007; McGowan & Brandick, 1999), or allowed them to stretch their student teaching experience over a longer period of time, so paraeducators could continue to work part time (Villegas & Clewell, 1998).

To alleviate the barriers of both money and time, local districts should afford paraeducators flexibility in their work schedules so they can fulfill degree requirements without having to resign from their position. This could include job sharing or allowing sabbatical leaves for paraeducators while they student teach (McGowan & Brandick, 1999; RNT, 2000), Villegas and Clewell (1998) gave an example of a school district which allowed paraeducators to take professional leave with pay every Friday to attend classes at the university. Students from the teacher education program at that university substituted for the paraeducators on those days, as part of their practicum requirements. This arrangement requires a substantial collaborative effort between the LEA and the IHE.

To lessen the stress of caring for one's family, LEAs should provide childcare in the evenings, so paraeducators can attend classes and/or complete assignments (RNT, 2000). High school students, as part of a class or volunteer group, could provide this

service. Local schools should also open their doors for events geared toward paraeducators' families or for cohort meetings, both of which have been shown to reduce the anxiety these individuals experience (Sadoval-Lucero & Chopra, 2010).

Finally, LEAs can reduce the effects of the academic barrier by assigning veteran special education teachers to mentor paraeducators, thereby offering strategies, suggestions, and examples for assignments and projects. Another effective strategy was paying former paraeducators who transitioned to teachers a stipend to provide test preparation services to paraeducators (RNT, 2000). In addition to offering the aforementioned camaraderie, cohorts of paraeducators also foster cooperative study groups, allowing paraeducators to work on assignments together and provide mutual academic support (RNT, 2000).

Recommendations for State Education Agencies (SEAs)

The most important recommendation from this researcher for SEAs is to begin the process of forming career ladder programs for paraeducators in the State. One of the roles of SEAs is to be an intercessor among LEAs, IHEs, and federal agencies, and within this assignment, SEAs are in a unique position to help design and implement career ladder programs (RNT, 2000). *A Guide to Developing Paraeducator-to-Teacher Programs* gave a checklist to aide in the development of such programs (RNT, 2000).

One of the first recommendations was to identify teacher shortage areas and "determine paraeducators' interest in becoming licensed" teachers, both of which have been completed in Minnesota (p. 31). Next, SEA personnel should meet with LEA administrators and teacher education faculty from IHEs to assist in the formation of partnerships between these entities. Together this group should work to identify other

potential supporters and partners, such as local teacher's union representatives, school board members, as well as individuals from foundations and corporations. This team should then "design a program", considering length and content, that attempts to alleviate some of the obstacles paraeducators face when obtaining their teaching license (p. 31).

To help reduce the effects of the financial barrier, this researcher recommends SEAs collaborate with federal agencies to bring about loan forgiveness programs for teachers who serve at least four years in high-needs areas. McGowan and Brandick (1999) and Villegas and Clewell (1998) wrote about this initiative, and Darling-Hammond and Sykes (2003) echoed their recommendations. SEAs have also been instrumental in securing grant funds from the Office of Special Education Programs at the U. S. Department of Education (Epanchin & Wooley-Brown, 1993; White; 2004) and the Office of Special Education and Rehabilitative Services (French, 2003). In addition, some states have used state lottery monies or state aid vouchers to fund stipends for paraeducators' childcare and transportation costs (RNT, 2000; Wall et al., 2005).

The numerous benefits to cohorts have been discussed in this study; however, these learning communities require a collaborative effort often initiated by SEAs (RNT, 2000). These cohorts have the potential to mitigate the effects of all four of the identified barriers of *time, family obligations, navigating the university system*, and *academics*. Typically, cohort members take university courses together in the evenings and on weekends (Kanter, 2010), which supports the needs of the respondents in this current study who stated they needed a flexible course schedule due to their time constraints. Paraeducators find cohorts to be a place where they can develop supportive relationships, often meeting together with their respective families for activities and social support

(Bernal & Aragon, 2004; Haselkorn & Fideler, 1996). Nunez and Fernandez (2006) found that paraeducators benefitted from the networking provided by cohorts, as these students navigated the challenges of the higher education institution. Finally, research shows that the cohort structure "promotes academic achievement, higher self-esteem, motivation to learn, and the development of social and collaborative skills" (Genzuk & Baca, 1998, p. 83).

After the program is developed, the SEA should help "secure funding, plan for follow-up support, and incorporate plans for program evaluation" (RNT, 2000, p. 31). This will require ongoing effort, as the supply of funding fluctuates, but is necessary to sustain these programs over time. As programs are evaluated, they should be altered to better fit the needs of the students in that region of the state. Finally, SEAs should work collaboratively with LEAs and IHEs to collect data on the number of special education teachers who were once paraeducators, as a way to establish empirical evidence of this transition and enable these pathways to be studied further.

In addition to facilitating the formation of career ladder programs, SEAs should work collaboratively with the Board of Teaching and IHEs to develop alternative teacher licensure routes for those who already have a bachelor's degree (Rosenberg, Boyer, Sindelar, & Misra, 2007; Villegas & Davis, 2007). Local school districts, particularly those with severe teacher shortages, require the support from SEAs for high-quality, alternate-route teacher preparation programs (Allen, 2003). Villegas and Clewell (1998) cited examples where agreements were developed between SEAs and LEAs which allowed paraeducators to embed the student teaching requirements into their existing job,

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thereby reducing the length of time in the program, and increasing the number of licensed personnel.

Recommendations for Institutions of Higher Education (IHEs)

This researcher recommends IHEs more widely publicize the availability of tuition waivers, scholarships, and endowments, for which deserving paraeducators can then apply. Many students are not aware of the possibility of these funds (Genzuk & Baca, 1998). Another way IHEs can and should lessen the financial cost is to form articulation agreements between 2- and 4-year IHEs (Pickett, 2000). These agreements allow credits to transfer between IHEs, which then reduces the likelihood that paraeducators will have to re-take similar courses, and thus incur more cost, if they move from one IHE to another. This study did not ask respondents if they had Associate of Arts (AA) degrees; however, many paraeducators who have taken college courses have done so at community colleges (Villegas & Davis, 2007) and would need to transfer to a four-year institution in order to obtain their bachelor's degree.

One action IHEs should take to reduce the barrier of time is to increase the number of classes provided online, in the evenings, or on weekends, so paraeducators can continue to work (Bernal & Aragon, 2004; Villegas & Clewell, 1998). Malian (2011) discussed innovative teacher education programs which allow paraeducators to demonstrate skills within their school district, allowing them to finish their degree more quickly. IHEs in several career ladder programs have considered paraeducators' prior experience, thereby reducing the required number of weeks of student teaching (RNT, 2000). In addition, they have allowed paraeducators to student teaching during the summer, when they are not working (RNT, 2000).

In several career ladder programs, professors and advisors from IHEs traveled to local school districts or some other convenient community location for classes or advisement, thereby affording paraeducators less travel time and more time with their families (RNT, 2000; Villegas & Clewell, 1998).

Institutions of Higher Education have the ability to lessen the institutional barrier by assigning specific academic advisors for career ladder participants (McGowan & Brandick, 1999; RNT, 2000). In addition to being knowledgeable about the application and registering process, they would also be authorized to modify certain degree requirements, based on paraeducators' previous experiences and transcripts, when applicable (RNT, 2000). A clearly defined program of study must be developed, so paraeducators know exactly what courses they need to take (RNT, 2000). As noted by Wall et al. (2005), offering office hours for advising in the evenings or on weekends was found to be helpful.

There are several recommendations to IHEs in regards to assisting paraeducators overcome the barrier of academics. Doctoral students could provide study materials, test-taking strategies, and teacher certification test preparation to paraeducators (McGowan & Brandick, 1999; RNT, 2000). Wall et al. (2005) noted the benefits of induction courses that teach academic competencies, writing skills, and basic computer skills. Additionally, many universities offer counseling assistance with time management and study skills (Villegas & Davis, 2007). Giancola, Munz, and Trares (2008) stressed the importance of faculty understanding the learning needs of adult students, as they differ from traditional students, due to their perceived lack of skills and time. Faculty can increase their understanding of these learners' needs by evaluating their academic preparedness early

on and by familiarizing themselves with andragogy techniques found in adult student literature (Giancola et al., 2008).

Undoubtedly, these career ladder programs are both resource-and labor-intensive (RNT, 2000). Lau et al. (2007) spoke to the need for collaborative relationships between several agencies and organizations who are committed to providing resources and encouragement. Without these supports, advancing to a teaching career would not be possible for many paraeducators (RNT, 2000). Those involved in developing and implementing them must be willing to think differently, unconventionally, and in creative ways.

Recommendations for Paraeducators

For those paraeducators who have considered obtaining their special education teaching license, this researcher recommends seeking advice from a trusted special education teacher. Although paraeducators often have extensive classroom experience and have an understanding of the demands that come with working with students with special needs, they do not see all of the teachers' responsibilities that are dealt with after school, in the evenings, or on weekends (Brandick, 2001). The work demands of special educators necessitate "additional record keeping, specialized behavior management skills, as well as thorough knowledge of content areas" (Lee, Patterson, & Vega, 2011, p. 64). Some paraeducators might not be aware of the federal and state mandates that must be followed, as well as the paperwork required to document compliance (Minnesota Department of Education, 2012). It would be wise for a paraeducator to seek an honest appraisal of the job before making the commitment to pursue a teaching license.

After determining an interest, a recommended strategy for paraeducators would be to meet with those who can help, starting with their special education director or principal. These administrators realize the challenge of finding competent, licensed special education personnel and are often interested in assisting someone in this endeavor (French, 2003; Growing Gap, 2007). An informal discussion could turn into a collaboration that results in the formation of a career ladder program (McGowan & Brandick, 1999). It would also be wise to communicate with one's bargaining unit, as many career ladder programs specify professional development opportunities in their contracts (RNT, 2000). Additionally, the paraeducator should contact their state education agency and ask about programs and incentives for those who wish to obtain their teaching license.

This researcher recommends enrolling in an introductory education course at a nearby college or university, either on campus or online. This is a relatively low-risk way to become familiar with navigating the higher education system and testing one's academic ability (Villegas & Davis, 2007). Successfully completing the course would also likely boost one's self-efficacy, according to Quimby and O'Brien (2004), and help gauge the resources needed to pursue a degree. Furthermore, it would be especially helpful for paraeducators to attend an orientation session geared toward non-traditional students at a college or university (Giancola et al., 2008). Becoming more familiar with the inner workings of the IHE, as well as the resources available, would likely ease the transition from paraeducator to paraeducator-student.

Finally, paraeducators should believe in their abilities, which are numerous. They typically live in and have a close connection to the community where they work, and

share a common background with the students (Eubanks, 2001; Rueda & Monzo, 2000), consequently relating well to them (Genzuk, 1997; Villegas & Clewell, 1998). McGowan and Brandick (1999) laud paraeducators' advantage of working in classrooms and thus a chance to develop good teaching skills before becoming a teacher. Paraeducators have a proven performance, and studies show they generally stay on the job longer after licensure (Clewell & Villegas, 2001; White, 2004). According to Brandick (2001, p. 34), most paraeducators approach this endeavor with a "can do attitude." This belief bodes well for our future special education teachers.

Recommendations for Researchers

This study should be replicated, with changes made to the method and/or timing of data collection. If using an electronic survey similar to the one used in this study, this researcher recommends disseminating it during the academic school year via email. The researcher could send an invitation email to school administrators, asking them to forward the email, containing a survey Uniform Resource Locator (URL), to the paraeducators in their buildings. The paraeducators would not have to type in a web address in order to access the survey, and the email would come from their school administrator, so they would typically read it (Dillman, 2007).

Another way to increase the number of survey respondents would be to administer the instrument in person to an assembly of paraeducators. According to Fowler, "Personal contact is significantly more effective than a letter" (2009, p. 58). Typically, when a group of individuals who are gathered together are asked to complete a survey, the "response rate is near 100%" (Fowler, 2009, p. 75). The researcher could distribute a

survey at a state paraeducator conference or training and have the ability to analyze the data almost immediately.

Because this study focused on the *time* barrier only as it relates to a flexible college course schedule (i.e., after 3 PM, weekends, online), additional studies should be conducted which would examine the *time* barrier as it relates to degree/certification completion. Paraeducators should be asked if they have an Associate of Arts degree and the number of college credits, if any, to better determine the length of time it would take them to obtain a teaching license. Those who have a bachelor's degree should be asked their field of study, as those with education degrees could typically obtain their special education licensure in a shorter amount of time, thus reducing the effects of this barrier.

Findings from this study support the need for further examination into the perceptions of minority respondents. While there is research that lends insight into the impressions expressed by different ethnic groups (Eaton & Dembo, 1997; Steinberg, Dornbusch, and Brown, 1992; Zusho, Pintrich, & Cortina, 2005), the sample in this study did not provide a large number of respondents from any ethnic minority. Additional studies using larger sample sizes would likely lead to more cultural and ethnic diversity among the respondents, thus providing greater understanding (Bates, Burbank, & Schrum, 2009). One recommendation would include inviting stakeholders, including paraeducators, to revise an existing survey instrument and then disseminate it widely to "elicit a strong paraeducator voice" (Fisher & Pleasants, 2012, p. 296).

Because this study was not able to determine the number of paraeducators in Minnesota who do not have a computer or Internet access in their home, this is an area that warrants further investigation. In their study, Wall et al. (2005) found that while

"most paraeducators had access to computers at work, less than half (46%) had a computer at home", and most paraeducators had no Internet access at home (p. 188). If there are Minnesota paraeducators who do not have access to a computer or Internet at home, they will likely experience another obstacle that must be overcome, as higher education coursework calls for the use of technology (Davis et al., 2012). This question would logically be answered more easily on a survey distributed in person.

Additionally, this investigation did not take into consideration the responsibilities paraeducators had to family members outside of the home. Because many paraeducators care for others who do not live with them (Lau et al., 2007), there is a need to examine this more thoroughly in subsequent studies. Furthermore, the survey used in this study did not differentiate between "dependent" and "adult," so if a paraeducator had an adult living in his/her home who needed significant care, it is not known whether that individual was reported as an adult or a dependent. The answers to these questions, as well as the ages of the dependents, would assist those who were attempting to assuage the barrier of family obligations.

It is important not only to investigate ways to alleviate the shortage of special educators, but also the teacher shortages that exist in other areas, as well. According to several researchers (Cortez, 2001; Lau et al., 2007; Sandoval-Lucero, 2006; Villegas & Davis, 2007), there is a significant need for teachers of English language learners (ELL). The overwhelming majority of teacher education programs do not adequately prepare future educators to "work responsively with students who do not conform to White, middle class norms" (Villegas & Clewell, 1998, p. 122). Although Rueda and Monzo's (2000) study demonstrated a need for training paraeducators for careers as ELL teachers,

more research needs to be conducted regarding the obstacles that impact the success of those individuals who aspire to become ELL teachers (Bernal & Aragon, 2004).

Finally, it is hoped that this study will prompt other researchers to investigate paraeducator-to-teacher career ladder programs in different states, with the intent of replicating successful pathways (Liston, Nevin, & Malian, 2009; RNT, 2000; Wallace, 2003). Because this concept of recruiting and assisting paraeducators has been practiced intermittently within the educational field since the 1960's (RNT, 2000), stakeholders have a great deal of research from which to surmise what has been successful. Much can be learned from carefully studying others' program components and their results (McLeskey & Billingsley, 2008).

Conclusions

Based on the findings from this study, two broad-based conclusions are made. First, paraeducators in Minnesota are a strong potential source of future special education teachers. This conclusion is based on the large number of respondents to this survey who indicated an interest in obtaining their teaching license. There are clearly paraeducators in Minnesota who aspire to become special education teachers. Although the sample size in this study was not large, almost every respondent indicated an interest in pursuing his/her special education teaching license. Couple that interest with the number of years of on-the-job experience these individuals possess, and their potential becomes even stronger. Far too many special education teachers enter the profession only to leave after a few short years, due to the challenges of working in this field. Paraeducators who decide to obtain their teaching license typically know what the job entails. They often work in

difficult and demanding environments, yet desire to stay in this vocation, presumably because they believe they can make a difference in the lives of their students.

The second conclusion is that paraeducators encounter several significant barriers while on their pathway to obtaining their special education teaching license. Not one paraeducator indicated this pathway would be impediment-free. The life experiences of these individuals vary, as do their ages, family structures, socioeconomic statuses and levels of education. The journey to a higher education degree is seldom without challenges, and the paraeducators in this study will undoubtedly need to overcome considerable obstacles while on this road, some greater than others.

APPENDICES

This survey is designed to help the Regional Low Incidence Projects and the Minnesota Department of Education to develop resources and strategies to help paraprofessionals who have an interest in finding pathways to teacher licensure. The information we gather in this survey will be used to determine interest in your becoming a licensed special education teacher, identify strategies that you think will be helpful to you, and help us at the Department find ways to make this work effective and efficient. Your information will not be shared with others, and any information you give us will be handled confidentiality. If you have questions, please contact Joan Breslin Larson, joan.breslin-larson@state.mn.us

1. What is your first and last name?

2. Please share a home mailing address.

3. What is your gender?

⊙ Female

⊙ M a l e

4. What is your race/ethnicity? Please choose one or more.

☐ White ☐

☐ African-American

☐ Black

☐ Latino

☐ Asian

☐ Native Hawaiian or other Pacific Islander

☐ American Indian or Alaska Native

☐ Other☐

5. What language do you mainly use at home?

⊙ English

⊙ American sign language or another manual communication

⊙ Spanish

○ Chinese

○ Russian

○ Vietnamese ☐

Other (please specify)

6. How many years have you been a paraprofessional?

○ 0 -5 year

○ 6-10years

○ 10 - 15 years

○ 15 - 20 years

○ More than 20 years

7. Do you have expertise, interest or experience in a specific special education category?

○ Yes

○ No

8. In which area do you have interest/expertise/experience?

☐ developmental delay (early childhood)

☐ blind/visually impaired

☐ autism spectrum disorder

☐ physical impairment

☐ learning disability

☐ emotional/behavioral disorder

☐ deaf/hard of hearing

☐ cognitive disability

Other (please specify)

| _____ |

_____

9. What is the highest level of school you have completed or the highest degree you have received?

○ Less than high school degree

○ High school degree or equivalent (e.g., GED)

○ Some college but no degree

○ Associate degree

○ Bachelor degree

○ Graduate degree☐

Other (please specify)

10. Are you interested in becoming a licensed special educator?

○ Yes

○ No

○ Maybe, but I need more information

11. Are you currently enrolled in any college courses?

○ Yes

○ No   If yes, please identify which college

12. Do you plan to apply to a college in a teacher preparation program?

◌ Yes

◌ No

If so, where?

13. When do you anticipate applying to a special education teacher program?

◌ 2014 academic year

◌ 2015 academic year

◌ 2016 academic year

◌ I am not sure

◌ I have no plans to enroll

_____

_____

_____

_____

_____

14. What area(s) of special education are you considering as a priority?

☐ development delay (early childhood)

☐ blind/visually impaired

☐ autism spectrum disorder

☐ physical impairment

☐ learning disability

☐ emotional/behavioral disorder

☐ deaf/hard of hearing

☐ cognitive disability
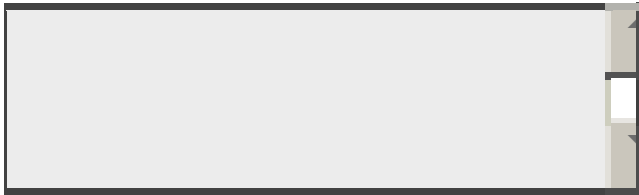
15. Would you be interested in a virtual or face to face program?

☐ virtual (on-line) ☐

☐ face to face

☐ combination of the two

16. What existing barriers might exist that would prevent you from pursuing a special education teaching career?

We appreciate the time you took to answer these survey questions. Thank you for your help with responding to this survey.

MN Department of Education
1500 Hwy 26 W
Roseville, MN 55113

Recipient

Questions?
Please contact Mary Lindell
Mary.Lindell@state.mn.us

Address Line 1
Address Line 2
Address Line 3
Address Line 4

Dear Paraprofessional,
During the Spring/Summer of 2013, you completed a questionnaire designed by the MN Dept. of Education to determine your potential interest in becoming a licensed special education teacher. Your responses were heard! Further information is now being collected via an electronic survey for a study at the University of North Dakota. Participation is completely voluntary and anonymous, and should take less than 10 minutes. Your feedback will help Stakeholders in MN determine strategies to make this paraprofessional-to-teacher pathway more effective and efficient.

To access the survey, please type the following link into your internet browser:
https://und.qualtrics.com/SE/?SID=SV_9ZwgaqLwFJ9m6vr

Thank you for completing the survey by July 14, 2014!

Postcard

MN Department of Education
1500 Hwy 26 W
Roseville, MN 55113

Questions?
Please contact Mary Lindell
Mary.Lindell@state.mn.us

Recipient

Address Line 1
Address Line 2
Address Line 3
Address Line 4

REMINDER***REMINDER***REMINDER***REMINDER***REMINDER

Dear Paraprofessional,

Recently you were invited to participate in a survey regarding your interest in becoming a licensed special education teacher. There is still time to complete the survey, if you have not done so! Participation is completely voluntary and anonymous, and should take less than 10 minutes. Your feedback will provide valuable insight to those who are working to make this paraprofessional-to-teacher pathway more effective and efficient.

To access the survey, please type the following link into your internet browser:
https://und.qualtrics.com/SE/?SID=SV_9ZwgaqLwFJ9m6vr

Thank you for completing the survey by July 14!

If you have already completed the survey—THANK YOU!

MN Paraeducators-to-Special Education Teacher Survey

I am interested in obtaining a special education teacher license   YES NO

I am currently enrolled in a teacher preparation program   YES NO

I am interested in completing a program with a cohort   YES NO
(completing the program class by class, with a group)
If yes, how many miles, round trip, are you willing to travel for a weekend cohort?
- <30
- 30-60
- 60-90
- >90

I currently have a bachelor's degree or higher   YES NO

I have access to a computer in my home   YES NO

I have access to high-speed Internet in my home   YES NO

GENDER: M   F

AGE:
- <30
- 30-39
- 40-49
- 50-59
- >60

ETHNICITY:
- White
- African-American
- Black
- Latino
- Asian
- Native Hawaiian or other Pacific Islander
- American Indian or Alaska Native
- Other

YEARS AS A SPECIAL EDUCATION PARA:
- 0-5
- 6-10
- 11-15
- 16-20
- >20

CATEGORY OF STUDENTS MOST SERVED:
- Autism Spectrum Disorders
- Blind or Visually Impaired
- Deaf/Blind
- Deaf/ Hard of Hearing
- Developmental Adapted Physical Education (DAPE)
- Development Cognitive Disability
- Developmental Delay (Ages 3-6)
- Emotional or Behavioral Disorders
- Other Health Disabilities
- Physical Impairment
- Severely Multiply Impaired
- Specific Learning Disability
- Speech or Language Impairment
- Traumatic Brain Injury

REGION OF EMPLOYMENT:
- 1&2
- 3
- 4
- 5&7
- 6&8
- 9
- 10
- 11

		Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1.	I would like to be a special education teacher because it seems rewarding	1	2	3	4	5	6
2.	I would like to be a special education teacher because I want to work the same hours as my children	1	2	3	4	5	6
3.	I would like to be a special education teacher because I have had positive experience(s) with someone with a disability	1	2	3	4	5	6
4.	I would like to be a special education teacher because I want to work with a team of other caring professionals	1	2	3	4	5	6
5.	I would like to be a special education teacher because I have something to offer kids with disabilities	1	2	3	4	5	6
6.	I would like to be a special education teacher because I will have job security	1	2	3	4	5	6
7.	Financially, I would need to continue to work full time while I earn my degree	1	2	3	4	5	6
8.	The financial cost of this degree would be a hardship for me	1	2	3	4	5	6
9.	Paying for tuition, books, and fees would be difficult for me	1	2	3	4	5	6
10.	Financially, my current salary is needed for my family's expenses	1	2	3	4	5	6
11.	University courses for this degree need to be offered after 3PM	1	2	3	4	5	6
12.	University courses for this degree need to be offered on the weekend	1	2	3	4	5	6
13.	University courses for this degree need to be offered online	1	2	3	4	5	6
14.	A flexible course schedule is necessary for me to complete this degree	1	2	3	4	5	6
15.	My family obligations would make obtaining this degree challenging	1	2	3	4	5	6
16.	Balancing home, work, and University courses would be difficult	1	2	3	4	5	6
17.	I have responsibilities to my family that leave me with little time for coursework	1	2	3	4	5	6

		1	2	3	4	5	6
18.	It would be challenging to find time to complete University coursework and care for my family	1	2	3	4	5	6
19.	I need assistance enrolling in University courses	1	2	3	4	5	6
20.	Completing the required University admission paperwork is confusing	1	2	3	4	5	6
21.	I need assistance in determining what courses to take	1	2	3	4	5	6
22.	I need assistance from an academic advisor	1	2	3	4	5	6
23.	I need a review of basic academic subjects in order to be prepared for college-level instruction	1	2	3	4	5	6
24.	I need academic skill development in order to do well in college-level courses	1	2	3	4	5	6
25.	I need academic tutoring in order to do well in college-level courses	1	2	3	4	5	6
26.	I need tutoring on how to prepare for tests at the college level	1	2	3	4	5	6

Appendix D
Survey Instrument – Code Sheet

MN Paraeducators-to-Special Education Teacher Survey (Codes)

I am interested in obtaining a special education teacher license   YES-1 NO-2

I am currently enrolled in a teacher preparation program   YES-1 NO-2

I am interested in completing a program with a cohort   YES-1 NO-2
(completing the program class by class, with a group)
If yes, how many miles, round trip, are you willing to travel for a weekend cohort?
- <30
- 30-60
- 60-90
- >90

I currently have a bachelor's degree or higher   YES-1 NO-2

I have access to a computer in my home   YES-1 NO-2

I have access to high-speed Internet in my home   YES-1 NO-2

GENDER: M-1   F-2

AGE:
- <30-1
- 30-39-2
- 40-49-3
- 50-59-4
- >60-5

ETHNICITY:
- White-1
- African-American-2
- Black-3
- Latino-4
- Asian-5
- Native Hawaiian or other Pacific Islander-6
- American Indian or Alaska Native-7
- Other-8

YEARS AS A SPECIAL EDUCATION PARA:
- 0-5-1
- 6-10-2
- 11-15-3
- 16-20-4
- >20-5

CATEGORY OF STUDENTS MOST SERVED:
- Autism Spectrum Disorders-1
- Blind or Visually Impaired-2
- Deaf/Blind-3
- Deaf/ Hard of Hearing-4
- Developmental Adapted Physical Education (DAPE)-5
- Development Cognitive Disability-6
- Developmental Delay (Ages 3-6)-7
- Emotional or Behavioral Disorders-8
- Other Health Disabilities-9
- Physical Impairment-10
- Severely Multiply Impaired-11
- Specific Learning Disability-12
- Speech or Language Impairment-13
- Traumatic Brain Injury-14

REGION OF EMPLOYMENT:
- 1&2-1
- 3-2
- 4-3
- 5&7-4
- 6&8-5
- 9-6
- 10-7
- 11-8
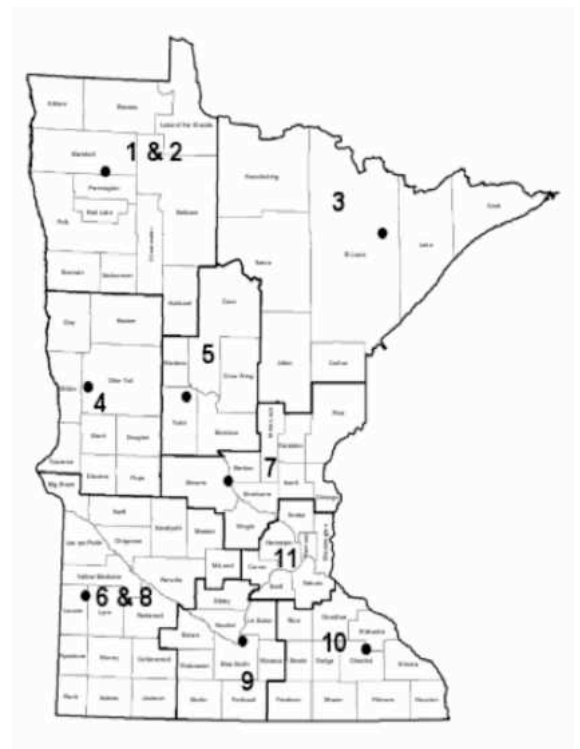
	(Scale 1-6)	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1.	I would like to be a special education teacher because it seems rewarding	1	2	3	4	5	6
2.	I would like to be a special education teacher because I want to work the same hours as my children	1	2	3	4	5	6
3.	I would like to be a special education teacher because I have had positive experience(s) with someone with a disability	1	2	3	4	5	6
4.	I would like to be a special education teacher because I want to work with a team of other caring professionals	1	2	3	4	5	6
5.	I would like to be a special education teacher because I have something to offer kids with disabilities	1	2	3	4	5	6
6.	I would like to be a special education teacher because I will have job security	1	2	3	4	5	6
7.	Financially, I would need to continue to work full time while I earn my degree	1	2	3	4	5	6
8.	The financial cost of this degree would be a hardship for me	1	2	3	4	5	6
9.	Paying for tuition, books, and fees would be difficult for me	1	2	3	4	5	6
10.	Financially, my current salary is needed for my family's expenses	1	2	3	4	5	6
11.	University courses for this degree need to be offered after 3PM	1	2	3	4	5	6
12.	University courses for this degree need to be offered on the weekend	1	2	3	4	5	6
13.	University courses for this degree need to be offered online	1	2	3	4	5	6
14.	A flexible course schedule is necessary for me to complete this degree	1	2	3	4	5	6
15.	My family obligations would make obtaining this degree challenging	1	2	3	4	5	6
16.	Balancing home, work, and University courses would be difficult	1	2	3	4	5	6
17.	I have responsibilities to my family that leave me with little time for coursework	1	2	3	4	5	6

|							
		1	2	3	4	5	6
18.	It would be challenging to find time to complete University coursework and care for my family	1	2	3	4	5	6
19.	I need assistance enrolling in University courses	1	2	3	4	5	6
20.	Completing the required University admission paperwork is confusing	1	2	3	4	5	6
21.	I need assistance in determining what courses to take	1	2	3	4	5	6
22.	I need assistance from an academic advisor	1	2	3	4	5	6
23.	I need a review of basic academic subjects in order to be prepared for college-level instruction	1	2	3	4	5	6
24.	I need academic skill development in order to do well in college-level courses	1	2	3	4	5	6
25.	I need academic tutoring in order to do well in college-level courses	1	2	3	4	5	6
26.	I need tutoring on how to prepare for tests at the college level	1	2	3	4	5	6

Figure 16. Indicator 7: Financially, I would need to continue to work full time while I earn my degree.

Figure 17. Indicator 8: The financial costs of this degree would be a hardship for me.
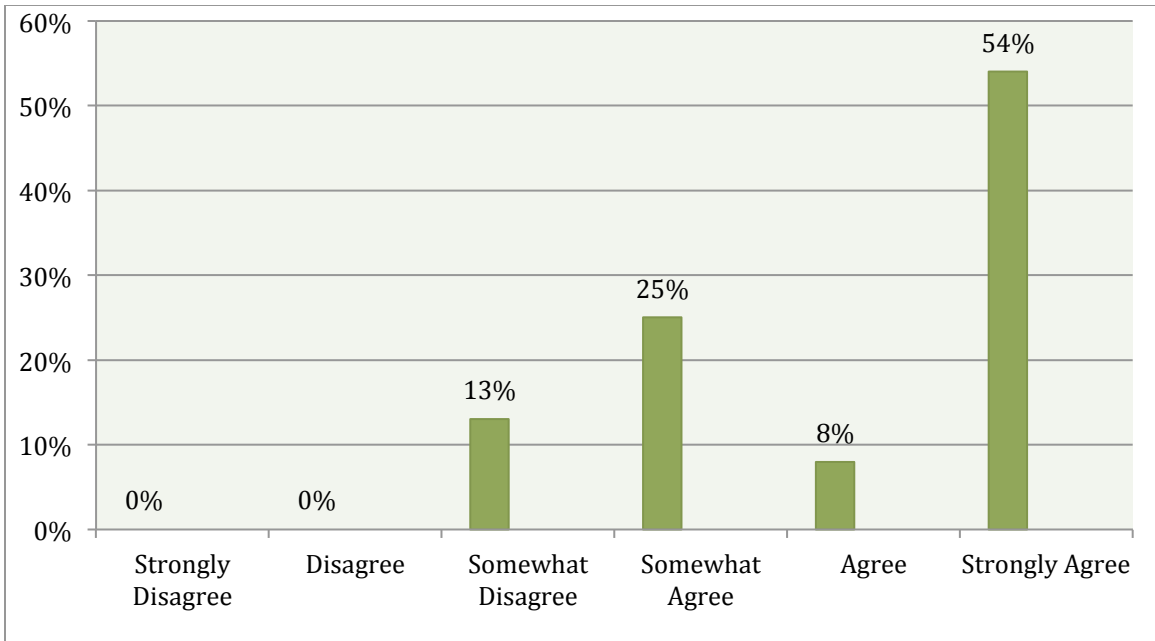
Figure 18. Indicator 9: Paying for tuition, books, and fees would be difficult for me..
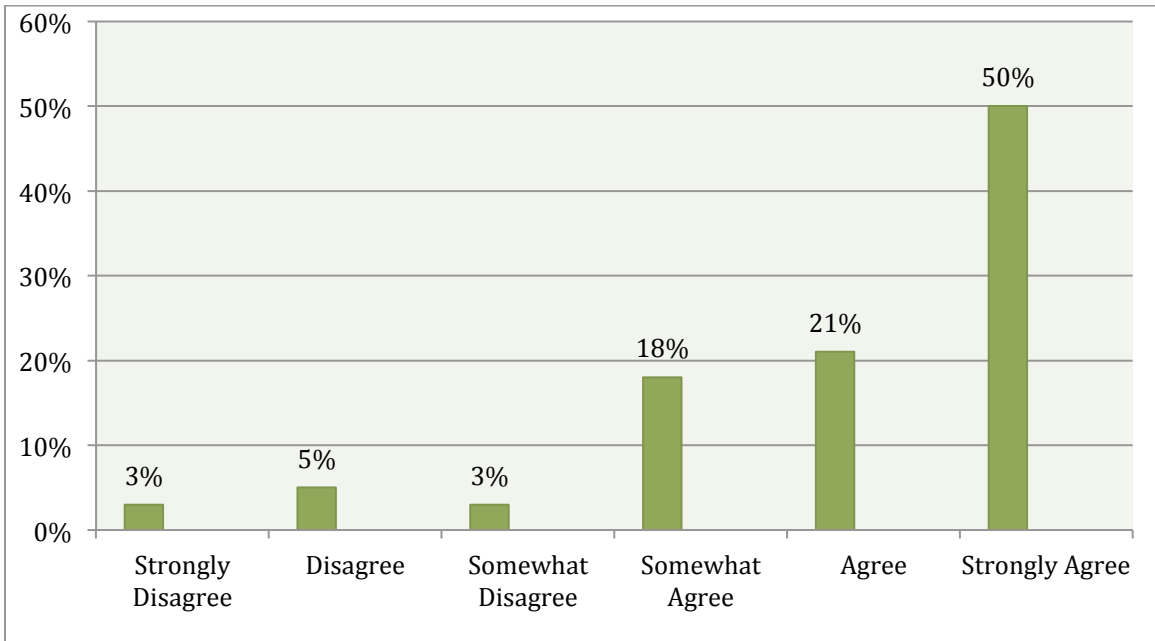
Figure 19. Indicator 10: Financially, my current salary is needed for my family's expenses.

Appendix F
Barrier of Time Indicator Results
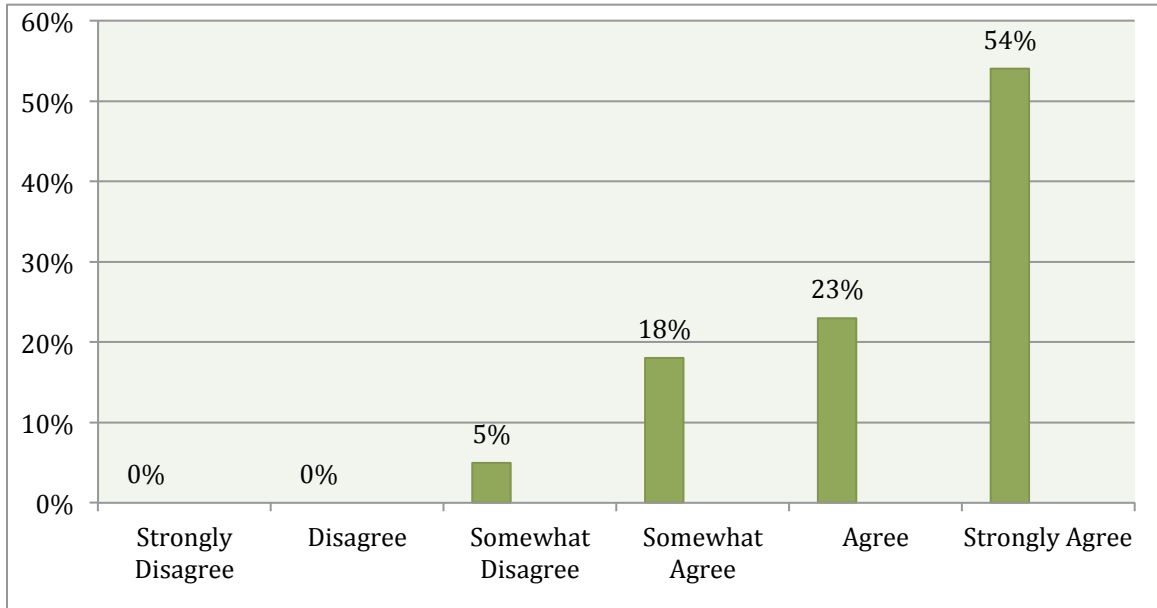
Figure 20. Indicator 11: University courses for this degree need to be offered after 3PM.
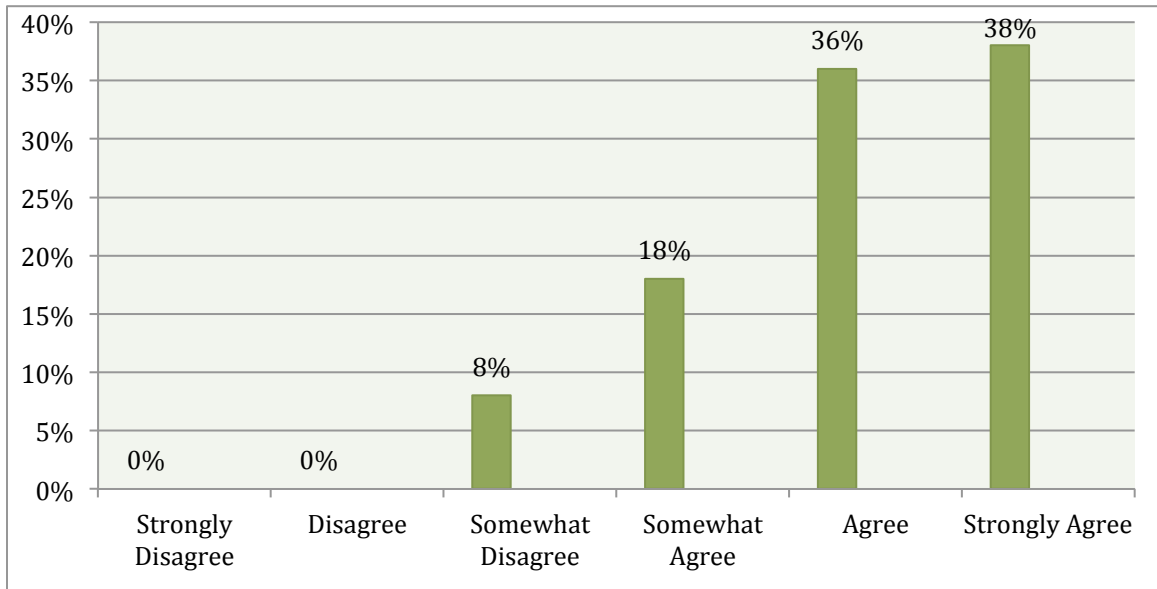
Figure 21. Indicator 12: University courses for this degree need to be offered on the weekend.
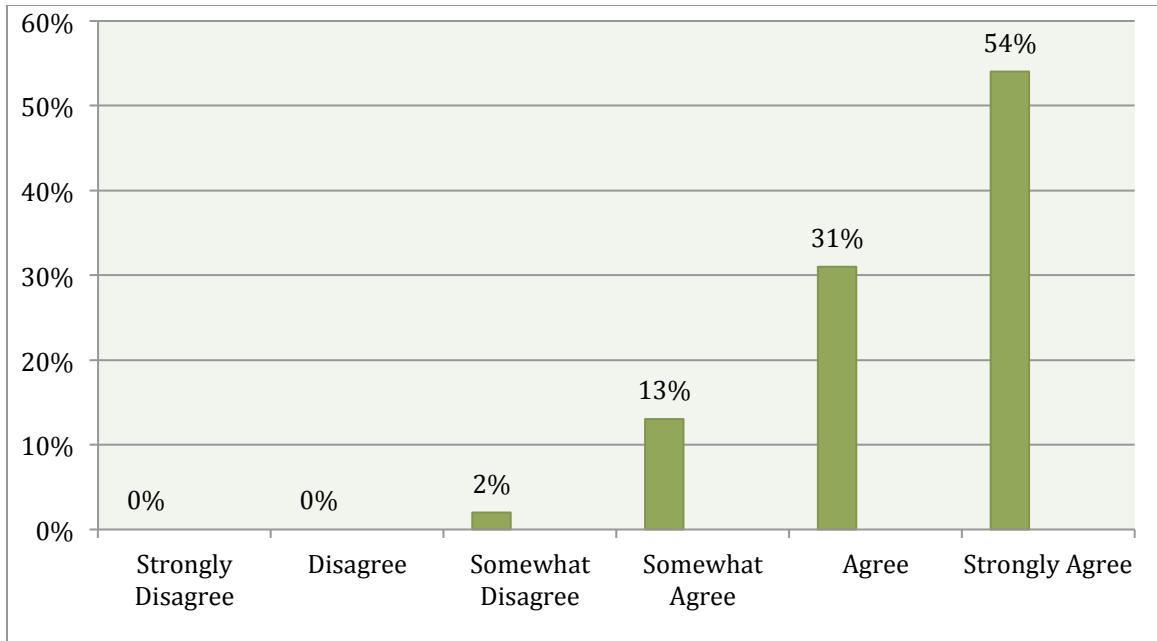
Figure 22. Indicator 13: University courses for this degree need to be offered online.
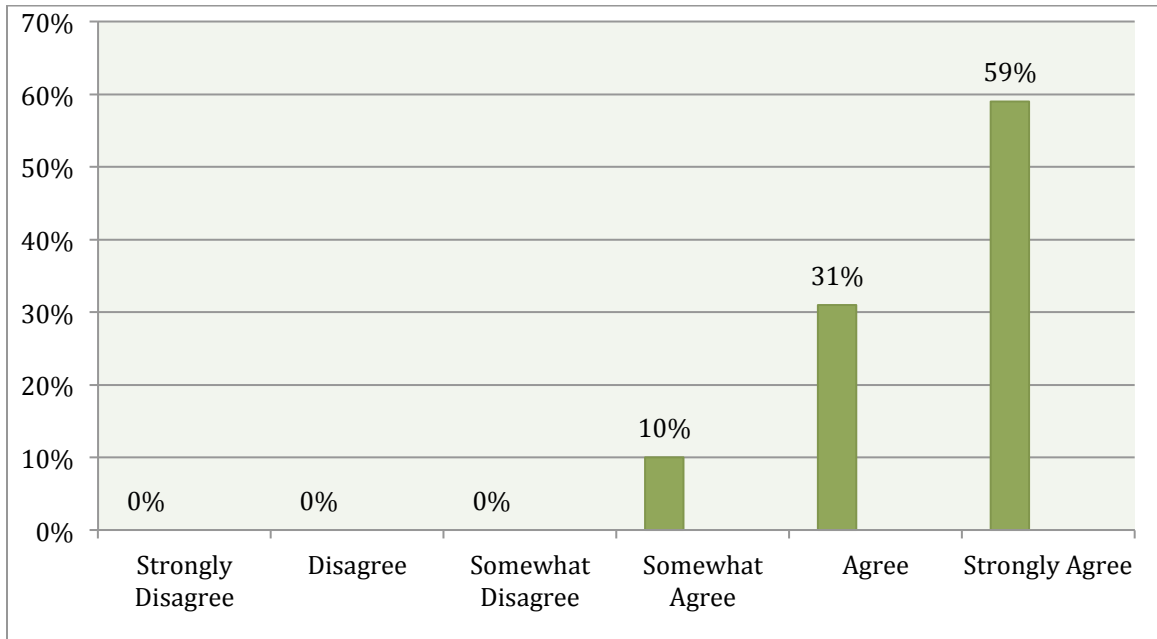
Figure 23. Indicator 14: A flexible course schedule is necessary for me to complete this degree.
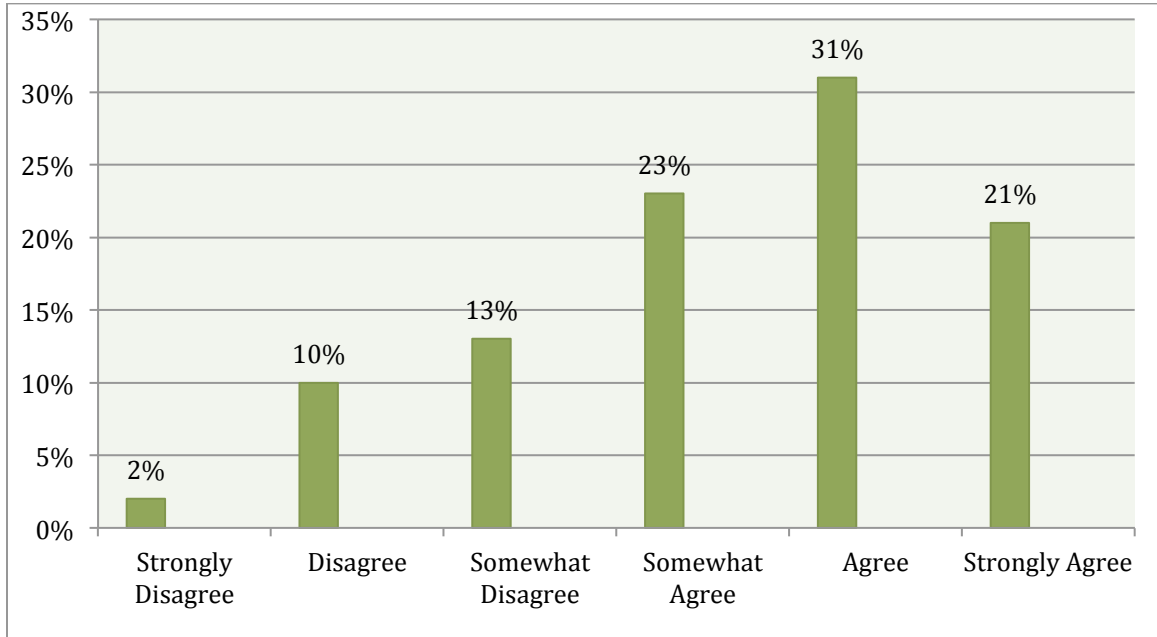
Figure 24. Indicator 15: My family obligations would make obtaining this degree challenging.
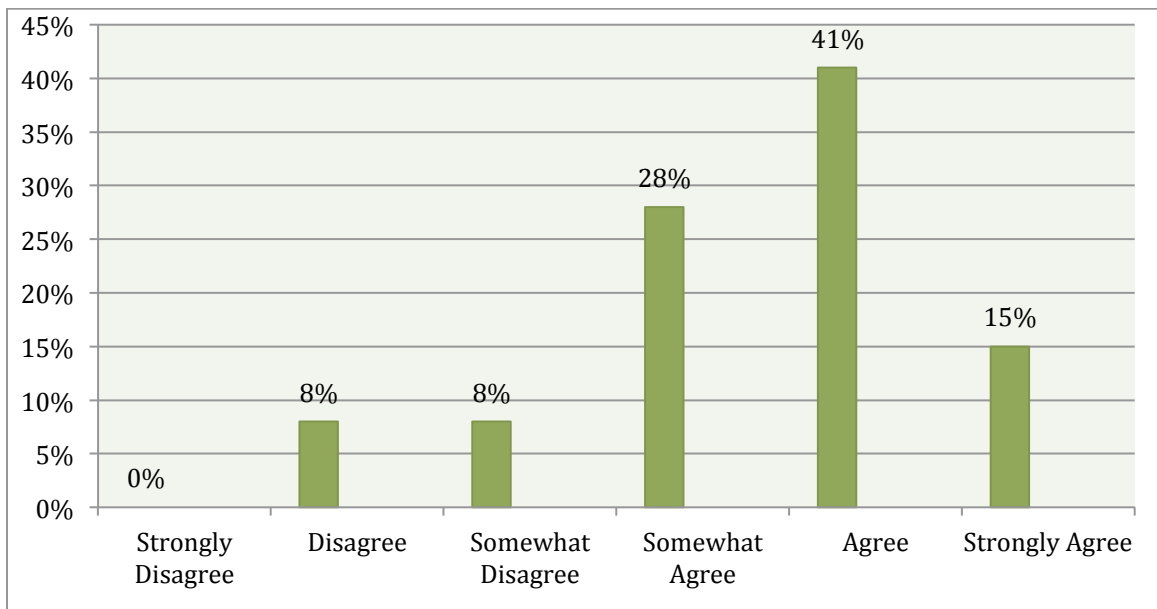
Figure 25. Indicator 16: Balancing home, work, and University courses would be difficult.
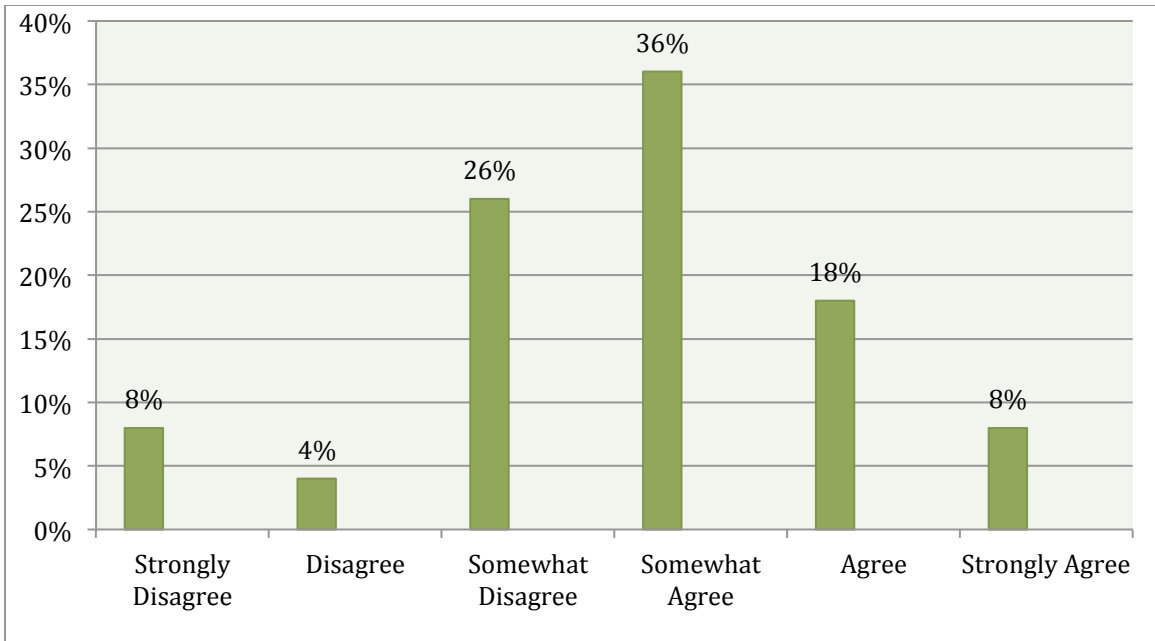
Figure 26. Indicator 17: I have responsibilities to my family that leave me with little time for coursework.
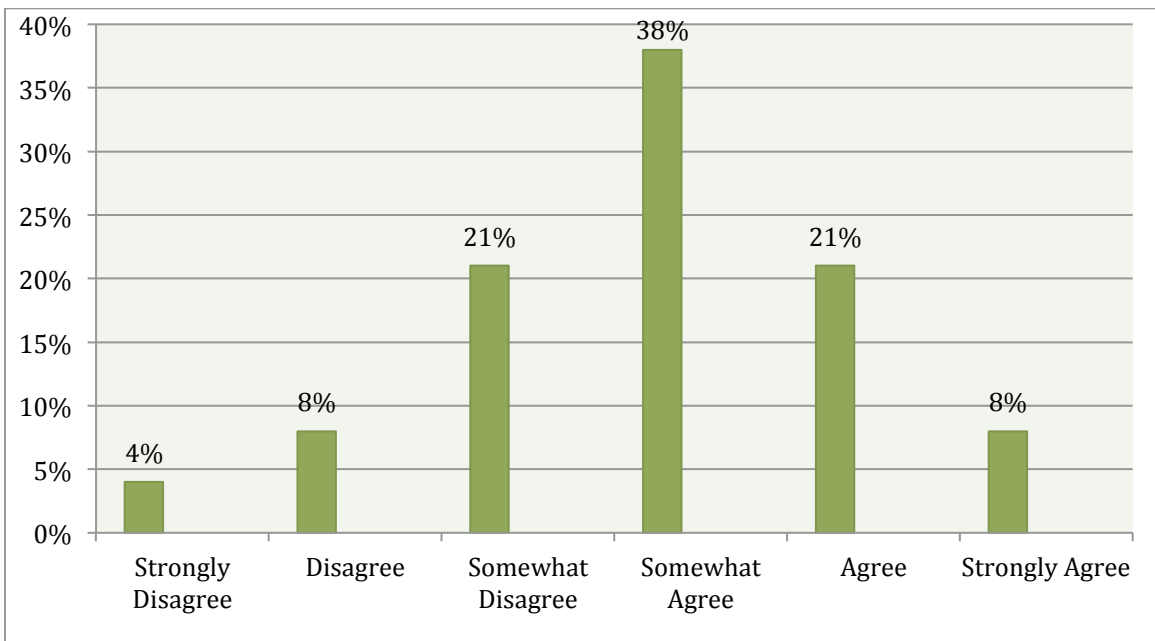
Figure 27. Indicator 18: It would be challenging to find time to complete University coursework and care for my family.
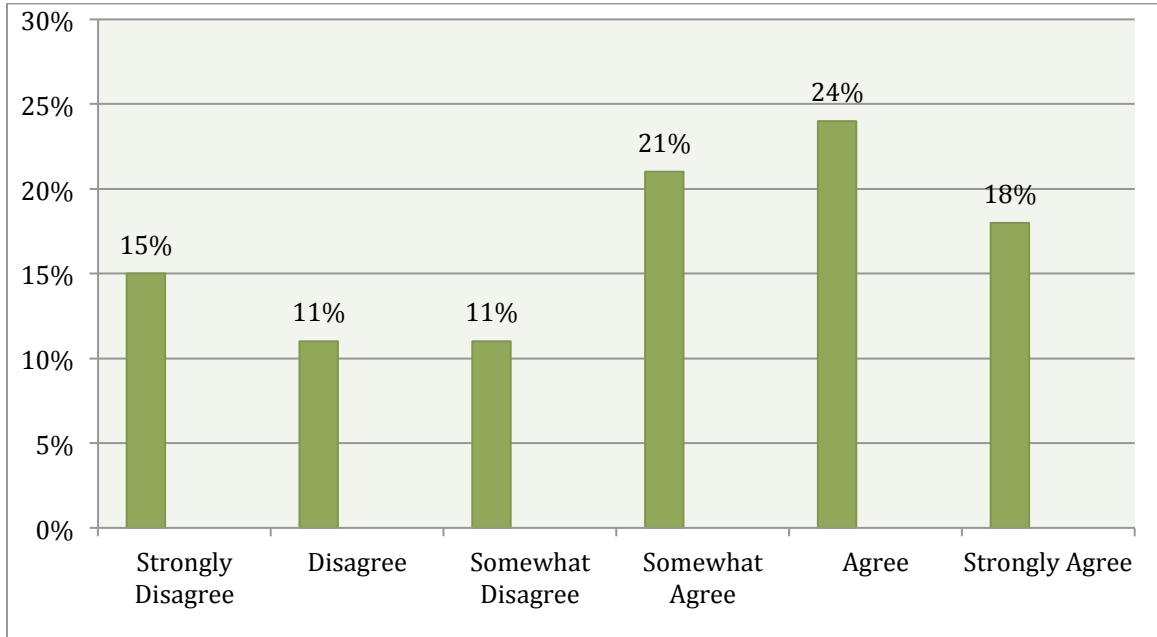
Figure 28. Indicator 19: I need assistance enrolling in university courses.
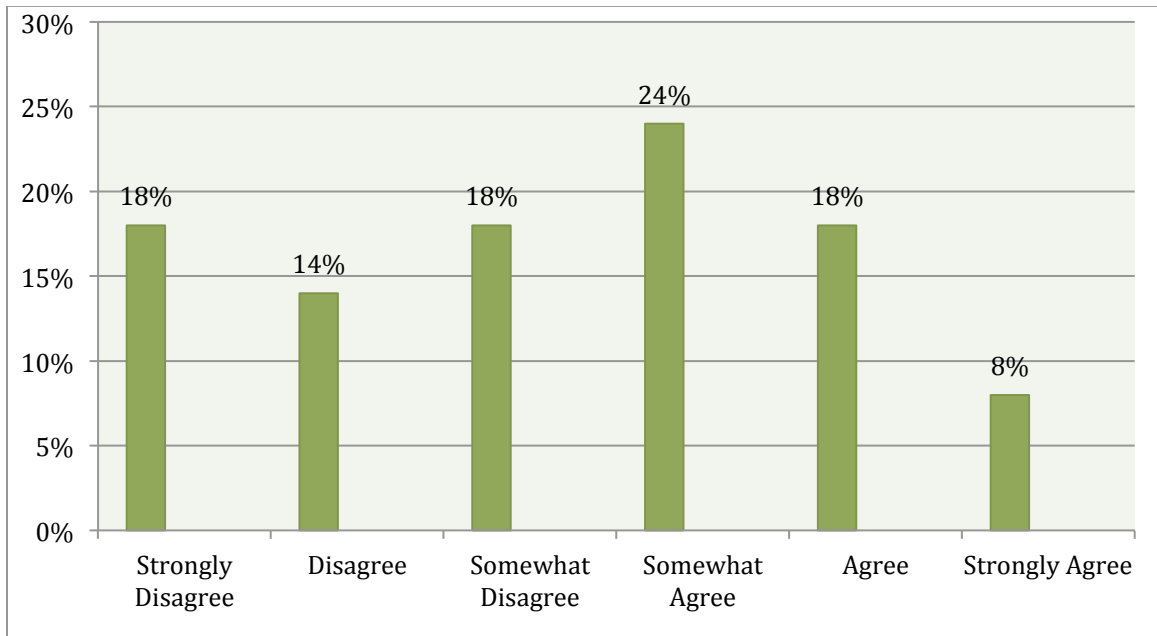
Figure 29. Indicator 20. Completing the required university admission paperwork is confusing.
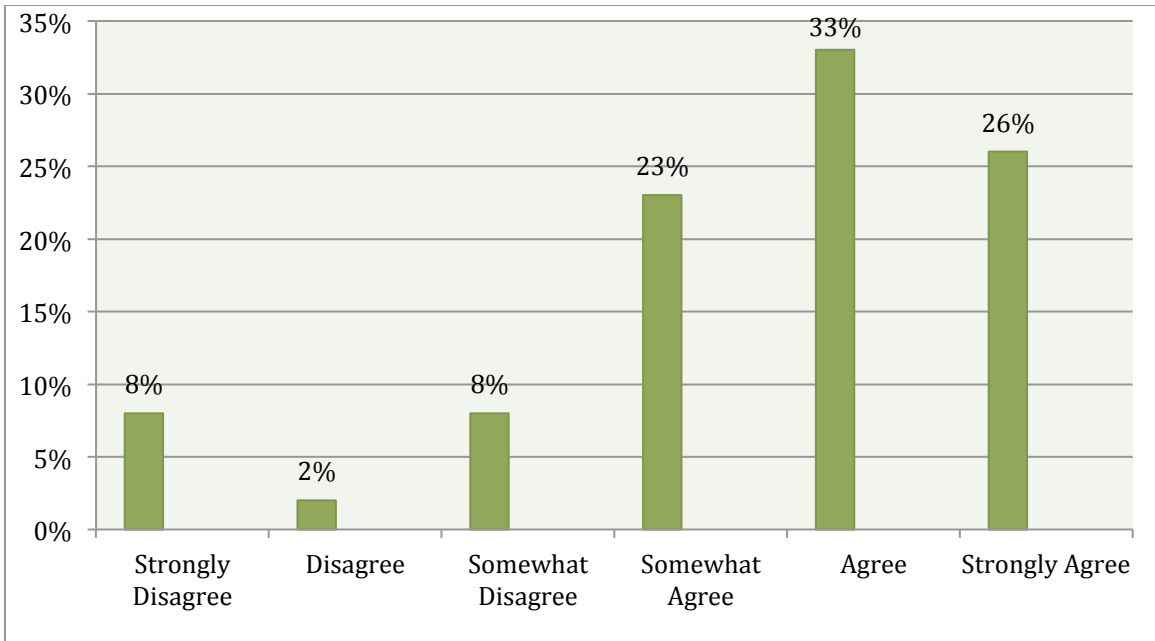
Figure 30. Indicator 21: I need assistance in determining what courses to take.
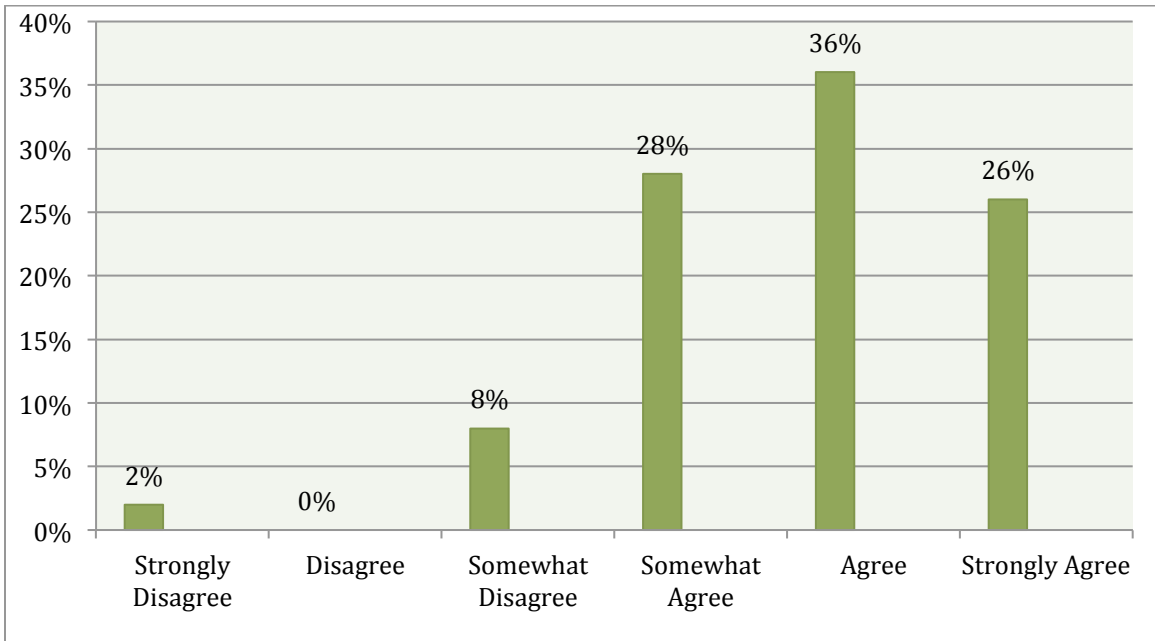
Figure 31. Indicator 22: I need assistance from an academic advisor.
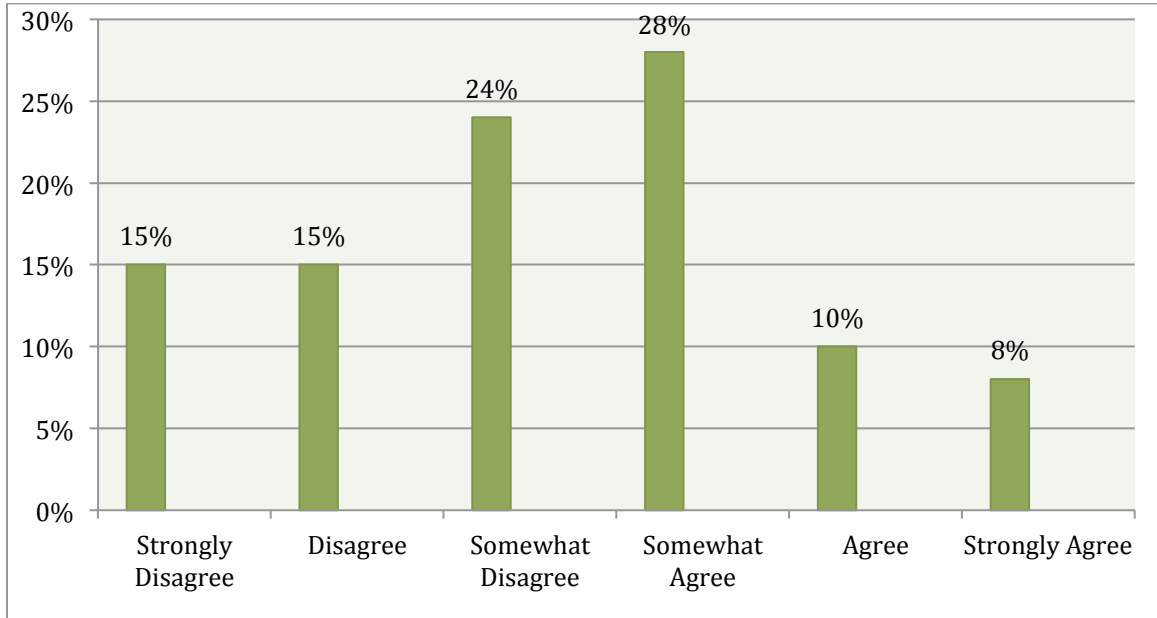
Figure 32. Indicator 23: I need a review of basic academic subjects in order to be prepared for college-level instruction.
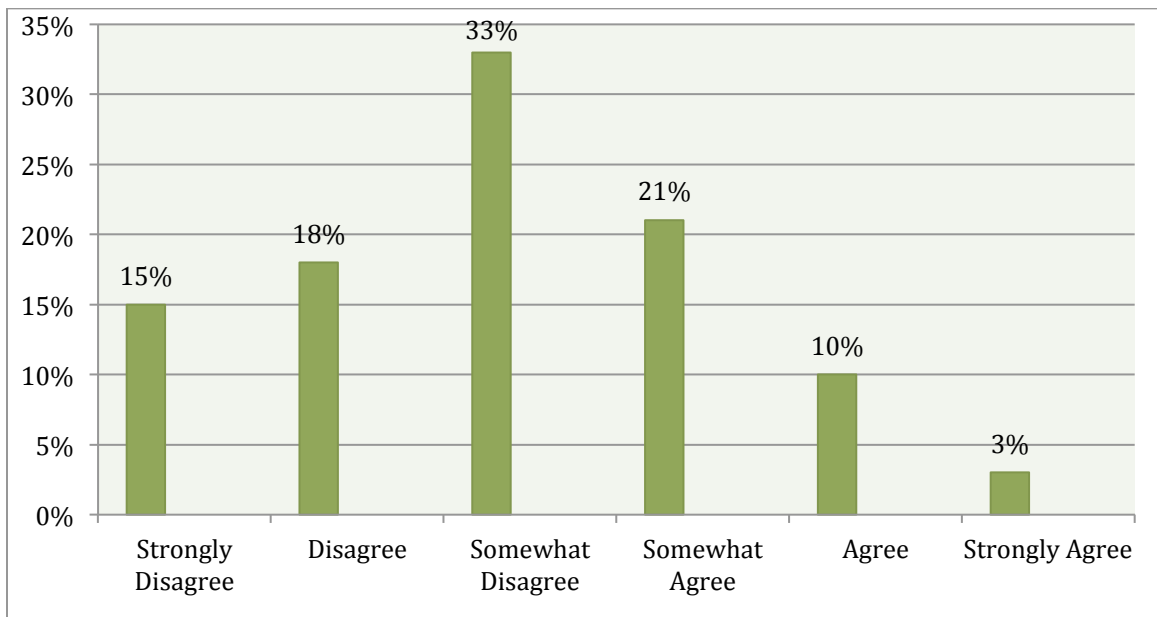
Figure 33. Indicator 24: I need academic skill development in order to do well in college-level courses.
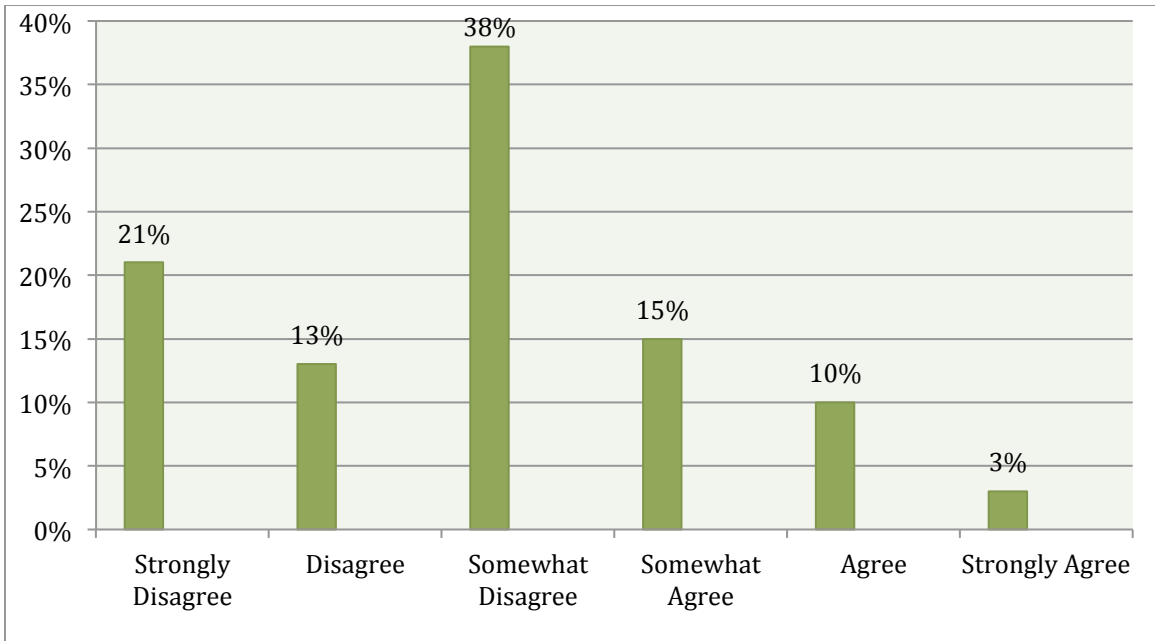
Figure 34. Indicator 25: I need academic tutoring in order to do well in college-level courses.
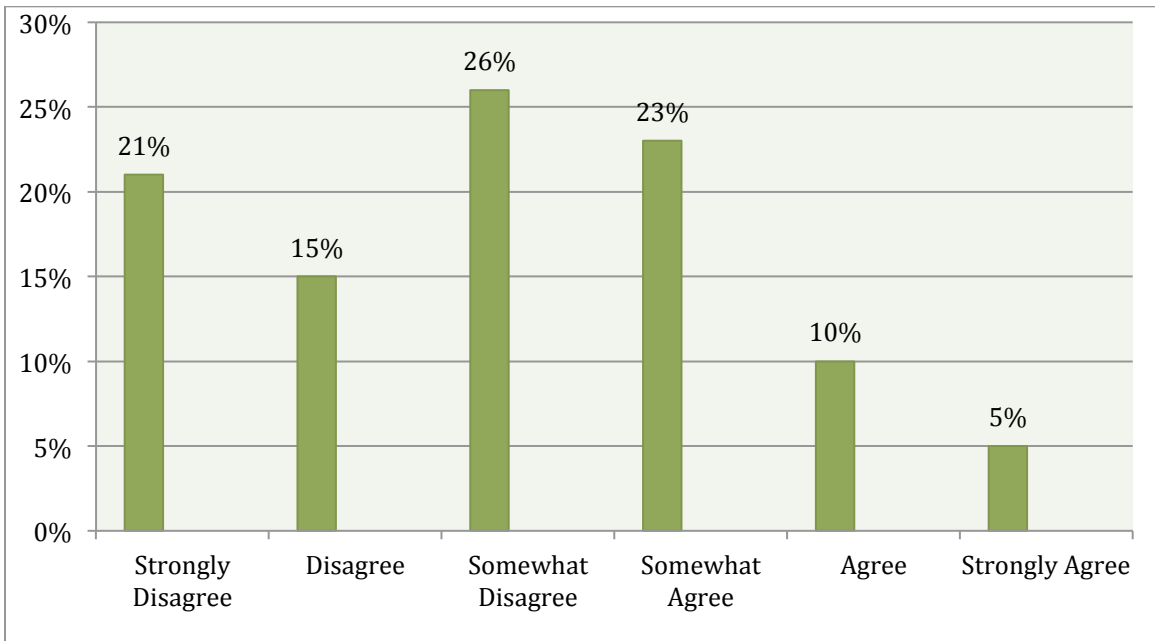
Figure 35. Indicator 26: I need tutoring on how to prepare for tests at the college level.

Means for the Barrier of Money
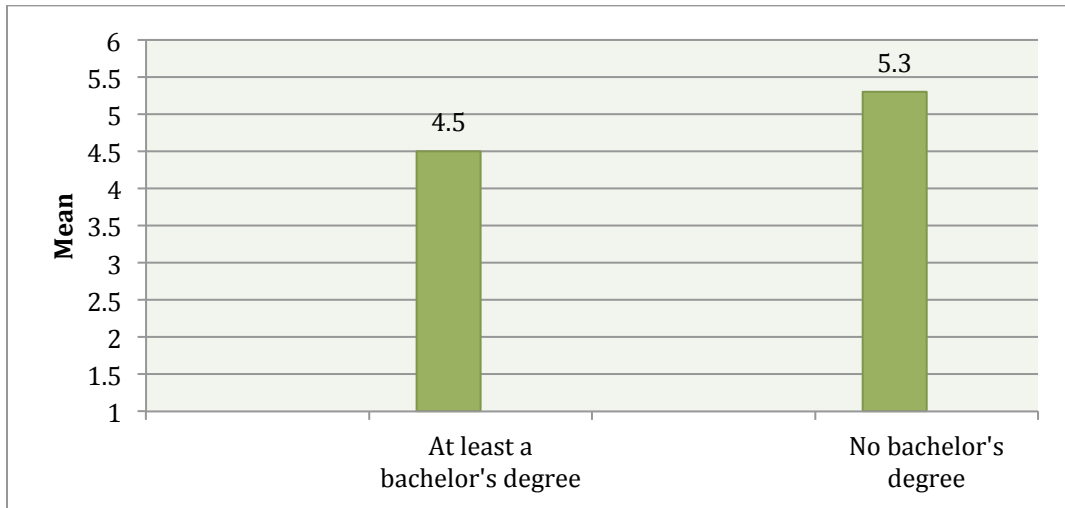
Figure 36. Indicator 7 Means: Financially, I would need to continue to work full time while I earn my degree.
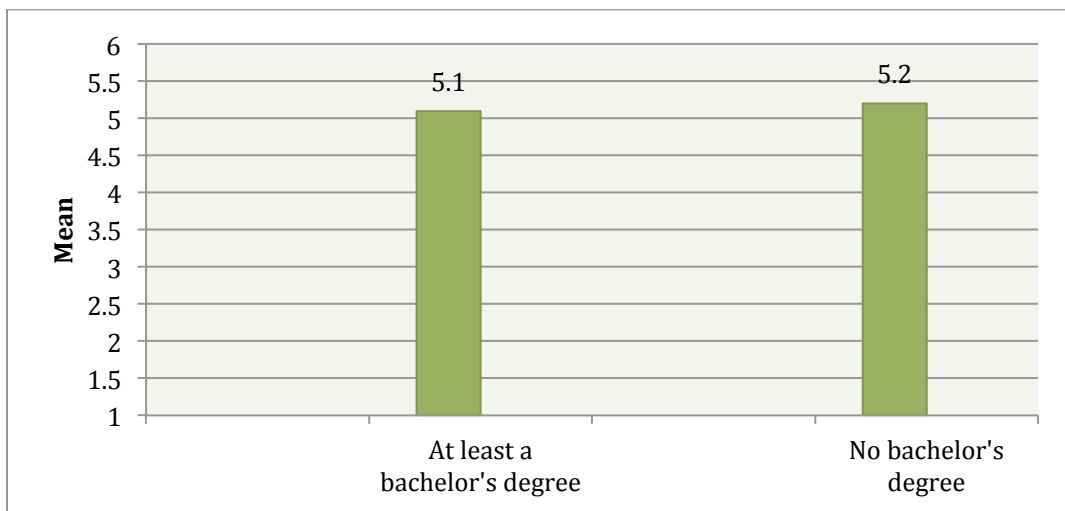
Figure 37. Indicator 8 Means: The financial costs of this degree would be a hardship for me.
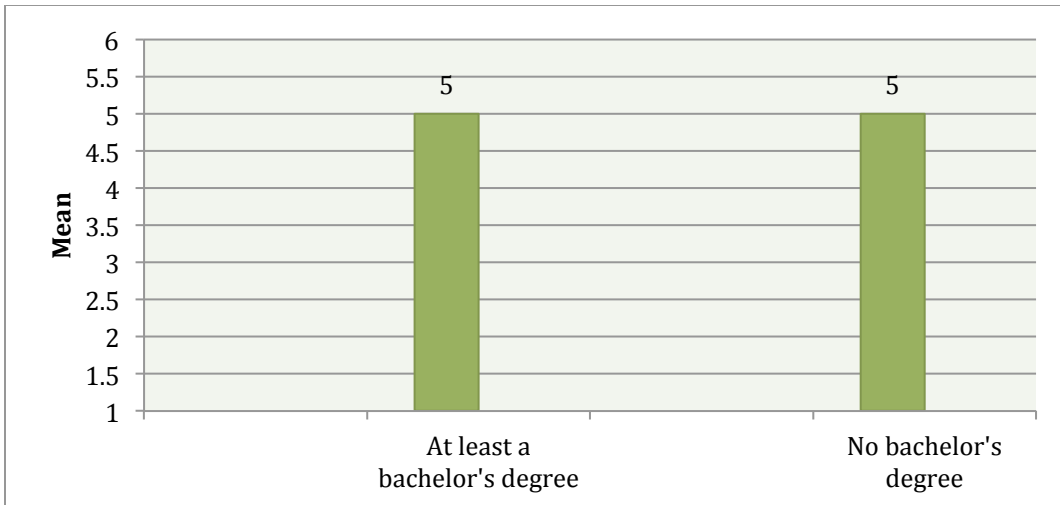
Figure 38. Indicator 9 Means: Paying for tuition, books, and fees would be difficult for me.
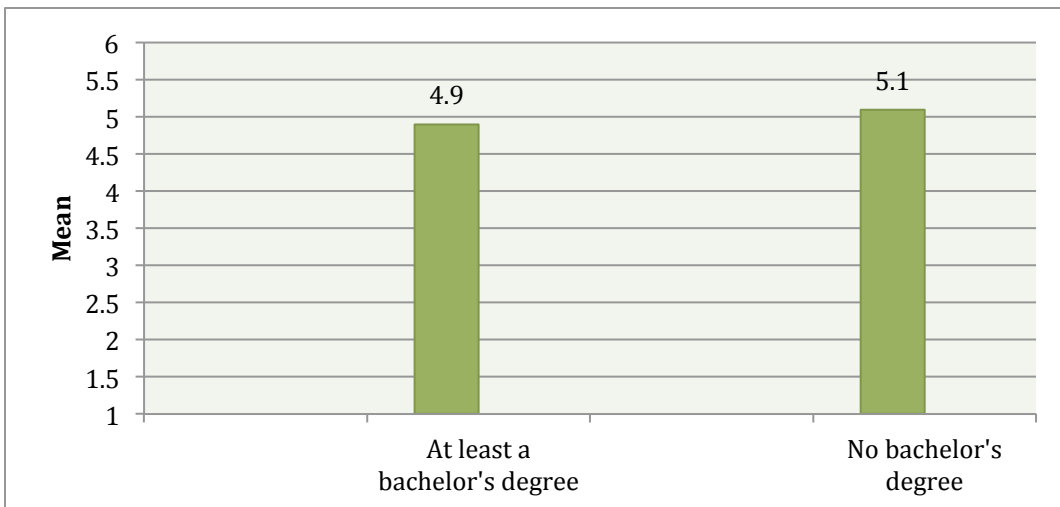
Figure 39. Indicator 10 Means: Financially, my current salary is needed for my family's expenses.
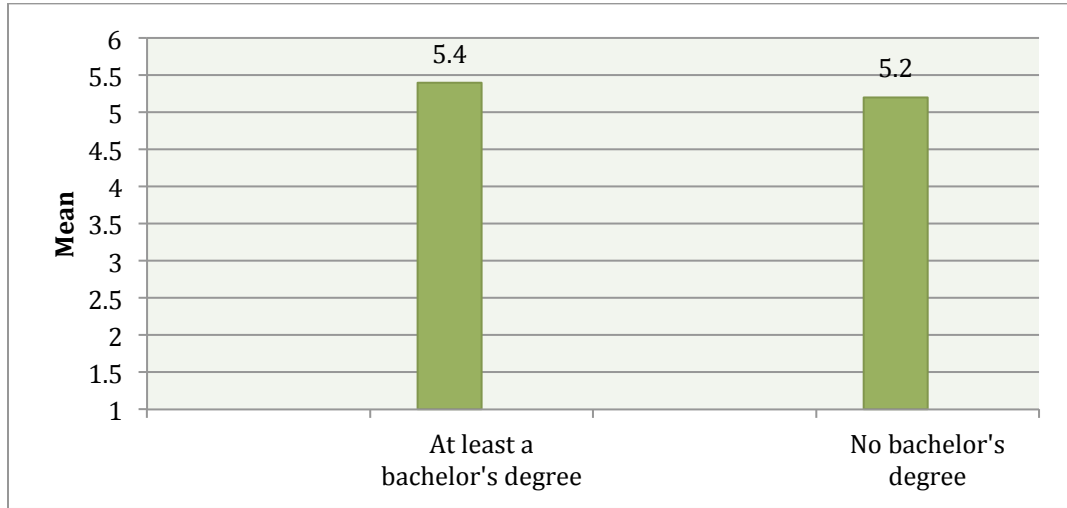
Figure 40. Indicator 11 Means: University courses for this degree need to be offered after 3PM.
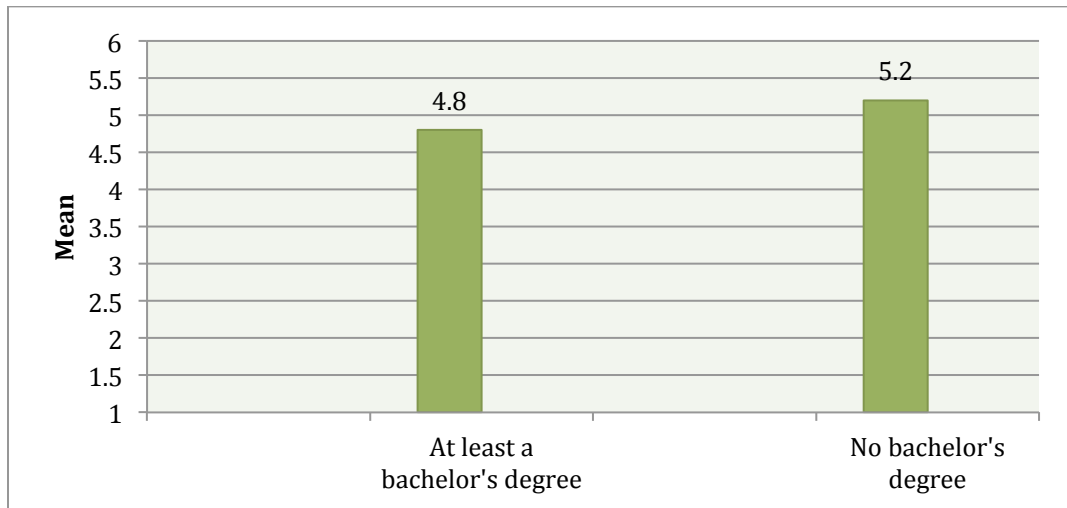
Figure 41. Indicator 12 Means: University courses for this degree need to be offered on the weekend.
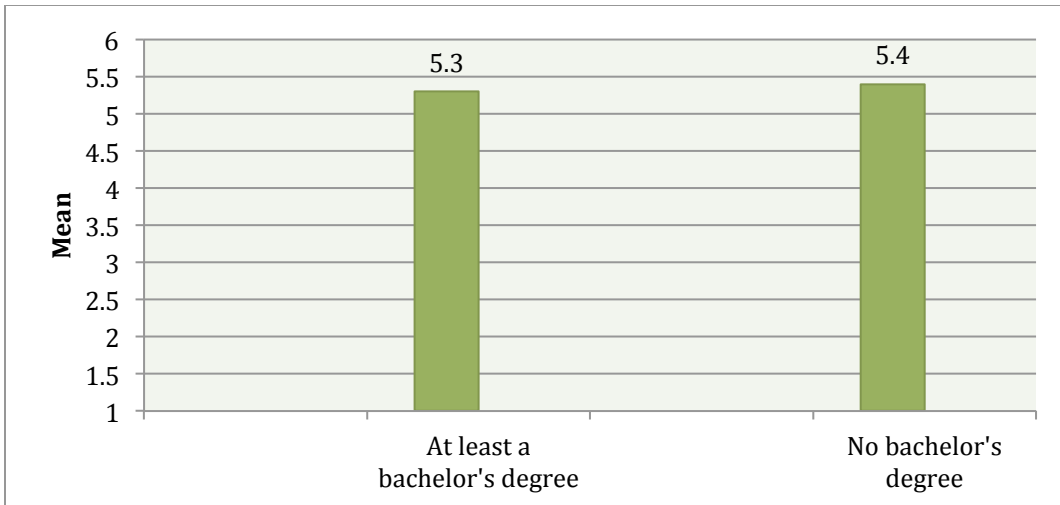
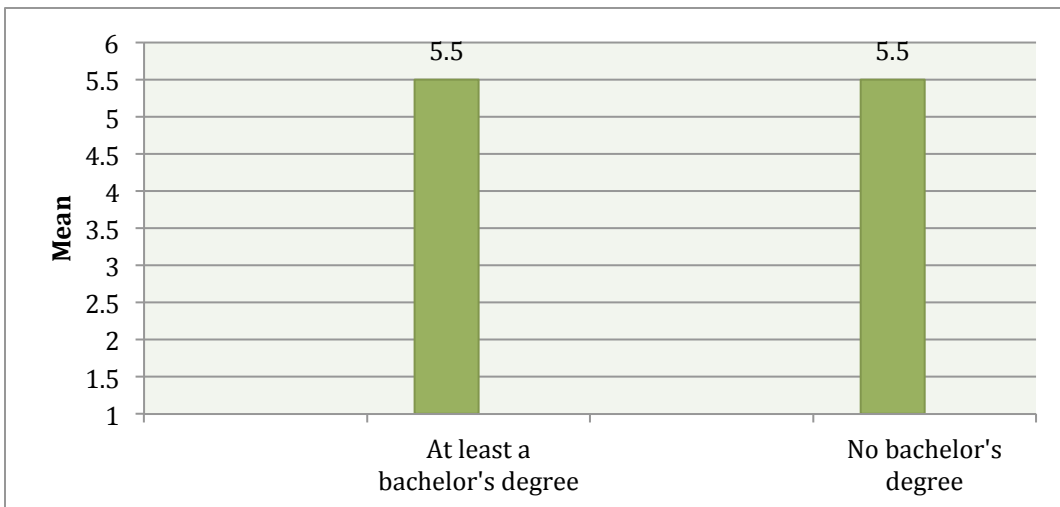Figure 42. Indicator 13 Means: University courses for this degree need to be offered online.

Figure 43. Indicator 14 Means: A flexible course schedule is necessary for me to complete this degree.

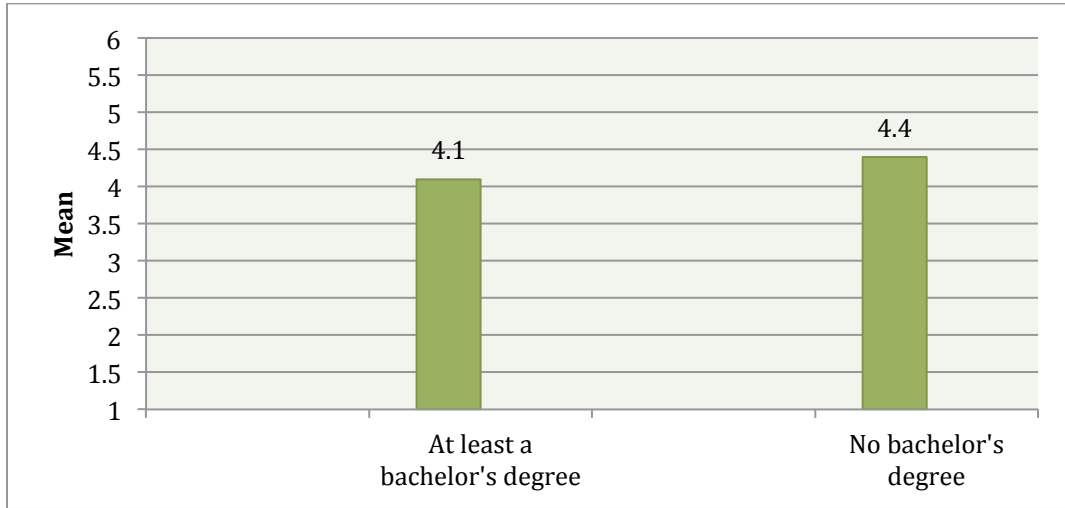**Means for the Barrier of Family Obligations**

Figure 44. Indicator 15 Means: My family obligations would make obtaining this degree challenging.
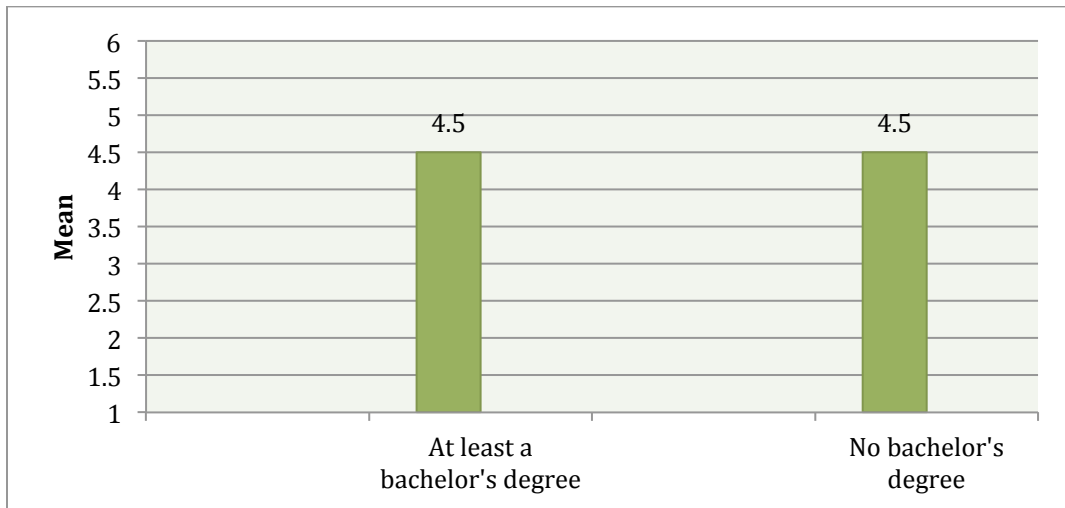

Figure 45. Indicator 16 Means: Balancing home, work, and University courses would be difficult.
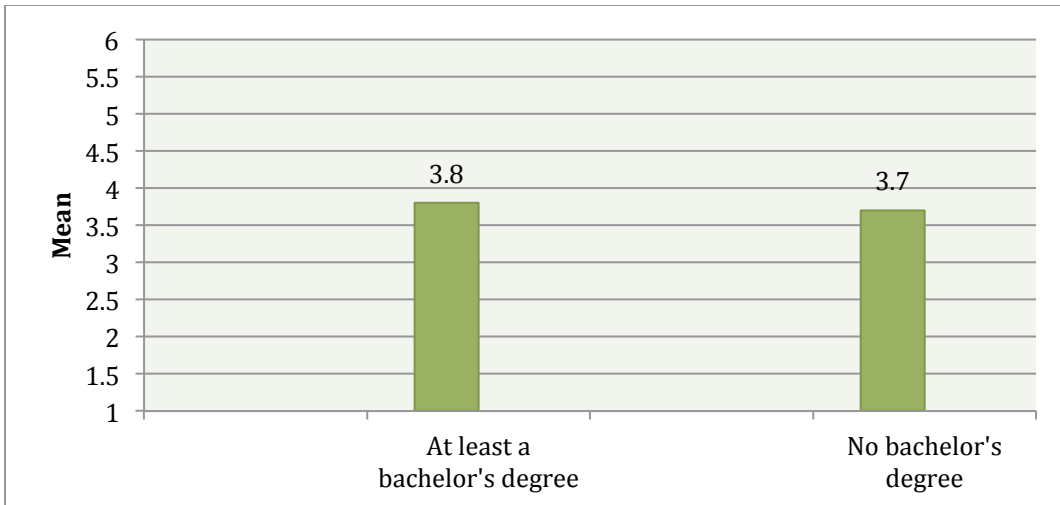
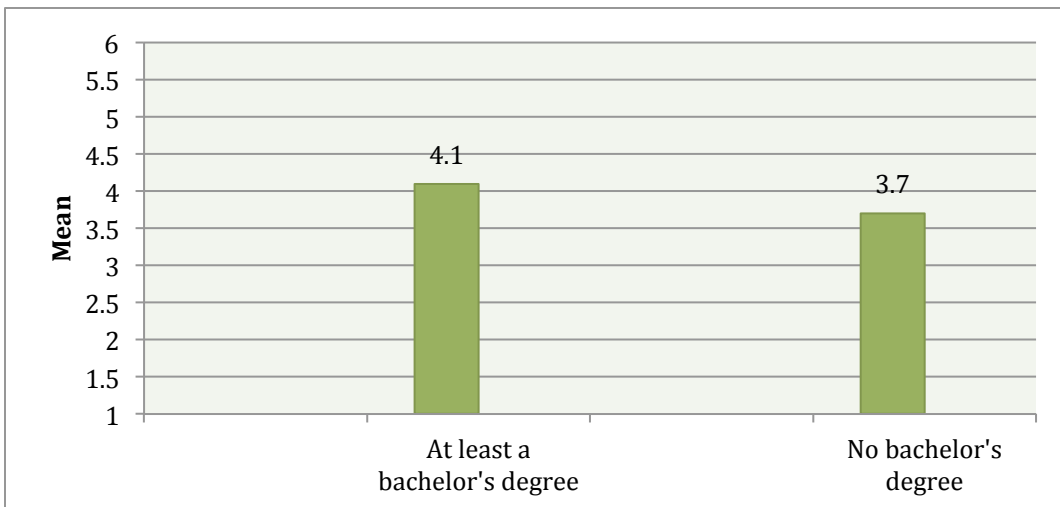Figure 46. Indicator 17 Means: I have responsibilities to my family that leave me with little time for coursework.

Figure 47. Indicator 18 Means: It would be challenging to find time to complete University coursework and care for my family.
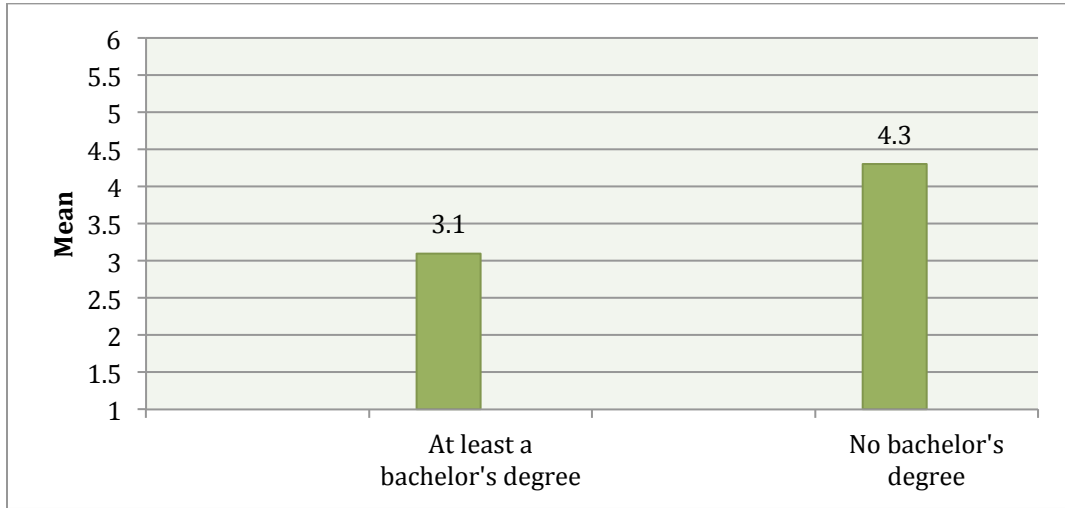
Figure 48. Indicator 19 Means: I need assistance enrolling in University courses.
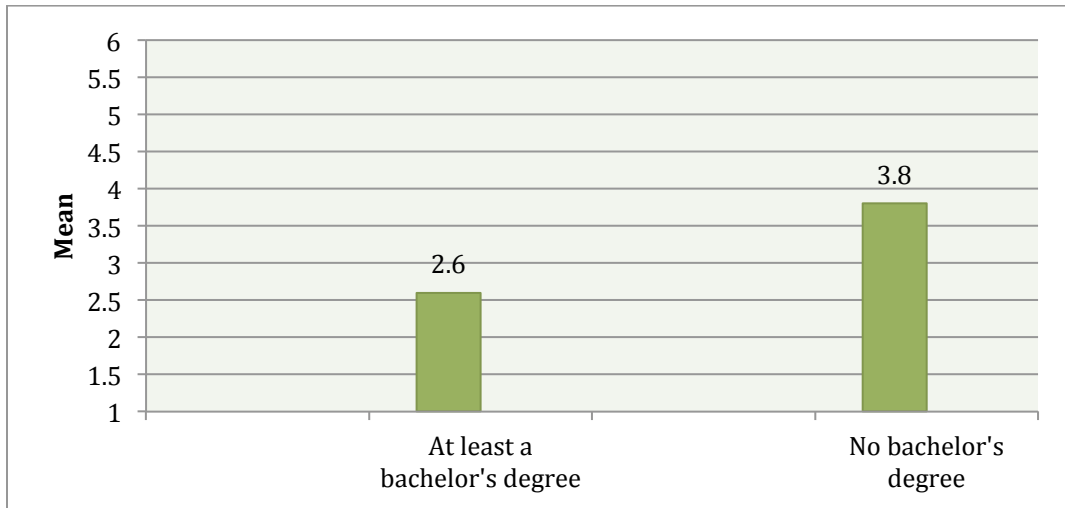
Figure 49. Indicator 20 Means: Completing the required University admission paperwork is confusing.
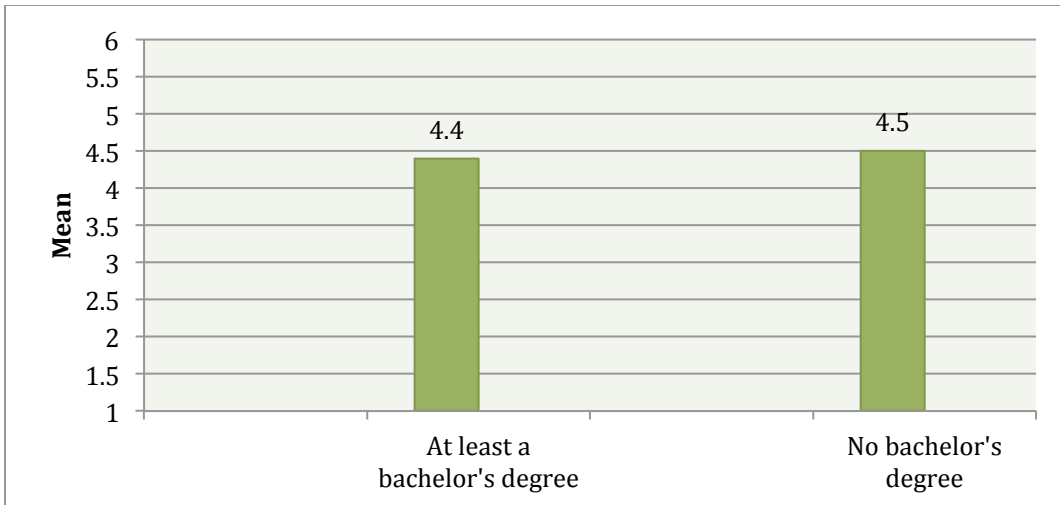
Figure 50. Indicator 21 Means: I need assistance in determining what courses to take.
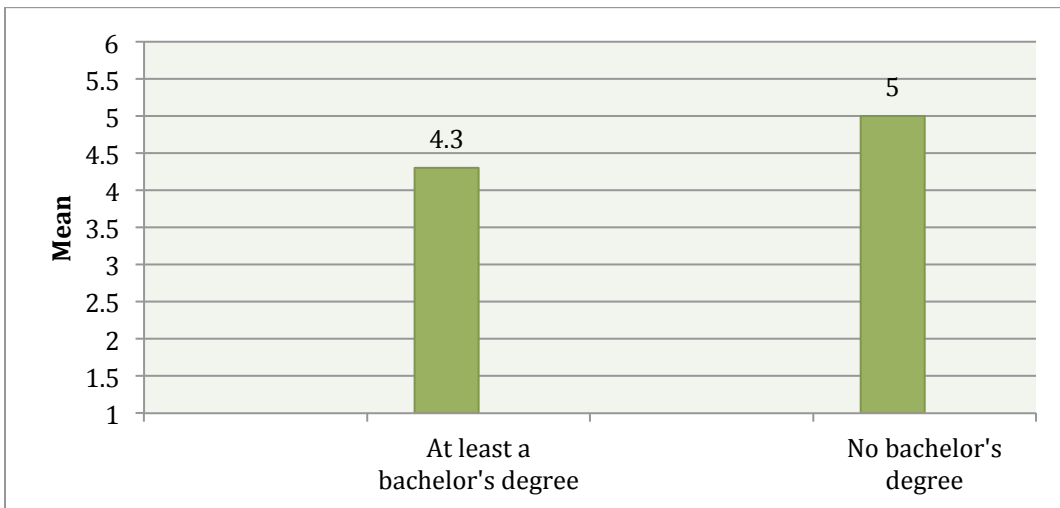
Figure 51. Indicator 22 Means: I need assistance from an academic advisor.
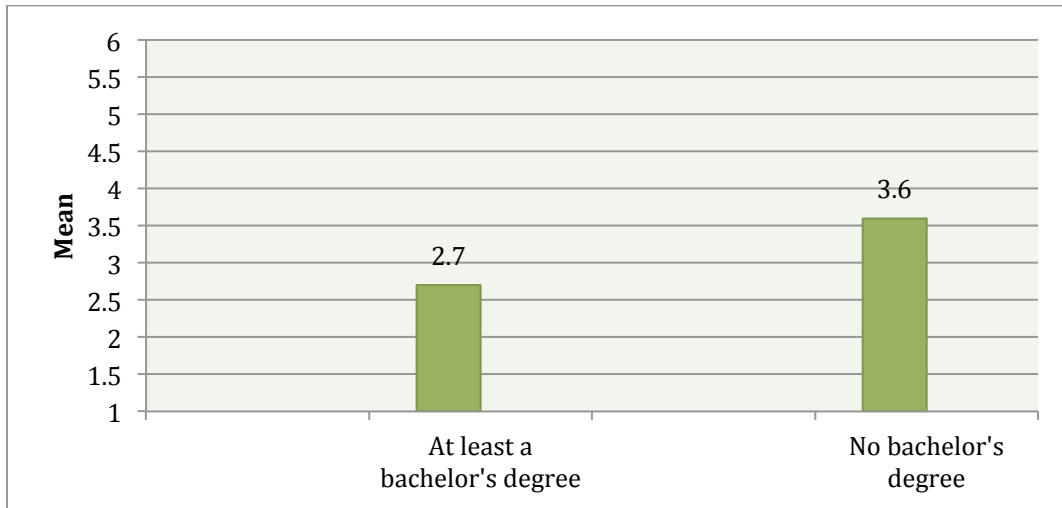
Figure 52. Indicator 23 Means: I need a review of basic academic subjects in order to be prepared for college-level instruction.
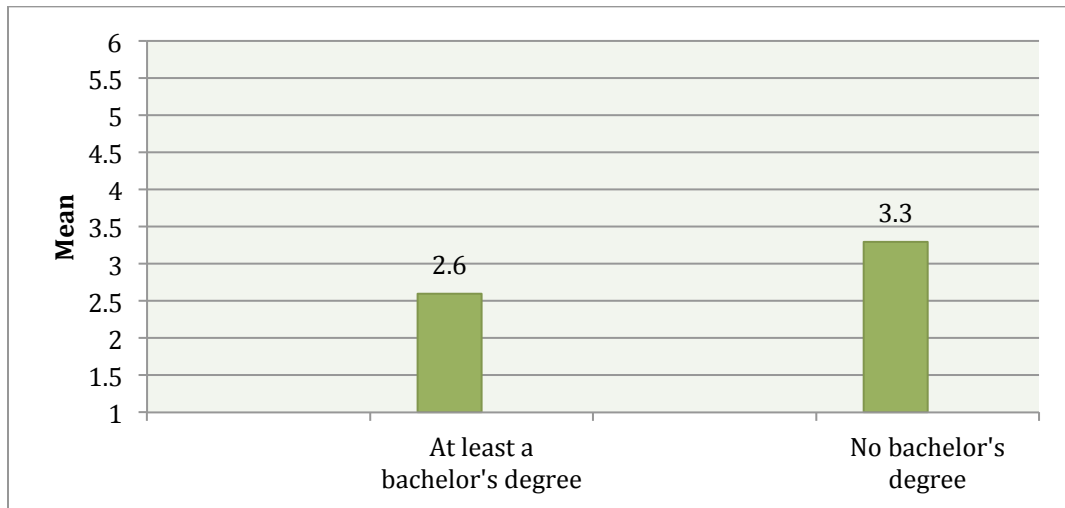
Figure 53. Indicator 24 Means: I need academic skill development in order to do well in college-level courses.
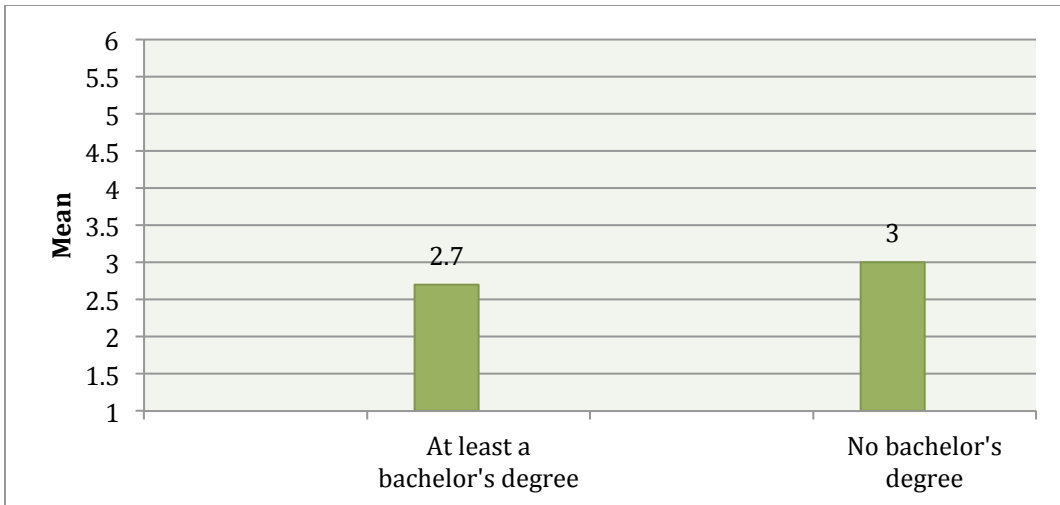
Figure 54. Indicator 25 Means: I need academic tutoring in order to do well in college-level courses.
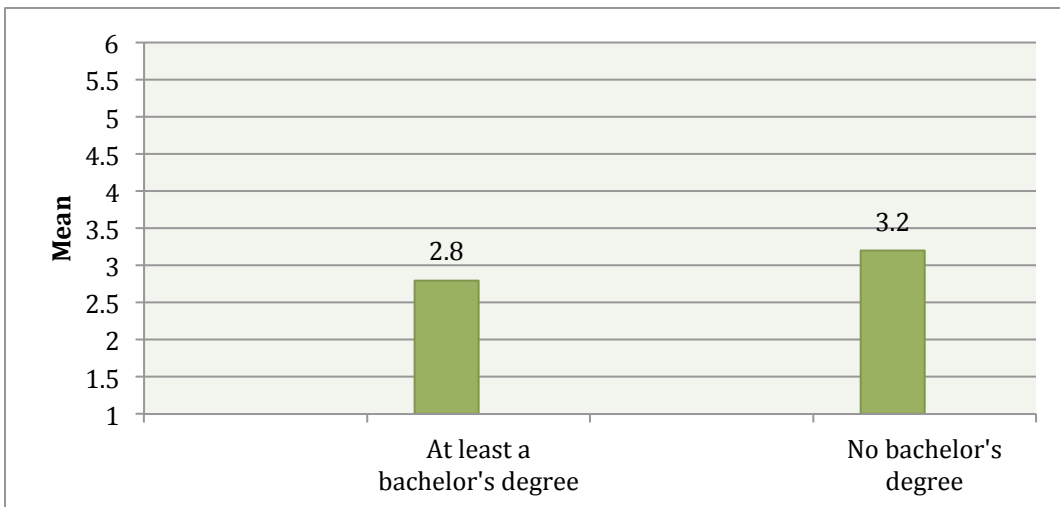
Figure 55. Indicator 26 Means: I need tutoring on how to prepare for tests at the college level.

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