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Factors influencing minority group pursuit of occupational therapy education

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FACTORS INFLUENCING MINORITY GROUP PURSUIT OF OCCUPATIONAL THERAPY EDUCATION

by

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An Independent Study
Submitted to the Occupational Therapy Department
of the
University of North Dakota
In partial fulfillment of the requirements
For the degree of
Master of Occupational Therapy

Grand Forks, North Dakota
May
2016
This Independent Study, submitted by Heber Hepworth and Courtney Schafer in partial fulfillment of the requirement for the Degree of Master of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Signature of Faculty Advisor

Date
## PERMISSION

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Heber Hepworth 04/22/2016

Courtney Schafer 04/22/2016
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ABSTRACT

There is limited representation of minority groups in the OT workforce and a
dearth of research on factors influencing minority groups to pursue and successfully
complete OT education. The CINAHL and PUBMED databases were used to explore
factors influencing minority population enrollment, experiences in health care programs,
and barriers to educational participation. A survey was constructed based on the
literature and sent to students in OT programs at the doctorate, master and assistant levels
through the AOTA Program Director list-serv. One hundred and thirteen masters (93%)
and doctorate (7%) OT students completed the survey. The majority of participants heard
about OT through family and friends (44%). Respondents rated the location (4.37 out of
5) and the reputation of an academic program (4.21 out of 5) as factors most influencing
their program choice. Only a small minority experienced discrimination in the OT
program and most felt a sense of belonging (rating of 4.5 out of 5). Respondents rated
excessive time demands (4.06 out of 5) and learning demands of the program (3.5 out of
5) as top factors contributing to stress while study skills support (4.2 out of 5),
discrimination protection, (4.15 out of 5) and supportive family events (4.11 out of 5)
were rated as most important to program success. Further study is needed to explore
effective recruitment strategies for minority populations, and the mechanisms utilized
within OT programs to create a positive learning environment. Time and learning
demands should be carefully considered in regard to their value to the learning experience. Strategies for family and study support merit further exploration.
Chapter I

Introduction

The demographic makeup of the United States is rapidly changing, and these changes are also impacting the provision of quality healthcare to clients in minority groups (Barfield, Cobler, Lam, Zhang, & Chitiyo, 2012; Haskins and Kirk-Sanchez, 2006). By the year 2050, it is anticipated that the minority population as a whole within the United States will be at 49% (Brown, DeCorse-Johnson, Irving-Ray, & Wu, 2005), which indicates that the minority population will increase by 19% in 50 years. The United Census Bureau of 2014 has estimated that 13.2% of African Americans, 17.4% Hispanics, 1.2% American Indian and Alaskan natives, 5.4% Asians, and 0.2% Pacific Islanders make up the population of the United States; the distribution of minority groups working in a healthcare profession is 14.2% for African Americans, 11.8% for Hispanics, and 6.0% for Asians (Bureau of Labor Statistics, 2014) accounting for major discrepancies for the African American, Hispanic, and Native American populations.

Lacy, McCann, Miller, Solomon, and Rueben (2012) found it is beneficial to have underrepresented minorities as practitioners in their respective medical field practice, education, and research as these individuals encourage other health care providers to be more sensitive in addressing cultural issues with regards to communication and care of underrepresented minority clients and their families (as cited in Devore, 1995).
Vu et al. (2015) noted that medical students value diversity and cultural competence because it helps them grow into their professional role as clinicians (as cited in Whitla et al., 2003 & Hung et al., 2007).

With the occupational therapy profession shifting to the occupational therapy doctorate in the year 2025, there is a need to look at the educational institutions and analyze any barriers for at-risk populations. There is extremely limited research on minority access to occupational therapy, and there has been no research conducted on minority students in occupational therapy programs, until now. Literature reviewed on this topic within this study will include: 1) the factors impacting the enrollment of minority populations in healthcare professions, 2) the social experience of the minority healthcare student, 3) factors impacting successful completion of healthcare programs and 4) incentives for minority recruitment and 5) supports provided by healthcare education programs to assist the minority student.

**Purpose of the Study**

The purpose of this study is to better understand the experience of minority students in entry-level doctorate, entry-level masters, and assistant occupational therapy programs. The study is needed so that occupational therapy educators can more effectively remove barriers for recruitment, participation, and enable candidates of minority status to successfully enter the occupational therapy workforce.

**Research Questions**

Throughout this study, we sought to answer the questions: What are the factors that influence the experience of minority students in attraction to, enrollment in, and completion of occupational therapy educational programs. To accomplish this, questions
were devised to acquire information regarding: demographics, factors influencing choice to attend college, succeeding in the occupational therapy program, and the impact of the environment of occupational therapy program on the student experience. See Appendix for a complete list of research questions. We anticipate that exploring the experience of minority Occupational Therapy students will assist occupational therapy educators in minority student recruitment and enhancement of the occupational therapy educational experience. Furthermore, study results may lead to further research in this area.

**Population**

This survey focused on students in accredited occupational therapy programs at the entry-level doctorate, entry-level masters, and assistant level within the United States. Subjects were recruited by sending an email to the occupational therapy program directors from the list-serv and asking them to pass the survey to their students who meet the inclusion criteria requirements. Exclusion criteria included: completing one year in an accredited Occupational Therapy program in the United States, and anyone not of minority status such as Caucasian females.

**Theoretical Framework**

As foundation for this research survey study, the authors used Occupational Justice as their theory to help guide the survey questions in combination with the literature review. Occupational justice incorporates the empowering rights, and providing the opportunity for all individuals in receiving a quality of life through all occupations of choice (Townsend & Whiteford, 2005; Wilcock & Townsend, 2000). Occupational alienation, occupational deprivation, occupational marginalization, and occupational
imbalance are terms used to explain the different kinds of injustices emerge with ethnic minorities.

**Definitions**

Underrepresented minorities are “racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population” (Association of American Medical Colleges, 2004, p.1). Underrepresented minorities included: African Americans, Mexican-Americans, Native Americans (American Indians, Alaska Natives, and Native Hawaiians), Pacific Islanders, and mainland Puerto Ricans (John Hopkins University, 2016).

**Summary**

Chapter I is the introduction of this independent study, an introduction to the literature to support the survey, an overview of the research questions, the population involved with this study, the theoretical framework, and definition of terms. The purpose of this study to better understand the experience of minority students in entry-level doctorate, entry-level masters, and assistant occupational therapy programs. This creates a need for educators to help remove any barriers impacting minority student’s performance while attending school. Chapter II presents specific literature findings regarding the survey in terms of: enrollment of minority populations in healthcare professions, barriers of underrepresented ethnicities in healthcare, social experience of the minority healthcare student, minority students face additional barriers while attending graduate school, incentives for minority recruitment, and healthcare program supports for minority students. Chapter III consists of the research methods used in this independent study. Furthermore, Chapter III is comprised of a description of the study design,
confidentiality measures, sampling procedures, a description of the participants involved in the study, instruments used, and data collection procedures. Chapter IV provides descriptive and visual diagrams regarding the presentation of the data analysis, and interpretation of the results. Chapter V includes the discussion of the results, limitations of the study, implications for practice, and future research recommendations.
Chapter II

Literature Review

The demographic makeup of the United States is rapidly changing, and these changes are also impacting the provision of quality healthcare to clients in minority groups (Barfield, Cobler, Lam, Zhang, & Chitiyo, 2012; Haskins & Kirk-Sanchez, 2006). Krueter et al. (2011) classified the following ethnicities to be underrepresented minorities in regard to healthcare provision: African Americans, Latinos, American Indians, Alaskan Natives, and certain Asian American and Pacific Islander subgroups because their numbers in the general population do not mirror their numbers in healthcare professions (as cited in Smedley, Butler, & Bristow, 2004). In the year 2000, the total minority population accounted for 30% of the United States population with the Asian and Hispanic/Latino populations showing the most growth in numbers (Haskins & KirkSanchez, 2006). By the year 2050, it is anticipated that the minority population as a whole within the United States will be at 49% (Brown, DeCorse-Johnson, Irving-Ray, & Wu, 2005), which indicates that the minority population will increase by 19% in 50 years.

Presently, there appears to be a disparity between the healthcare experiences of individuals in minority populations and the experiences of Caucasian individuals. Gordon and Copes (2010) noted the following disparities among minority populations: the infant death rate in the African American population is twice as high compared to the Caucasian population, the 1) rate of low birth weight in the Puerto Rican population is
50% higher compared to the Caucasian population, and the death rate in the Native American population is double what is seen in the Caucasian population (as cited in the National Institute of Nursing Research, 2001).

Disparities in healthcare may be related to the lack of representation of minority groups in healthcare professions. The United Census Bureau of 2014 has estimated that 13.2% of African Americans, 17.4% Hispanics, 1.2% American Indian and Alaskan natives, 5.4% Asians, and 0.2% Pacific Islanders make up the population of the United States. The distribution of minority groups working in a healthcare profession is 14.2% for African Americans, 11.8% for Hispanics, and 6.0% for Asians (Bureau of Labor Statistics, 2014).

It appears that representation may impact the quality of healthcare provided. Condon et al. (2013) found that underrepresented minority health care providers are more accepting of diverse clients and the challenges they face on a daily basis and are more likely to serve other underrepresented minorities and medically underserved communities (as cited in American Association of Colleges of Nursing [AACN], 2011). Moore, Beitman, Rajan, Dandrea, Nicolosi, and Shepard et al. (2003) suggest that having more Black and Minority Ethnic (BME) professionals will lead to an increase of cultural awareness and better care for non-white patients. Several sources agree that BME professionals should not be restricted to only working with non-white patients; they should work with all ethnic backgrounds (Andrew & Boyle, 2007; French, 1992). Lacy et al. (2012) noted that when underrepresented minorities are present in healthcare it vastly addresses the need for dental treatment as they are more likely to practice in
underserved minority communities, such as Hispanic and African American communities, compared to their Caucasian counterparts. They also found it is beneficial to have underrepresented minorities as practitioners in their respective medical field practice, education as these individuals encourage other health care providers to be more sensitive in addressing cultural issues with regards to communication and care of underrepresented minority clients and their families (as cited in Devore, 1995). Vu et al. (2015) noted that medical students value diversity and cultural competence because it helps them grow into their professional role as clinicians (as cited in Whitla et al., 2003 & Hung et al., 2007).

There is limited research in the profession of occupational therapy as to the factors that impact enrollment and completion of occupational therapy educational programs by minority groups, but literature from other professions, as well as limited resources in occupational therapy will provide foundational information on this topic. Literature will be reviewed to better understand: 1) the factors impacting the enrollment of minority populations in healthcare professions; 2) the social experience of the minority healthcare student; 3) factors impacting successful completion of healthcare programs; 4) and incentives for minority recruitment; 5) and supports provided by healthcare education programs to assist the minority student. An occupational justice theoretical framework will be used as a lens to guide the literature review.

A Theoretical Framework for the Minority Experience: Occupational Justice

The theoretical framework of occupational justice is a helpful lens to utilize in understanding the issues that may be encountered by minority populations when
accessing healthcare education. Occupational injustice is any sort of confinement, restriction, segregation, disruption, exploitation, exclusion, or alienation that results in one being unable to engage in meaningful occupations which will ultimately place a limit on what a person can do, be, become, and will play a role in how they belong and participate in society (Townsend & Marval, 2013). Individuals from a racial minority who are pursuing occupational therapy as a profession may experience injustice throughout their educational process. Townsend and Marval (2013) noted that six populations are at a higher risk of experiencing occupational injustice compared to privileged members of society: people with a disability, people living in poverty, people fleeing from natural disaster, people living in war and refugee zones, senior citizens, people who have been incarcerated, and people who fall outside the social ‘norm’ of social class, gender, race, religion or sexual orientation.

Individuals from minority populations may experience many aspects of injustice. Blackwell and Pinder (2014) gathered data from two first generation minority participants who were poor and lived in poverty while they were students. Both participants were from the southern part of the United States with family members working long hours to support their large families. There were three motivating factors that helped these student’s pursuit in achieving a higher education, which included the love of reading early in life, having different aspiration from their siblings, and wanting a better life. This particular study talking about first generation minority students is relatable for every healthcare profession that can be pursued by ethnic minorities. The theory of occupational justice is a framework that may be used to inspire and empower individuals
who face injustices, supporting the right of minority individuals to receive a fair and equal chance in their surrounding environment (Nilsson & Townsend, 2010).

An occupational justice perspective suggests that the experience of the individual in socio-cultural-political contexts will have a major impact on their participation in education, work, home, and other occupations and on the development of their diverse capabilities to participate in the environment. Through the lens of occupational justice, the impact of systemic and institutional barriers on clients’ engagement in meaningful occupations becomes more evident. By making barriers explicit, there is an opportunity to enable an environment that promotes equity, and better mediates the social determinants of health (MacLachlan, 2015; Townsend & Marvel, 2013). Occupational justice enables empowerment and the creation of equal opportunities for individuals who want to participate in everyday occupations (Townsend & Wilcock, 2004; Wilcock & Townsend 2000). There are four kinds of occupational injustice that emerge from this perspective (Magasi & Hammel, 2009): occupational alienation, occupational deprivation, occupational marginalization, and occupational imbalance.

Occupational alienation can negatively impact participation in valued occupations and life roles leading to psychosocial symptoms. Occupational alienation also leads individuals to feel a sense of isolation, meaningless and emptiness (Townsend & Wilcock, 2004). Clark, Mercer, Zeigler-Hill, and Dufrene (2012) have stated that there is a social disconnection between majority healthcare students and minority healthcare students. This limits the chances for minority students to participate in conversation with students/co-workers in the areas of their professions. An example of occupational alienation is when someone works in a
demeaning environment that results in them receiving lower wages (Townsend & Wilcock, 2004). This has often been the case for ethnic minorities who do not have the same privileges as the ethnic majority in society. Occupational alienation may impact the desire of minority populations to go to college, or to pursue professions that are not commonly sought out by others in their minority group.

Occupational deprivation is represented by lack of ability to participate in physical and social context/environments (Magasi & Hammel, 2009). Occupational deprivation is considered an injustice because it confines individuals’ participation to a limited number of occupations within a given environment (ex: work, school) (Townsend & Wilcock, 2004). Clark et al. (2012) propose that minority students may experience occupational deprivation when they are not equally included as majority of students are in a given social situations or in the variety of social environments that majority students may experience.

Occupational marginalization occurs when an individual’s liberty to participate in occupations is taken away (Magasi & Hammel, 2009). Occupational marginalization limits the right of individuals to participate and the choices of participation (Townsend & Wilcock, 2004). In this scenario, minority students are able to participate in education, but their participation is marginalized by having limited choices that reflect their lifestyle or values. Clark et al. (2012) identify occupational marginalization as a common issue for minority students who are pursuing healthcare professions. Currently, many healthcare programs are trying to develop new ways to create a more comfortable environment for minority students.
The fourth and final emerging type of occupational justice is occupational imbalance. Occupational imbalance occurs when individuals do not have the same chance as others to actively engage in society (Magasi & Hammel, 2009). Individuals in minority groups experience occupational imbalance when they must work longer hours for the same pay that others receive for shorter work days, if equal rights and privileges while working are not available (Townsend & Wilcock 2004). Another example involves the disparity of income afforded to individuals based on their occupations in the economy. Recruitment of minority groups into the occupational therapy profession provides more opportunity for individuals of a minority status to receive higher economic reward and success in society. For this reason, Clark et al. (2012) are trying to implement new ways of incorporating minority ethnic students into health care programs.

Enrollment of Minority Populations in Healthcare Professions

Traditionally healthcare has been considered to be a white female, middle class dominated profession (Mason & Sparkes, 2002; Nicholls & Cheek, 2006). Current statistics suggest that the physiotherapy profession is increasing in ethnic minority diversity, since enlarging the enrollment participation agenda for this specific program (department of education and skills, 2003). The Chartered Society of Physiotherapy (2011) stated that 10% of Black and Minority Ethnic (BME) physiotherapy students were taking courses in the United Kingdom. This makes it below the United Kingdom (UK) average of 18% BME students who were enrolled in classes during the same year (Higher Education Statistics Agency, 2012). The reality is that the majority of whites who are attending physiotherapy school remains the same as it did years ago (Greenwood, Lim, &
Bithell, 2005). Participants agreed that the majority of the students that were going into physiotherapy were predominately white. The lack of ethnic diversity within the profession of physiotherapy has raised great concern because physiotherapists are national providers of health and it makes sense to have a better representation of minority groups in this particular field (Greenwood et al. 2005; Chartered Society of Physiotherapy, 2010.)

There is also a lack of ethnic diversity in the dental profession, which can increase the chances of creating a barrier between health care providers and the community (Sullivan Commission on Diversity in the Healthcare Workforce, 2013). The reason why this barrier can happen is because society has developed stereotypes between ethnicities that should not be in reality the deciding factor in the end. Greenwood et al. (2005) mentioned that the majority of ethnic groups were looking for solid career opportunities that lined up with their interests. This study compared minority and majority student’s perceptions of occupational therapy to physiotherapy and nursing based upon areas of recruitment. The participants who were surveyed for this study consisted of eighteen first year undergraduates in pharmacy and allied health professions (AHP). Seven senior high school students, and seven access students were also added as participants. The study found overall that individuals representing minority groups feel that ethnicity should not be the deciding factor of what patients they should work with, rather their skills should be the determining factor of client assignment.

The dental profession is struggling due to the disparity of African Americans, Hispanics, and American Indians within the health care field in proportion to their
prevalence within the United States (Lacy, McCann, Miller, Solomon, & Rueben, 2012). If this disparity could be resolved, the dental profession would be much greater in numbers, and profit in every aspect. Thirty percent of the United States population is made up of underrepresented minorities but only 6% of this population are dentists enrolled in dental school. According to the Bureau of Labor Statistics of 2014 the percent total of employed ethnic minority dentists is: 5.6% African American, 15.5% Asian, and 6.8% Hispanic.

Benefits of Underrepresented Ethnicities in Healthcare

There are several barriers that may interfere with minority students enrolling in health care professions. Barfield, Folio, Lam, and Zhang (2011) identified the following barriers for all students interested in allied health professions: 1) social influence (e.g. role models, cultural influence, etc.); 2) experiential opportunity (e.g. access to part-time jobs and shadowing experiences, scholarships, etc.); 3) academic preparation (e.g. high school academic performance specifically in math and science classes); 4) physical selfefficacy (e.g. athletic ability, physical fitness level and personal health); 5) and selfmanagement (e.g. workload and demand of major, study skills, and obligations outside of the classroom, etc.). To help with recruitment and retention of students interested in allied health education, the authors of this study discussed the importance of addressing each of the barriers they identified.

Barfield et al. (2011) concluded that social influences had the highest influence on degree program choice and recommended increasing exposure to the allied health professions. For example, children within the grade school setting might be supplied
with program-specific recruitment materials. The authors noted that coursework and grade point averages can be demanding, which is why it is important for students to be aware of what is expected of them for entrance into an allied health profession and academic preparation and have early exposure at a young age. The authors highlighted the importance that personal experience has on allied health students selecting their major, which is why they believe that students who are exposed to sports and are physically active tend to feel more confident pursuing these types of majors (as cited in Stewart et al., 2002). In addition, allied health education has extra-curricular requirements such as internships, clinical hours, and fieldwork placements, which can create potential barriers for its students, which is why self and time management are critical to being successful (Barfield, Folio, Lam & Zhang, 2011). In addition, heavily utilized computer-assisted technology (CAT) in healthcare education programs may be problematic for minority students as they are less likely to own their own personal computers and have limited experience with the devices (Haskins & Kirk-Sanchez, 2006).

Barfield, Cobler, Lam, Zhang, and Chitiyo (2012) conducted a study to identify the differences between minority and Caucasian students in regard to perceived enrollment barriers in their pursuit of allied health professions. They found that African Americans were highly influenced by outside social factors such as: 1) personal influence (e.g. high school counselor); 2) social influence (e.g. social interactions within the program); 3) academic preparation (e.g. high school academic performance, especially in math and science classes); 4) career opportunity (e.g. interest in degree); 5) individual aspiration (e.g. desire to help others); 6) and physical self-efficacy (e.g. success in
sports), when making an enrollment decision. Students felt that social influence, experiential opportunity, academic preparation, physical self-efficacy, and self-management were all enrollment barriers. African Americans felt that the following barriers produced greater obstacles compared to their Caucasian counterparts: 1) social influence (e.g. high school teacher, counselor or coach); 2) experiential opportunity (access to part-time jobs in field and job shadowing); 3) academic preparation (e.g. high school academic performance, especially in math and science classes); 4) and physical self-efficacy (e.g. study skills, course difficulty in major, obligations outside of major, etc.). It is also important to take into consideration the high costs of attending health care programs, and the low numbers of minority students who enter these schools (Page, Castillo-Page, Wright, 2011).

Donini-Lenhoff and Brotherton (2010) highlighted that minority students interested in allied health (e.g. physical therapy, occupational therapy, recreational therapy, music therapy, etc.) are more likely to attend a for-profit institution, which typically have higher attrition rates for minority students than non-minority students compared to other types of institutions. Steep tuition and fees, rising levels of student loan debt, and loan and grant amounts available are problematic for all allied health students. Haskins and Kirk-Sanchez (2006) found education disparities at the bachelor degree level and 25 years-old age group as 28.1% of non-Hispanics have their bachelor's degree compared to 17% of African Americans and 10.6% of Hispanics (as cited in Therrien and Ramirez, 2000).
Additional barriers for individuals interested in occupational therapy include the low visibility of the profession as a whole, and the proposed transition of the profession from an entry-level master’s to a doctoral degree. Greenwood et al. (2005) sent out questionnaires and conducted interviews with minority groups, schools with a high Caucasian population, and college students in order to understand perceptions about occupational therapy. The participants expressed that occupational therapy was less familiar to them compared to physiotherapy and nursing professions. Overall, 15% of all students interviewed and 22.8% of ethnic minority students interviewed had never heard about occupational therapy. Over half of the participants from the study had heard about occupational therapy but had no idea what occupational therapists did. The physiotherapy and nursing professions were more commonly known compared to occupational therapy. Haskins and Kirk-Sanchez (2006) identified the rapid movement to the doctorate level as a barrier for minority students in physical therapy education and these same barriers, added tuition fees and degree demands, would likely impact occupational therapy unless there is a vast improvement in strategies utilized to increase recruitment and retention.

Brown, Crabtree, Mu, and Wells (2015) noted that the shift in entry-education for occupational therapy is expected to result in an increase in salaries, advancement in profession (i.e. primary care), and professional competence (as cited in Smith, 2007). However, there is not a clear consensus on the impact of this change. Smith (2007) sent a survey to 353 occupational therapy alumni from a Midwestern University in the United States and found that 83% of respondents felt that the switching to the
Occupational Therapy Doctorate (OTD) would not enhance interpersonal relationships, achieve a higher level of public recognition of the profession, or allow the therapy process to begin without a referral or even enhance reimbursement from third-party payers. Brown et al. (2015) also argue that movement of occupational therapy to an entry-level doctorate will create a decrease in the enrollment of those who are socioeconomically disadvantaged and in the overall student diversity. It was also noted that shifting to an OTD would result in higher education costs with no real increase in salary upon completion of occupational therapy education, which in turn results in a sharp decrease in qualified academic professors, personnel shortages, and equity admission issues for disadvantaged societal groups. Currently there are no other countries, aside from the United States, with occupational therapy doctorate degrees and there is no talk of launching one internationally anytime in the near future.

The Social Experience of the Minority Healthcare Student

There are several social factors that can impact whether or not minority students pursue and complete healthcare education programs. Dansby and Dansby-Giles (2011) investigated factors that hinder graduation rates among at-risk students currently in high school who show potential to be first generation college students. The at-risk students happen to be those who are most likely to drop-out or not succeed in school. These factors include: 1) difficulties at home and financial concerns; 2) basic needs (e.g. food, water, shelter, etc.) as well as medical care not being met; 3) difficulty concentrating on school work; 4) lack of communication with parents or guardians; 5) lack of supervision in the home setting; 6) an absence of positive role models who can demonstrate positive
solving skills; 7) self-discipline; 8) and helpful study techniques; 9) violence; 10) neglect or abuse in the home setting; 11) struggles with accessing mental health services; 12) and safety issues (e.g. joining a gang, cyber-bullying, peer pressure, etc.). The authors studied in depth the problems stated above in order to enhance understanding and provide deeper insight to all members on the educational team and find ways to implement an educational program that addresses drop-outs. Examples of these recommendations for all involved with at-risk students include: 1) demonstrating verbally and nonverbally that they care to decrease communication barriers; 2) listening intently and paying full attention to the student; 3) being respectful; 4) having an abundance of staff on the mental health team including aides to properly deal with paperwork; 5) having transportation options; 6) and having classes that go at the student's' pace; 7) and finding ways in, which students can be fully engaged in activities they love (especially extracurricular activities). The authors stated that schools having temporary shelters, which provided free and reduced meals would be the most beneficial.

For first generation college students, three factors stood out as related to continuity of high school education and success. The students who were able to successfully complete a course in higher education loved to read at an early age, were uniquely compared to their siblings, and they all wanted a better living environment (Blackwell & Pinder, 2014). It was further noted the first generation students who went directly from high school to college stated how difficult it was to stay on top of having jobs while going to school. One of the participants stated that attending college full-time and working were the hardest experiences of their life. Despite the hardships experienced while attending college each participant said it was worth it. Each participant mentioned
their living environment and prior education level as poor. The participants all had at least one supportive parent who was willing to make necessary changes in order for them to be successful in school. The participants had the determination that led them to achieve their desired goal of finishing college.

**Minority Students Face Additional Barriers While Attending Graduate School**

Clark et al. (2012) measured the experiences of 87 minority students and 313 students from majority ethnic groups to examine the barriers minority students face socially, emotionally, academically while attending graduate school. They found that the degree to which students feel a sense of belonging appears to be a contributing factor to the success of underrepresented minority students in higher education. Some minority students who attend predominately ethnic majority universities have expressed they felt they were overlooked and underestimated in the classroom setting. Overall, these students expressed that attending another university would solve the issue (Solorzano, Ceja, & Yosso, 2009). This has also been felt by other racial ethnicities not just African Americans, Asians, or Hispanics (Yosso et al. 2009). Based upon a study on the barriers of the success in ethnic minority students attending a graduate psychology program, ethnic majority students’ belongingness was slightly higher than ethnic minority students. The categories of autonomy, emotional distress, and academic had little difference across the board with the success of minority students attending the graduate psychology program (Clark, Mercer, Zeigler-Hill, & Dufrene, 2012). Overall the study reinforced the concept that ethnic minority students do receive higher racial microaggressions than
ethnic majority students even though the reports were low on both ends of minority and majority students.

This study defined a microaggression as an unintended, but offensive comment geared towards minority groups, which reinforces prejudices (as cited from dictionary.com). Racial microaggression can happen through microinsults, microassaults, and microinvalidations. Microinsult is a type of microaggression that is demeaning to a person’s identity (yourdictionary.com). An example of an microinsult occurs when African Americans are stereotyped to work in fast food restaurants. Microassaults are a type of microaggression of purposely participating a discriminating act towards a person. An example of microassault occurs when someone is name calling a person by telling them to go back where they came from. Microinvalidation is a type of microaggression that total neglects any thoughts or feelings from a person. An example of an microinvalidation occurs when a person asks someone where they are from and not taking their response literally. All of the microaggression categories have the potential to create separation barriers between ethnicities through hatred, bitterness, and grudges. For example, in a quantitative study of black African Americans, who were either graduate students or workers in higher education, participants reported being told they were less intelligent, second class citizens, potential criminals, and the inferior culture (Sue, Nadal et al. 2008).

Yeowell (2013) explored the ethnic diversity experiences of minority physiotherapy students’ while enrolled in a physiotherapy program. Three emerging themes surfaced within this qualitative study; lack of ethnic diversity, impact of decreased ethnic diversity, and potential benefits and risks of increased Black and
Minority Ethnic (BME) representation within the physiotherapy program (Moore et al. 2003). Lack of ethnic diversity was represented by statements such as “Ooh wow, I’ve never seen a Black physio before”, “Yeah but isn’t it all White”? The second theme, impact of decreased ethnic diversity, was represented by comments regarding decreased empathy for others, feeling out of place and viewing physiotherapy as only for white students. The theme entitled potential benefits and risks was characterized by student comments as they were viewed by their peers as race experts, having an insider understanding, and having additional cultural competence based on their ethnicity. There was a consensus among students that when practicing or participating in clinical learning experiences, they were not prepared to address the needs of individuals from a variety of religions and cultures. Students expressed concern that they did not know the different religions and cultures of their clients. Respondents mentioned that increasing the different backgrounds will only increase the opportunity for working with someone different from oneself and create more opportunities for the profession and the education of others (Yeowell, 2013).

**Incentives for Minority Recruitment**

Several initiatives have been proposed for improving the recruitment and retention of minority students in healthcare professions. In dentistry, exposing high school students to the dental profession earlier on has been identified as important to recruitment to dental education (Lacy, McCann; Miller et al., 2012; Formicola, Klyvert, & Thompson et al., 2003). Mentoring programs for underrepresented minority groups have also been proposed as a solution. An example of this is an engagement program
developed for underrepresented minority groups by the University of Michigan School of Dentistry (Inglehart et al., 2014). The program was designed to recruit underrepresented minority (URM) and low income Ypsilanti High School students for the dental profession. All the high school students that volunteered to be a part of the engagement program had the opportunity to participate in several activities the dental mentors provided during the program. The goal of this study was for dental students and dental hygiene students to collaborate together to provide a mentoring program to URM high school students, so they could provide information on oral health care to the communities and based on the results given, both the mentors and mentees found the outreach program to be successful and hoped to stay in contact after the program was over. An example of the impact had on a student was: a mother mentioned that her daughter never been interested in academics, but now she wants to go to college.

Degazon, Natan, Shaw, and Ehrenfeld, (2015) emphasized the importance of providing current and accurate information about the importance of nursing, so that minority students can create a better perception about nursing. They suggest that recruitment material for nursing should incorporate the academic demands and how challenging it can be as a minority student. They believe that this will more likely attract those minority high school students who have higher GPA’s and those who are motivated to fulfill the role of a nursing profession. Ben Natan, and Oren, (2011); Bovbjerg et al., (2009) in the effort to expand diversity among Registered Nurses (RNs) in both the USA and Israel have suggested that supply strategies include recruiting international RNs, training second career professionals, increasing financial compensation for nursing, and improving workplace conditions.
Dental schools that had lower first year tuition, lower total financial aid awarded, and lower first-year total costs were most successful in recruiting underrepresented minority students. Dental schools located in urban counties that made it their mission to recruit students were most victorious in Hispanic recruitment. The following items were correlated with triumphant African American recruitment: schools in states with emergency Medicaid dental benefits: schools with lower total financial aid awarded, a cultural environment in the classroom that is respectful and accepting of diverse populations, high percentage of URM clinical faculty, humanistic treatment of clients. One item that did not positively influence African American recruitment was total financial aid awarded by the dental school they selected to attend.

Distinctive strategies may need to be tailored to the values of a given minority population. For example: Reiskin and Haussler (1994) found that Asian-Americans perceived nursing to be less attractive than African American and Hispanic-American females. The findings have indicated that several studies done in the US and internationally have described differing viewpoints of careers and nursing career opportunities (Degazon, Natan, Shaw, & Ehrenfeld, 2015). Leonard (2006) proposed the changes with nursing has occurred by reviewing diversity in education, which has brought to attention that whites make up 69% of the population is expected to decrease to 52.8% by 2050.

Recruitment might also be influenced by the representation and status of minority faculty members in healthcare education. However, minority representation by faculty is not always evident. Furthermore, minority faculty members who are at the assistant and
associate professor levels are less likely to receive a promotion than white faculty members (Fang, Moy, Colburn, & Hurley, 2000; Palepu et al., 1998; Nivet, CoraBramble, & Butts, 2009). When minority representation is low, medical schools that have low minority representation may need to physically recruit ethnic minority faculty in order to increase the level of diversity within their programs (Page, Castillo-Page, & Wright, 2011). It is important to note that minority and local minority faculties are very different from each other when it comes to this comparison. The added contribution that minority faculties provide towards academics should not be judged by health disparities, but by the overall experiences that benefits the whole institution. This is something to take into consideration while minority students are presently engaged in attending healthcare programs.

Page, Castillo-Page, and Wright (2011) conducted a research study on diversity programs with minority faculty of the nation's medical programs and what indicators lead to higher faculty diversity. Based upon their results, improvements of minority student attendance have the capacity to impact how many minority faculty members will be present in the future. The reasoning for this is that minority students who attend medical schools usually meet the credentials of becoming faculty members of the future. The representation of minority faculty members also positively correlated with the increased attendance of minority students enrolled in higher education programs. In 1998 African Americans and Hispanic totaled to be 14.2% within all medical students and in 2008 it amounted to 15.1% (Association of American Medical Colleges, 1998, 2010). However, other statistical comparisons demonstrate that there was a higher representation of minority medical student in association with higher ethnic diversity among faculty in
1998 than there was in 2008. An example is >4.2% faculty representation in 2008 with more Latino medical students in 1998. In the long scheme of things, it will be helpful for ethnic minority students to attend out of state institutions in order to plant seeds for future minority faculty members elsewhere in the USA.

**Healthcare Program Supports for Minority Students**

There appears to be several factors that contribute to the successful experience of minority students in healthcare education programs. The factors that will be discussed are: 1) attitudinal mindsets; 2) providing healthcare education opportunities for minority students; 3) implementing multiculturalism into programs; 4) educational costs; 5) population characteristics; 6) and providing clinical experience.

African Americans students have mentioned having that an open mind and trust with faculty and peers play an essential role in classroom success (Booker, 2007). In order to retain ethnic minority students, programs should provide a variety of social and professional activities that encourage a sense of belongingness during their academic careers (Clark et al., 2012). Research has indicated that students feel more comfortable when programs implement multiculturalism and diversity into their programs (PopeDavis. Liu, Nevitt, & Toporek, 2000). Whether someone likes multicultural training or not, giving this kind of respect to underrepresented minorities has been proven to help those who attend these programs (Clark et al., 2012). These multicultural programs can help programs gain awareness of the impact that microaggressions have on ethnic minority groups.
Andersen et al. (2007) hypothesized that students of all socio-economic status and ethnicities select the school they want to attend based on their own personal fit with the school’s environment and or location, characteristics, and the curriculum. The authors conducted a study to evaluate what enhances minority recruitment in dental schools. They identified the following factors as important to student selection including: 1) community characteristics; 2) population characteristics (i.e. ethnicity, socioeconomic status, etc.); 3) dental school characteristics (i.e. mission statement, pipeline program, ownership, educational costs, culture etc.); 4) Community Based Dental Education (CBDE) (i.e. curriculum, instruction time allotted, treatment of patients, etc.); 5) extramural clinical rotations (i.e. number of weeks needed to complete, quality of time, perception of experience, etc.).

To better understand the cultural climate of dental colleges in the southwest, Vu et al. (2015) sent out a questionnaire to dental and dental hygiene students to obtain their: 1) perspectives on campus experiences; 2) cultural comfort; 3) diversity awareness; 4) racial pressures; 5) fair treatment; 6) respect; 7) lack of support; 8) patient care; 9) and overall satisfaction. The authors of this study concluded that overall the cultural climate of these colleges was positive but suggested that the climate could be improved with cultural competence training and focusing on respecting all cultures, with added emphasis on the African American experience. Many health care professions have tried different methods to recruit and retain minority students in their educational programs. A nursing program at a faith-based sciences university in the western United States created a “Success in Learning: Individualized Pathways Program (SLIPP)” to attract graduate disadvantaged and ethnically diverse students (Condon et al., 2013). From the SLIPP, seventy students
entered the nursing workforce and are currently serving clients similar to their own background. Key features that created success for these students included: 1) preentrance preparation program; 2) personal connection with the SLIPP professors; 3) Exam Analysis, which brings to the student’s attention what they can improve on during the test; 4) and financial support, which encompasses a tuition discount; 5) scholarships; 6) housing and living stipends; 7) and other materials to successfully complete demands of the program.

Similar to the SLIPP program mentioned above, a pre-entry program called “Coppin Academy for Pre-Nursing Success (CAPS)” was implemented in Baltimore, Maryland for 8th to 12th graders from disadvantaged backgrounds and ethnic minorities who are interested in pursuing nursing as a major (Gordon & Copes, 2010). Features of the CAPS include: 1) mentoring; 2) counseling; 3) and advisement throughout the entire program; 4) academic support (i.e. tutoring); 5) partnership with the University’s Upward Bound Program (one of their main focuses is on cultural and social enrichment); 6) reality-based clinical exposure; 7) workplace mentoring; 8) monthly stipends; 9) academic; 10) career and financial aid counseling; 11) and an advanced placement options for high school students who are interested.

Clinical setting exposure greatly facilitated these students’ successful transition into the clinical learning environment and workplace mentoring provided role modeling to demonstrate the appropriate values and behaviors within the professional nursing setting. Academic support aided in intensive remediation in order to pass the Nurse Entrance Test (NET) and improve SAT scores and tutoring helped addressed the student’s academic needs if they had learning disabilities and/or special circumstances.
The purpose of the monthly stipend was to enhance the opportunity for students to devote their time and energy to schoolwork instead of working long hours and stressing about financial responsibilities. Students from disadvantaged backgrounds tend to have limited knowledge and experience with financial, academic and career planning so this program made it possible for them to have access to this information as well as additional support. These students were also encouraged to be involved in career fairs, lectures and focus groups that the University offered to help them be social and enhance the educational experience that college life offers. The CAPS program went above and beyond their expectations as their retention rate was higher than the University’s average and the first class in the CAPS program all passed the National Council Licensure Examination (NCLEX-RN exam) on the first try, which they selected to serve local populations concluding graduation.

Summary

The purpose of this study is to identify the factors influencing minority group pursuit of and success in completion of occupational therapy education. Little research is available regarding recruitment and retention of occupational therapy students, however, information from other healthcare professions is helpful in identifying factors of interest. Research is needed in occupational therapy to identify factors influencing the recruitment and retention of minority students in occupational therapy education.
Chapter III

Methodology

Chapter 3 is a description of the research design, sample procedures, and characteristics of the population. This section also presents the inclusion criteria for the participants who were selected to apart of the research study. Furthermore, the instruments used and to survey, collect, analyze data are explained. The study was approved by the University of North Dakota (UND) Institutional Review Board (IRB).

Design and Sample (IRB)

A non-experimental descriptive survey design was used to gather data from underrepresented minority (URM) students in occupational therapy programs at the doctorate, masters and assistant levels throughout all regions within the United States of America. Following the completion process of the survey, no occupational therapy assistant students participated in the study. Data was gathered through use of online survey format created by the authors on Qualtrics.com and was released on October 20th, 2015 to November 15th, 2015. The Director of the Occupational Therapy Program at the University of North Dakota sent out a recruitment statement on the AOTA Program Directors List Serve, which was received by all program directors of occupational therapy assistant, entry level occupational therapy master’s program, and doctoral occupational therapy programs in the United states. Program Directors were invited to pass the recruitment statement and a link to the survey on to their students. Researchers were seeking the perspective of underrepresented minority students who have successfully completed at least one year of their selected programs. Occupational therapy students
that identified as being underrepresented minority students and who had successfully completed at least one year of their OT academic program were invited to participate in the survey.

The invitation e-mail included: a description of study, the purpose, procedures, risks, and benefits (See Appendix). Participants were informed that participation in the Qualtrics survey served as a form of consent. The following regions of the United States were represented in the survey: southwest, northwest, upper central, lower central, upper northeast and lower northeast. The subjects were informed that they would a total of 4 weeks to complete the survey.

**Survey Development**

The survey developed and explored the experience of occupational therapy (OT) students in regard to their pursuit of occupational therapy education. The survey consisted of questions related to general demographics information such as: age, years attending college, first generation student, gender, race, geographic location, and program level. Other categories within the survey consisted of: 1) first hearing about occupational therapy; 2) decision to pursue occupational therapy as a career; 3) supports to success in occupational therapy program; 4) level of satisfaction while attending occupational therapy program; 5) experienced discrimination in the occupational therapy program; 6) selection of current occupational therapy program; 7) stress/challenges experienced during occupational therapy application process; 8) suggestion to improve experiences of ethnic minorities attending occupational therapy programs; 9) and factors contributing to stress during occupational therapy school. There were a total of 20 questions all with forced choices using a Likert scale with opportunity for open-ended response for select
items. All of the questions developed were informed by a comprehensive literature review, with particular attention to a survey format developed by (McCann, Lacy & Miller 2014).

**Review and Revisions**

Permission was obtained from McCann, Lacy and Miller (2014) to use their survey of dental students as a prototype for this survey. In addition, the survey was strengthened by informing each survey question from the literature on the topic. Once the initial survey was developed, feedback was obtained from the project advisor in the occupational therapy department, consultation with a statistician, and an individual with expertise in the Qualtric survey format. During the process many of the questions were eliminated or combined in order to streamline content and shorten the length to encourage survey completion. Once the authors received this feedback, changes were made to the survey prior to sending it to potential participants.

**Participants**

The authors of this study obtained their participants through the utilization of the AOTA Program Director’s List Serve. The survey was directed to occupational therapy students. The inclusion criteria for survey participation included: (a) must be a selfidentified minority (b) must be an occupational therapy student pursuing either an entry level occupational therapy masters or doctorate programs, or pursuing certification in an occupational therapy assistant programs within the United States of America. There were 140 individuals that started the survey, but 113 individuals who completed the survey.

The sample was sent out to a total of 470 accredited occupational therapy programs,
representing a total of 18,550 students enrolled, which included master’s and doctorate students and 10,048 occupational therapy assistant students. (AOTA Academic Programs Annual Data Report, 2014-2015).

Protection of Participants

The survey entitled “Minority Access to Occupational Therapy” was approved by the UND IRB. The potential participants were informed through an email recruitment letter that completion of the survey indicated their willingness to participate in this survey (See Appendix A). By clicking on the embedded URL link in the email, participants were directed to the survey’s “Welcome Page”, which again briefly described the purpose of the survey, and explained how to proceed with its completion. Once the participants began responding to survey questions, consent was finalized. Participants were informed of the right to withdraw from the survey was possible at any time with no negative consequences. There was no identifiable data collected as part of this research. Basic demographic information was collected (i.e. location, gender, ethnicity) in order to analyze these variables.

Data Collection

Within the email consent form, participants were asked to access the online survey through the embedded link provided. Once the individuals agreed to participate in this survey, they were directed to the questions in the following sections of the survey: “Factors Influencing Choice to Attend College”, “Succeeding in the Occupational Therapy Program”, and “Environment in the Occupational Therapy Program”. There was a total of seven “Demographic” questions placed at the end of the survey. Quantitative data collection and analysis was automatically compiled by
Qualtrics system, which included frequencies and percentages.

**Summary**

Chapter III provides an overview of the authors research project design, sample procedures, and characteristics of the population. In addition, Chapter III includes inclusion criteria for the research population, a description of the process to ensure confidentiality, and procedures to collect and analyze data. Chapter IV reports the results from the descriptive data analyses.
Chapter IV

Presentation, Analysis, and Interpretation of Data

Demographics

The survey was sent to every occupational therapy program using the AOTA Program Director’s List Serve within every region of the United States of America. The survey was sent out using the Qualtrics online service with an introduction notification about the survey. The survey opened on October 20th, 2015 and closed on November 15th, 2015. The researchers received a total of 140 responses but 27 respondents did not fully complete the survey, which brought the total of responses completed to 113 or 81% completion. Of the 100 participants who selected to identify their geographic region where 29% were from the southwest, 25% were from the lower northeast, 21% were from the upper central, 10% were from the upper northeast, 8% were from the northwest, and 7% were from the lower central. See results in Figure 1.

Figure 1

Geographic Location in the United States
Of the 113 respondents who selected to identify their gender, 13 were males and 88 were females’. The vast majority of respondents (87) identified the program level of their course work as entry-level occupational therapy masters. Only 7% indicated having an educational level of entry-level occupational therapy doctorate and none indicated for the certified occupational therapy assistant. Over half of the respondents were over the age of 25 where 37% of respondents fell in the 25-29 category and 18% in the 30 and over. Forty-five percent of respondents were under the age of 24. Thirty-four percent of the respondents have spent the last four years working on their degree, 27% have spent five years working on their degree, and 39% have spent six years, and over working on their degree. Over half of the 107 survey respondents identified with being classified as Caucasian, 29% as other, 21% Asian, 11% African American, 4% Pacific Islander, and 0% Native American. The respondents’ age indicated that 51 of them were older than 25 years of age and 41 of them were less than 24 years of age. The total amount of years attending college of
the respondents ranged from less than 4 years to over 6 years. The respondents with less than 4 years of college came to 31, 25 respondents had 5 years of college experience, and 36 respondents had 6 years of college or more. The respondents who were not first generation students (60) almost doubled how many first generation students (32) who participated in taking the survey. See results in Figures 2 and 3.

**Figure 2**

*Ethnicity of Participants*
Factors Influencing Occupational Therapy as a Career Choice

Respondents (n= 129) were asked how they first heard about occupational therapy. The ten options of hearing about occupational therapy were reduced into four categories: 1) search by self (e.g. read about it, self or other received occupational therapist, vocational interest inventory, and through a college course); 2) told by another (e.g. school advisor or teacher, and family member or friend); 3) work (e.g. work experience in health care setting, and shadowing an occupational therapy practitioner or student); 4) and research media (e.g. television or other virtual reality, and while researching other healthcare professionals). In contrast, minority students were more
likely to find information by themselves, and they were also less likely to be told by someone else compared to Caucasian students. Participants (30%) also selected the category of “While Researching Other Health Care Professionals” as the option representing how they first heard about occupational therapy. See results in Figure 4.

**Figure 4**

*How Did Minority Students First Hear About OT?*

(n = 129)

Respondents were asked to rate on a five point Likert scale ranging from extremely unimportant to extremely important the factors that led them to pursue occupational therapy. Factors in their decision to pursue occupational therapy included: 1) variety of work settings; 2) challenge and variety in the work; 3) lots of personal contact; 4) holistic approach of the work; 5) opportunity to work in a healthcare setting; 6) job security; 7) opportunity to help disabled individuals; 8) good paying job; 9) chance to use creativity; 10) regular weekday hours; 11) opportunity for promotion; 12) and
opportunity to serve in my cultural background. A substantial number (91%) identified job security as extremely important in their decision to pursue occupational therapy. Opportunity to help disabled individuals was the second greatest reason (87%) followed by a tie in third for lots of personal contact, and opportunity to help disabled individuals (74%). See results in Figure 5.

Figure 5

Reason for Pursuing OT Career

Respondents were asked to rate on a five point Likert scale ranging from extremely unimportant to extremely important the importance of the following factors that led to their selection of their current occupational therapy program.
Seventy-five of the 126 respondents identified “location” as extremely important, however, 46 of 113 respondents rated “desire to live away from home” as extremely unimportant. Job perks (e.g. reputation for excellence, location, gaining automatic acceptance into selected OT program, and having family and friends nearby) had the highest of the three categories followed by work situation (e.g. reasonable tuition, available financial aid package, length of program and helpful admissions advisors). See results in Figure 6.

**Figure 6**

*Reason for Selecting a Specific OT Program*

Success in the Occupational Therapy Program

Respondents were asked to rate the influence of the following supports that contributed the greatest acceptance/entry into the occupational therapy program. The
types of support were rated on a five point Likert scale ranging from extremely influential to not at all influential. Supports rated included: 1) rigorous pre-OT coursework; 2) guidance from pre-OT faculty advisor; 3) strong family support; 4) assistance from an OT student already in the program; 5) assistance from friends; 6) formal college assistance program for minority groups; 7) and personal determination to work hard. The majority of respondents (111) identified one factor as having the most influence on successful acceptance and entry into the professional occupational therapy program and that was personal determination to work hard. See results in Figure 7.

**Figure 7**

*Top Five Contributions to Successful Application to OT School*

Respondents were asked to rate the level of stress/challenges experienced in relation to applying to OT programs. Ten types of stresses and challenges were rated on a five point Likert scale ranging from extremely stressful to not at all stressful. The
challenges rated included: 1) filling out application paperwork; 2) participating in an interview process; 3) relocating; 4) obtaining financial resources for tuition and fees; 5) understanding occupational therapy program curriculum; 6) completing demanding prerequisite coursework; 7) communicating with my family about the program; 8) planning for my safety in school; 9) obtaining required volunteer hours; 10) and securing references for application. Participating in the interview process and obtaining financial resources for tuition and fees were deemed the most challenging for the respondents. See results in figure 8.

**Figure 8**

*Stresses Related to OT Application*

Respondents were asked to rate the importance of the following supports that contributed the greatest success in the occupational therapy program. The types of support were rated on a five point Likert scale ranging from extremely unimportant to extremely important. Supports rated included: 1) personal advising, 2) financial advising,
3) tutoring/mentoring program, 4) flexible testing dates, 5) academic advising, 6) study skills support, 7) supportive family events, 8) clubs and networking, 9) and discrimination protections. Study skills supports and supportive family events were deemed the greatest support in their completion of academic coursework while in the OT program. See results in Figure 9.

**Figure 9**

*Importance of Supports to Program Success*

![Importance of Supports to Program Success](image)

Using a five point Likert scale of never, rarely, sometimes, often, and always, respondents were asked to rate the factors that contributed the greatest stress while in occupational therapy school regarding: 1) daily life (e.g. social isolation, inadequate living situation, adequate nutrition, lack of resources, and adequate health care); 2) time (e.g. excessive time demands, multiple role expectation, family turmoil, and learning demands of the program); 3) study (e.g. undeveloped study habits); 4) and money (e.g.
financial uncertainty, and limited transportation options).

Other results, which fell into the “often” to “always” categories comprise of: learning demands of the program, financial uncertainty, and multiple role expectation, respectively. The significant results that fell within the never category included: lack of resources (i.e. personal laptop computer), limited transportation options, and inadequate living situation. See results in Figure 10.

**Figure 10**

*Factors Contributing to Stress While in OT Program*

![Graph showing factors contributing to stress while in OT program with mean values]*

**Environment of the Occupational Therapy Program**

The variables impacting the environment of the occupational therapy programs were further explored, once divided into the following categories: expectations related to being a minority, verbal racism, belonging/satisfaction, and external racism. Most respondents (n=107) who selected to comment on their satisfaction with their overall
treatment within their respective occupational therapy program, (41) reported being “Satisfied”. Thirty-five respondents reported being “Very Satisfied” and the vast majority (86%) have never experienced discrimination within their occupational therapy program. In regards to the resources offered by their occupational therapy program, three-fourths of respondents reported an overall high satisfaction based on a five point Likert scale of: very dissatisfied, dissatisfied, neutral, satisfied, and very satisfied. See results in Figure 11 and Figure 12.

Figure 11

*Have You Experienced Discrimination in Your OT Program?*
Respondents were also given the opportunity to write in their suggestions of improvement on their experience. The most frequent theme found was desire for a more diverse staff and student population in their occupational therapy program. Some examples of feedback included: “More OT programs to be diverse in their student, and staff population”, “In my cohort, I felt that the student population could have been more diverse”, “If you attend my OT program, be prepared to be one of VERY few ethnic minorities”, and “to have a more ethnically diverse faculty or to encourage ethnically
diverse OT practitioners come in to lectures as guest speakers”. Constructive criticism for suggested improvement on their experience and other ethnic minority students attending their occupational therapy program included: “I don’t believe ethnicity plays a role in the selection or achievement of students”, “I felt that one of my peers of ethnic background was ‘pushed’ through the classes and wasn’t held to the same standards as everyone else”, and “Professors need to be careful when they make comments about a particular ethnic group or culture”.

Respondents were asked to rate the following racial and ethnic situations in their occupational therapy program. The five racial and ethnic scenarios were rated on a five point Likert scale ranging from strongly disagree to strongly agree. The five racial/ethnic scenarios included: 1) overall sense of belonging in respective program; 2) expectations about academic performance tied with race/ethnicity; 3) expectation to represent their racial and ethnic background in group discussions; 4) minimizing characteristics in order to fit in OT program; 5) and feeling pressured to participate in ethnic activities. The two most commonly identified racial and ethnic situations in OT program are: I feel a sense of belonging in your OT program and I feel there are expectations about my academic performance because of my race and ethnicity. See results in Figure 13.
Respondents were asked to rate the following offensive items that occurred outside of their occupational therapy program. These seven situations were rated on a five point Likert scale ranging from *this event has never happened to me* to *this event happened to me and I was extremely upset*. Seven situations included events such as: 1) providing their opinion to represent their race/ethnicity; 2) being told someone is not prejudice if they have friends from diverse backgrounds; 3) being lectured on the importance of working hard to overcome racial barriers; 4) being followed in a store; 5) people assuming they were a service worker or laborer based on their physical appearance; 6) being made to believe their accomplishments were due to preferential
treatment; 7) and having someone react negatively to the way they dress. The two most common racial and ethnic hardships outside of the program were providing their opinion to represent their race/ethnicity and someone made a statement that they are not racist or prejudice because they have friends from different racial and ethnic backgrounds. There were zero responses in, *this event happened to me and I was extremely upset* in regards to feeling achievements were primarily due to preferential treatment and someone reacted negatively to clothing presentation. See results in Figure 14.

**Figure 14**

*Top Five Racial and Ethnic Hardships Outside of OT Program*

<table>
<thead>
<tr>
<th>Offense From</th>
<th>Mean of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Someone Assumed I was a Service Worker or Laborer</td>
<td>1.31</td>
</tr>
<tr>
<td>I was Followed in a Store</td>
<td>1.43</td>
</tr>
<tr>
<td>Someone Told Me That Everyone Can Get Ahead If They Work Hard</td>
<td>1.5</td>
</tr>
<tr>
<td>Someone Made a Statement to Me That They Are Not Racist or Prejudice</td>
<td>1.83</td>
</tr>
<tr>
<td>Someone Asked My Opinion as a Representative of My Race and Ethnic Background</td>
<td>1.8</td>
</tr>
</tbody>
</table>

**Summary**

Chapter IV included the following information: presentation, analysis, and interpretation of the data through use of descriptive statistics. The findings from Chapter
IV are further explored in detail in Chapter V.
Chapter V

Discussion

Overall, the respondents of our study are reflective of the wider population of occupational therapists in the United States, as there were 11% male and 89% female master’s degree students and 12% male and 88% female doctoral students enrolled into occupational therapy programs during the 2014 – 15 academic years (AOTA Academic Program Annual Data Report, 2014). The length of time attending college and age of respondents is also representative of the larger population and to the population descriptors of similar studies (Craik et al., 2001). Most of the respondents were master’s level students, also representative of student enrollment in OT programs in the US. Although it was expected that most respondents would be first generation college students, this was not the case (only 31% fit this category). This factor may impact study findings in that first generation college students often have a different perception of their educational experience than those who are first generation (Blackwell & Pinder, 2014).

The majority of the respondents indicated the most effective way to recruit minority students into an occupational therapy program was by searching out the profession for themselves or through a family member or friend, a finding that is echoed in other health professions and in earlier studies of occupational therapy students (Rowe & MacDonald, 1995). Craik et al. (2001) found in a study of 330 first year OT students that they were most likely to hear about OT from working in a healthcare setting and from occupational therapist’s/family member/friends; this finding was further supported in their follow-up study (Craik & Zaccaria, 2003). Our study reaffirms these findings,
suggesting that both programmatic efforts and larger-scale efforts on the part of the profession for recruitment of minority members is needed. Promising models for minority recruitment are provided by other healthcare professions. For example, the University of Michigan School of Dentistry developed a recruiting engagement program for high school students that went on for fifteen weeks and resulted in increased student interest in pursuing health-related fields (Inglehart et al., 2014). It could also indicate that minority students have to be more motivated and self-directed in seeking a degree focus. It is possible that minority students are less likely to hear about OT through workrelated activity, independent research or through public media as they may not work in healthrelated fields where they have contact with OT, and exposure through the larger media may not be sufficient or provide enough information to stimulate professional interest (Greenwood et al., 2005).

Study findings revealed that respondents were most attracted to the occupational therapy profession because of the desirable work conditions and benefits. This finding is comparable to that of Craik et al. (2001), who found that the opportunity to work in a variety of work settings and challenge/variety was most important to occupational therapy students while pursuing occupational therapy as a career. This was also confirmed in a follow-up study (Craik & Zaccaria, 2003). The respondents found career opportunities (regular weekday hours, opportunity for promotion, opportunity to serve in my cultural background) to be the least relevant reason of choosing OT out of the three categories. This could be due to limited knowledge of the profession or more attention to other aspects of career value.
When selecting a specific OT program, most respondents indicated family (location, have family or friends nearby, as the most important consideration. The other categories; college (reputation of excellence, gaining automatic acceptance into selected OT program, helpful admission advisor, availability of extracurricular activities and money/time (reasonable tuition, available financial aid package, length of program) were somewhat important for the respondents. This is similar to the findings of Craik et al. (2001) as they indicated that unconditional funding and finding a course close to home, as most important to minority OT students in the United Kingdom. In contrast, Wheeler (2001) in a study of occupational therapy students in (United Kingdom), found the reputation of the OT program was the top reason for choosing the program while the convenience of a location close to the parent’s home came next in line. These results point to the need for OT programs to consider aspects of family in recruitment materials and in the recruitment and advising process.

Findings regarding the stressful nature of the application process are not surprising, considering what is known about minority populations in healthcare professions relative to financial stress and work pressures. The stress related to paperwork is no doubt exacerbated by the movement of many programs to an electronic application process since access to a computer or the internet is often a concern for minority populations (Haskins & Kirk-Sanchez, 2006). The findings suggest that academic assistance and tutoring, which are viewed by minorities as helpful to their academic success, may also be warranted in the application process (Gordon & Copes, 2010).
It is interesting that the majority of the respondents had the perception that they gained acceptance into an occupational therapy programs primarily by determination and receiving assistance from family, friends, and OT program. A strong family support and the ability to work hard has been expressed in the literature as supporting the success of minority students (Blackwell & Pinder, 2014). Blackwell and Pinder (2014) also found that minority students were motivated towards a higher education because they wanted a better life for themselves. In contrast, very few respondents spoke to the value of pre-OT courses and advising (14.2%) as contributing to their acceptance into an occupational therapy program. It was surprising to find that most respondents (54%) felt neutral about the opportunity to serve individuals from their cultural background since the literature suggests that minority students are more likely to practice in underserved minority communities in comparison to their white counterparts (Lacy et al., 2012).

As students considered the reasons for their current success, it appears that there is a mixture of support valued, including both academic support and external support. Blackwell and Pinder (2014) found that minority students had the greatest success through peer support groups, teachers as mentors, teachers as role models, which correlates with the research study findings. The categories of personal help (19%), networking (9%) and all the above (8%) were found to be on the lower end of the survey response rate. This is not surprising since minority students are less likely to have the financial resources to obtain personal help, nor the time to give to networking outside of already established networks or parental supports (Blackwell & Pinder, 2014).

The vast majority of the respondents (73.6%) were satisfied with the resources provided by the occupational therapy programs. Clearly, the occupational therapy
programs are offering resources that are helpful to the minority students. The findings also indicated there is room for improvement with the level of satisfaction in order to provide more additional resources for all ethnic races attending OT programs. The participants who participated in Greenwood et al. (2005) study were less likely to find OT satisfying based upon their perception. This may be due to unfamiliarity with the profession. Most respondents (67.9%) indicated time as the most stressful aspect while attending school. The many time commitments of being in an allied health professional program, can create a barrier that interferes with family responsibilities, which is only exacerbated if home responsibilities include children (Barfield et al., 2011). Even for students without families, students experience the stress of digesting a large amount of material in a very short time period (Pfeifer, Kranz, & Scoggin, 2008), which correlates with this study’s findings. Money (16%) was another stressor that impacted respondents while attending school, as the average income of minority groups are lower (U.S. Census Bureau State and County QuickFacts, 2013, U.S. Census Bureau, 2007-11). Financial burden creates stress for those minority students who are trying to achieve a higher education, but financial resources might alleviate some of the stress. Advising/testing (e.g. financial advising, flexible testing dates, academic advising, and study skills support) and support from the family were deemed the greatest support in minority students’ completion of academic coursework while in their respective OT program. McCann, Lacy and Miller (2014) similarly identified factors contributing to the success of students enrolled in dentistry programs as help from other students, help from faculty members, the Big Sib program, and the Student Development Office. Similarly,
study skills support, and personal advising were on the top five greatest supports desired by students in our study.

**Environment of the Occupational Therapy Program**

The majority of respondents (79%) reported satisfaction with their current occupational therapy program reported facing no discrimination (86%). An overwhelming number felt a sense of belonging in their OT program, which suggests that most minority students feel comfortable in the environment of the professional occupational therapy program. A greater sense of belongings and autonomy are associated with increased academic engagement and less emotional distress for minority students (Clark et al., 2012). A smaller percentage of respondents (19.6%) believed they have expectations based upon their ethnicity, and an even smaller percentage (5.9%) felt they had to minimize their ethnicity in order to fit in the program. It is possible that the prevailing culture of the occupational therapy discipline supports mutual respect for one another or that cultural norms sanction against disrespectful behavior. It appears that this sense of belonging appears to be fairly common in healthcare programs. Vu et al. (2015) found the cultural climate of southwestern dental schools to be positive overall as students felt a great sense of belonging and they did not feel there was any mistreatment in regards to race and ethnicity.

**Limitations**

The sampling frame was the AOTA Program Directors List-Serve, and since all occupational therapy program directors were not enrolled in AOTA List-Serve, so some
colleges and universities were not represented. The nature of the minority status of Caucasian participants is not described clearly. There was a zero response rate from certified occupational therapy assistant (COTA) and Native American students.

**Recommendations**

Overall, the findings support the need for further efforts on the part of the profession of occupational therapy to support minority students. Recruitment efforts should be directed to minority populations as a whole since students are most likely to hear about OT through searching out the profession for themselves and family member or friends. The information provided to minority students during recruitment should address both the desirable work conditions and benefits of the profession as well as the specific benefits that students may receive related to the reputation of excellence in a given occupational therapy program. Closer scrutiny regarding the time demands of occupational therapy education is warranted, and consideration of flexible learning platforms, such as online learning components, is recommended. Consideration should be given to alternative venues to support the study skills of minority students considering this was identified by students as the most important factor enabling successful completion of their academic coursework. Attention to creation of a strong environment for learning is recommended, including discrimination protection, provision of study supports and inclusion of family in recruitment and student support.

**Conclusion**

The study demonstrated the unique factors relative to the recruitment and success of minority students in occupational therapy education. The importance and value placed
on family relationships relative to investigation of the occupational therapy profession as a career choice, as well as recruitment to a particular program and support while enrolled in a program are readily apparent. The negative impact of time demands as well as the positive impact of study supports on student’s perception of performance is supported by this study. Attention to the broader environment of the occupational therapy program, particularly in regard to discrimination protection and family inclusion has been established as important to minority student success.
Appendix A: IRB Approval & Consent Form

October 5, 2015

Principal Investigator(s): Heber Hepworth and Courtney Schafer
Project Title: Factors Influencing Minority Group Pursuit of Occupational Therapy: A Quantitative Study
IRB Project Number: IRB-201510-073
Project Review Level: Exempt 2
Date of IRB Approval: 10/05/2015
Expiration Date of This Approval: 10/04/2018

The application form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

If you need to make changes to your research, you must submit a Protocol Change Request Form to the IRB for approval. No changes to approved research may take place without prior IRB approval.

This project has been approved for 3 years, as permitted by UND IRB policies for exempt research. You have approval for this project through the above-listed expiration date. When this research is completed, please submit a Termination Form to the IRB.

The forms to assist you in filing your project termination, adverse event/unanticipated problem, protocol change, etc. may be accessed on the IRB website: http://und.edu/research/resources/human-subjects/

Sincerely,

Michelle L. Bowles, M.P.A., CIP
IRB Coordinator

MLBije

Cc: Debra Hanson, PhD, OTR/L, FAOTA
UNIVERSITY OF NORTH DAKOTA
Institutional Review Board
Informed Consent Statement

Title of Project: Factors influencing minority group pursuit of occupational therapy: A Quantitative Study

Principal Investigator: Heber Hepworth, OTS, 208-757-3735, heber.hepworth@my.und.edu

Co-Investigators: Courtney Schafer, OTS, 307-438-1768, courtney.schafer@my.und.edu Dr. Debra Hanson, 701-777-2218, debra.hanson@med.und.edu

Purpose of the Study:
We are conducting a study to examine the factors that influence underrepresented minority populations in their pursuit of obtaining an education in occupational therapy and their experiences while in occupational therapy and occupational therapy assistant programs.

Procedures to be followed:
You will be asked to complete an online survey of approximately 38 questions, some being open-ended, others closed choice and matrix format. We are seeking the perspectives of underrepresented minority students who have successfully completed at least one year in their selected program. The information collected as part of this survey is confidential. The information will be analyzed according to strict confidentiality standards and presented in aggregate form. Participation in this survey is voluntary. The survey should take no longer than 15 minutes to complete.

Risks:
There are no risks to participating in this research beyond those experienced in everyday life.

Benefits:
A potential benefit to participating in the study is that you may have a better understanding of the factors influencing underrepresented minority populations in their pursuit of obtaining an education in occupational therapy.

Duration:
It will take about 15 minutes to complete the survey questions.

Statement of Confidentiality:
The survey does not ask for any information that would identify the respondents. Therefore, your responses are recorded anonymously. If this research is published, no information that would identify you would be included, since your name is not linked to your responses.

Approval Date: OCT-5 2015
Expiration Date: OCT-4 2018
University of North Dakota IRB
All survey responses received will be treated confidentially and stored on a secure server, however, given that the surveys can be completed from any computer, we are not able to guarantee the security of the computer you choose to use to enter your responses. As a participant in our study, we want you to be aware that certain “key logging” software programs exist that can be used to track or capture data that you enter and/or websites that you visit.

**Right to Ask Questions:**
The researchers conducting this study are Heber Hepworth, Courtney Schafer, and Debra Hanson. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Heber Hepworth at 208-757-3735 during the day.

If you have questions regarding your rights as research subject, you may contact The University of North Dakota Institutional Review Board at (701) 777-4279. You may also call this number with complaints or concerns about the research. Please call this number if you cannot reach research staff, or you wish to talk with someone who is an informed individual who is independent of the research team.


**Compensation:**
You will not receive compensation for your participation.

**Voluntary Participation:**
You do not have to participate in this research.

You can stop your participation at any time. You may refuse to participate or chose to discontinue participation at any time without any benefits to which you are otherwise entitled.

You do not have to answer any question you do not want to answer.

You must be at least 18 years old to participate in this research study.

Completion of the online survey implies you have read the information in this form and consent to participate in the research.

Please keep this form for your records or future reference.

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Approval Date: OCT 5 2015
Expiration Date: OCT 4 2018

University of North Dakota IRB
Appendix B: IRB Documents

Proposed Research Beginning Date: September 2015

Exempt research will be approved for 3 years from the original approval date.

Funding agencies supporting this research: N/A

(A copy of the funding proposal for each agency identified above MUST be attached to this proposal when submitted.)

□ YES or ☒ NO

Does any researcher associated with this project have a financial interest in the results of this project? If yes, submit on a separate piece of paper an additional explanation of the financial interest. The Principal Investigator and any researcher associated with this project should have a Financial Interests Disclosure Document on file with their department.

☒ YES or ☐ NO

Will any research participants be obtained from another organization outside the University of North Dakota (e.g., hospitals, schools, public agencies, American Indian tribes/reservations)?

☒ YES or ☐ NO

Will any data be collected, or obtained from another organization outside the University of North Dakota?

If yes to either of the previous two questions, list all institutions:

All professional occupational therapy accredited programs within the United States

Letters from each organization must accompany this proposal. Each letter must illustrate that the organization understands its involvement and agrees to participate in the study. Letters must include the name and title of the individual signing the letter and should be printed on organizational letterhead.

Does any external site where the research will be conducted have its own IRB? ______ YES or ☒ NO

If yes, does the external site plan to rely on UND’s IRB for approval of this study? ______ YES or ☒ NO

(If yes, contact the UND IRB at 701-777-4279 for additional requirements)

If your project has been or will be submitted to other IRBs, list those Boards below, along with the status of each proposal.

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<tr>
<th>N/A</th>
<th>Date submitted:</th>
<th>Status:</th>
<th>Approved</th>
<th>Pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Date submitted:</td>
<td>Status:</td>
<td>Approved</td>
<td>Pending</td>
</tr>
</tbody>
</table>

(Include the name and address of the IRB, a contact person at the IRB, and a phone number for that person)

Type of Project: Check "Yes" or "No" for each of the following.

☒ YES or ☐ NO New Project

☒ YES or ☐ NO Dissertation/Thesis/Independent Study

☐ YES or ☒ NO Continuation/Renewal

☒ YES or ☐ NO Student Research Project

☐ YES or ☒ NO Is this a Protocol Change for previously approved project? If yes, submit a signed Protocol Change Form, along with a signed copy of this form with the changes bolded or highlighted.

Please provide additional information regarding your research by responding to questions 5-11 on a separate sheet of paper.

5. In non-technical language, describe the purpose of the study and state the rationale for this research.

6. In non-technical language, describe the study procedures.

How will subjects be informed of the research? If you will be having subjects sign a consent form, justify why. How will information be distributed? Will compensation be provided? What is the expected duration of subject participation? Etc.

7. Where will the research be conducted?

8. Describe what data will be recorded.

9. How will data be recorded and stored (that is will it be coded, anonymous, etc.)?

Note: Must state that data will be stored for a minimum of three years after data analysis is complete, or for a period of
time sufficient to meet federal, state, and local regulations, sponsor requirements, and organizational policies and procedures.

10. Describe procedures you will implement to protect confidentiality of data collected from participants and privacy of participants when participating in research activities.

11. Describe the nature of the subject population and the estimated number of subjects.

   If participants who are likely to be vulnerable to coercion and undue influence are to be included in the research, define provisions to protect the privacy and interests of these participants and additional safeguards implemented to protect the rights and welfare of these participants.

12. Include a copy of the study information sheet to be given to participants (either in person or online, depending on the nature of the research) that discloses research information. A template is available under ‘Exempt Certification Forms’ on the IRB Forms page of the IRB website: http://und.edu/research/resources/human-subjects/forms.cfm

Necessary attachments:
- Signed Student Consent to Release of Educational Record Form (students and medical residents only);
- Investigator Letter of Assurance of Compliance;
- Key Personnel Listing;
- Surveys, interview questions, or educational tests;
- Printed web screens (if survey is over the Internet);
- Advertisements, including recruitment emails/letters and social network postings; and
- Informed consent statement.

NOTE: The UND IRB requires that all listed personnel involved in the research complete human subject education before IRB approval to conduct research can be granted.

******************************************************************************************************************************************
By signing this form, I certify that the above information is accurate and that this research will be conducted in accordance with the statements provided above; this research does not involve prisoners, but if a subject becomes a prisoner, I will notify the IRB.

Katherine Schepis, PhD 9-22-15
(Principal Investigator)

Date:

Devin Johnson, MPA 9-23-15
(Student Advisor)

Date:

**All students and medical residents must list a faculty member as a student advisor on the first page of the application and must have that person sign the application.**

Submit the signed application form and any necessary attachments to the Institutional Review Board, 264 Centennial Drive, Stop 7134, Grand Forks, ND 58202-7134; or bring it to Twamley Hall, Room 106.
5. The purpose of this research study is to examine the factors that influence minority populations to pursue and succeed in all levels of occupational therapy education (Occupational Therapy Assistant, Masters and Entry-level Doctoral degrees). This study is not sponsored. There are limited numbers of under-represented minorities in occupational therapy and although data is available internationally (Craig, Gissane, Douthwaite & Philip, 2001) but little is known as to the factors influencing occupational therapy recruitment or retention in the United States, therefore a national survey of all students is needed.

6. Research questions were designed in a Qualtrics survey. The survey was reviewed by experts in survey design and statistical analysis regarding the clarity of each question. Subjects will be recruited by asking Academic Program Directors of Accredited Occupational Therapy programs in the US to pass the study on to students enrolled in their academic programs. Academic Program Directors will be contacted through a list serve designed for this group by the American Occupational Therapy Association. The survey will be sent to occupational therapy and occupational therapy assistant students. An email announcement will be sent describing the purpose of the research and requesting student participation in the study.

7. The research will be conducted at the occupational therapy department of the School of Medicine and Health Sciences at the University of North Dakota. Participants will be able to complete the online survey at a location of their choice.

8. The survey was developed to meet the objectives of the study. Existing questionnaires found in the literature were reviewed (Damsby & Dansby-Giles, 2011; McCann, Lacy & Miller, 2014; Vu et al., 2015). Based on these samples, researchers developed the existing questionnaire to meet the goals of the research study. The data will include information on the demographics of minority students, including age, ethnicity, gender as well as factors influencing professional education pursuit and participation.

9. The data will be recorded and stored on a secure server at the University of North Dakota. Data will be stored for a minimum of three years after the data analysis is complete.

10. Information from the surveys will be summarized and shared in only aggregate format. There will be no way to directly link responses with individual participants.

11. We are planning to send the survey to Academic Program Directors of all accredited occupational therapy programs in the United States. We are hoping for a minimum of a 50 percent response rate representing all programs, and a total of at least 50 respondents.
References


Announcement

Dear Occupational Therapy Program Director,

We are students in the entry level master’s occupational therapy program at the University of North Dakota and are investigating the factors influencing minority students in their pursuit of occupational therapy education. Could you help us out? Please pass our survey along to all cohorts of students within your academic program, whether that be at the certificate as well as entry level masters and entry level doctorate levels of education. The information will be analyzed according to strict confidentiality standards and presented in aggregate form. Participation in this survey is voluntary. The survey will take approximately 15 minutes to complete.

Respectfully,

Heber Hepworth, Occupational Therapy Student
Courtney Schafer, Occupational Therapy Student
Dr. Debra Hanson, OTR/L, FAOTA, Student Advisor
STUDENT RESEARCHERS: As of June 4, 1997 (based on the recommendation of UND Legal Counsel) the University of North Dakota IRB is unable to approve your project unless the following "Student Consent to Release of Educational Record" is signed and included with your IRB application.

STUDENT CONSENT TO RELEASE OF EDUCATIONAL RECORD

Pursuant to the Family Educational Rights and Privacy Act of 1974, I hereby consent to the Institutional Review Board’s access to those portions of my educational record which involve research that I wish to conduct under the Board’s auspices. I understand that the Board may need to review my study data based on a question from a participant or under a random audit. The title of the study to which this release pertains is Factors influencing minority group pursuit of occupational therapy: A Quantitative Study.

I understand that such information concerning my educational record will not be released except on the condition that the Institutional Review Board will not permit any other party to have access to such information without my written consent. I also understand that this policy will be explained to those persons requesting any educational information and that this release will be kept with the study documentation.

ID # 0970845 / CAW0725
Printed Name

Date 09/22/15
Signature of Student Researcher

1Consent required by 20 U.S.C. 1232g.
INVESTIGATOR LETTER OF ASSURANCE OF COMPLIANCE
WITH ALL APPLICABLE FEDERAL REGULATIONS FOR THE
PROTECTION OF THE RIGHTS OF HUMAN SUBJECTS

I, Heber Hepworth/Courtney Schafer/Dr. Debra Hanson
(Name of Investigator)

agree that, in conducting research under the approval of the University of North Dakota Institutional
Review Board, I will fully comply and assume responsibility for the enforcement of compliance with
all applicable federal regulations and University policies for the protection of the rights of human
subjects engaged in research. Specific regulations include the Federal Common Rule for Protection of
the Rights of Human Subjects 45 CFR 46. I will also assure compliance to the ethical principles set
forth in the National Commission for the Protection of Human Subjects of Biomedical and Behavioral

I understand the University's policies concerning research involving human subjects and agree to the
following:

1. Should I wish to make changes in the approved protocol for this project, I will submit them
   for review PRIOR to initiating the changes. (A proposal may be changed without prior IRB
   approval where necessary to eliminate apparent immediate hazards to the subjects or others.
   However, the IRB must be notified in writing within 72 hours of any change, and IRB review is
   required at the next regularly scheduled meeting of the full IRB.)

2. If any problems involving human subjects occur, I will immediately notify the Chair of the
   IRB, or the IRB Coordinator.

3. I will cooperate with the UND IRB by submitting Research Project Review and Progress
   Reports in a timely manner.

I understand the failure to do so may result in the suspension or termination of proposed research and
possible reporting to federal agencies.

[Signature] 09/22/15
Investigator Signature  Date
Appendix C: Introduction to Research Questions

Introduction

There is limited research on the factors of minorities pursuing entry level occupational therapy masters and doctorate programs as well as the certified occupational therapy assistant programs. Information collected as part of this survey is confidential. The information analyzed according to strict confidentiality standards and presented in aggregate form. Participation in this survey is voluntary. The survey will take approximately 15 minutes to complete.

Announcement

Dear Occupational Therapy Program Directors,

We are entry level masters of occupational therapy students at the University of North Dakota. We are interested in the factors in which minorities pursue occupational therapy because there is limited research in the doctorate, masters and assistant programs. We have created a survey and done an extensive literature review on this particular topic and now we would like to collect data to present at conference.

We would greatly appreciate if you would be kind enough to pass our survey along to the students in your respected occupational therapy program for them to complete. The information analyzed according to strict confidentiality standards and presented in aggregate form. Participation in this survey is voluntary. The survey will take approximately 15 minutes to complete.

Respectfully,

Heber Hepworth, Courtney Schafer, & Dr. Debra Hanson
Appendix D: Research Question
Introduction

There is very little information in the professional literature as to the factors influencing the recruitment and retention of minority students in occupational therapy education. Your perspectives are needed to understand more about your experience as an occupational therapy student in a certificate, master's, or entry level doctoral occupational therapy program. Information collected as part of this survey is confidential. The information will be analyzed according to strict confidentiality standards and presented in aggregate form. Participation in this survey is voluntary. The survey will take approximately 15 minutes to complete.

Factors Influencing Choice to Attend College

Q1

How did you first hear about Occupational Therapy? (Select all that apply)
- Work Experience in Health Care Setting
- Shadowing an Occupational Therapy Practitioner or Student
- While Researching Other Health Care Professionals
- School Advisor or Teacher
- Self or Other Received Occupational Therapist
- Family Member or Friend
- Read About It (i.e. Newspaper, Magazine, Literature, etc.)
- Television or Other Virtual Reality
- Vocational Interest Inventory
- Through a College Course

Q2

Please rate the importance of the following factors in your decision to pursue occupational therapy as a career

<table>
<thead>
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<th>Variety of Work Settings</th>
<th>Extremely Unimportant</th>
<th>Somewhat Unimportant</th>
<th>Neutral</th>
<th>Fairly Important</th>
<th>Very Important</th>
<th>N/A</th>
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<tbody>
<tr>
<td>Challenge and Variety in the Work</td>
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<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Lots of Personal Contact</td>
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<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<td>Holistic Approach of the Work</td>
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<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Opportunity to Work in a Health Care Setting</td>
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<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<td>Job Security</td>
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<tr>
<td>Rate the importance of the following factors to your selection of</td>
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<tr>
<td>your current occupational therapy program:</td>
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<table>
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<th>Neutral</th>
<th>Fairly Important</th>
<th>Very Important</th>
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<td>c</td>
<td>c</td>
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</tr>
<tr>
<td>Chance to Use Creativity</td>
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<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Opportunity to Serve in my Cultural Background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Reputation for Excellence</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Location</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Gaining Automatic Acceptance into Selected OT Programs</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Have Family or Friends Near By</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Reasonable Tuition</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Available/ Financial Aid Package</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Length of the Program</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Helpful Admissions Advisors</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Availability of Public Transportation</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Contact with Current or Former Graduates from Program</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Desire to Live Away From Home</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Availability of Extracurricular Activities</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Large Proportion of Minority Students</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Ability to Participate in Family Activities</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Q4</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>
Please rate the level of stress/challenge you experienced from each of the following factors related to the OT application process:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Extremely Stressful</th>
<th>Very Stressful</th>
<th>Neutral</th>
<th>Somewhat Stressful</th>
<th>Not Stressful At All</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling out application paperwork</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Participating in an interview process</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Relocating</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Obtaining Financial Resources for Tuition and Fees</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Understanding Occupational Therapy Program Curriculum</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Completing demanding pre-requisite coursework</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Communicating with my family about the program</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Planning For My Safety In School</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Obtaining required volunteer hours</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Securing references for application</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>

Q5

Rate the influence of the following factors on your successful acceptance/entry into the professional occupational therapy program:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Not At All Influential</th>
<th>Slightly Influential</th>
<th>Somewhat Influential</th>
<th>Very Influential</th>
<th>Extremely Influential</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigorous Pre-OT Coursework</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Guidance from Pre-OT Faculty Advisor</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Strong family support</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Assistance from an OT student already in the program</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Assistance from friends</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Formal college assistance program for minority groups</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Personal determination to work hard</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>

Copy Items From...
Create a New Question
Succeeding in the Occupational Therapy Program: Block Options

Q6

How important are the following support to your success in your occupational therapy program?

<table>
<thead>
<tr>
<th></th>
<th>Extremely Unimportant</th>
<th>Somewhat Unimportant</th>
<th>Neither Important nor Unimportant</th>
<th>Somewhat Important</th>
<th>Extremely Important</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Advising</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Financial Advising</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Tutoring/Mentoring Program</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Flexible Testing Dates</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Academic Advising</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Study Skills Support</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Supportive Family Events</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Clubs and Networking</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Discrimination Protection</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>

Q7

What is your overall satisfaction of the resources that your occupational therapy program offers/providers?

- c Very Dissatisfied
- c Dissatisfied
- c Neutral
- c Satisfied
- c Very Satisfied

Q8

Rate the degree to which the following factors contribute to your stress during OT school.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Uncertainty</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Family Turmoil</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Undeveloped Study Habits</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Learning Demands of the Program</td>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
<td>N/A</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>--------</td>
<td>-----------</td>
<td>-------</td>
<td>--------</td>
<td>-----</td>
</tr>
<tr>
<td>Inadequate Living Situation</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Social Isolation</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Lack of Resources (i.e. personal laptop computer)</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Multiple Role Expectation</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Excessive Time Demands</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Limited Transportation Options</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Adequate Nutrition</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Adequate Health Care</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
</tbody>
</table>

Copy Items From... Create a New Question

Environment of the Occupational Therapy Program

Q9

Please indicate to what extent you agree with the following statements:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel a sense of belonging in your OT program</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>I feel the need to minimize various characteristics of my racial/ethnic culture to be able to fit in my OT program</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>I feel pressured to participate in ethnic activities at this school</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>I feel I am expected to represent my race and ethnic group in discussions during class</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>I feel there are expectations about my academic performance because of my race or ethnicity</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
</tbody>
</table>

Q10

Identify your overall level of satisfaction with the treatment that you have received during your time in your occupational therapy program.

- ❌ Very Dissatisfied
- Dissatisfied
- Neutral
- Satisfied
- Very Satisfied

Q11

Have you ever experienced discrimination in your OT program?
- Yes
- No

Q12

Please rate the following questions according to a five point scale:

<table>
<thead>
<tr>
<th>0= This has never happened to me</th>
<th>1= This event happened but I was not upset</th>
<th>2= This event happened, I was slightly upset</th>
<th>3= This event happened, I was moderately upset</th>
<th>4= This event happened to me and I was extremely upset</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was made to feel that my achievements were primarily due to preferential treatment based on my racial and ethnic background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Someone assumed I was a service worker or laborer because of my racial and ethnic background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>I was followed in a store due to my racial and ethnic background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Someone reacted negatively to the way I dress because of my racial and ethnic background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Someone asked my opinion as a representative of my race and ethnic background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Someone made a statement to me that they are not racist or prejudice because they have friends from different racial or ethnic background</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
<tr>
<td>Someone told me that everyone can get ahead if they work hard when I describe a difficulty related to my racial and ethnic background.</td>
<td>c</td>
<td>c</td>
<td>c</td>
<td>c</td>
</tr>
</tbody>
</table>

Q13

Do you have any suggestions to improve upon your experience or other ethnic minority students attending your OT program? (Write in paragraph form)
Copy Items From...
Create a New Question

Demographics
Q14

What is your current age in years?

Q15

What is your gender?

- Male
- Female

Q16

With which race do you primarily identify yourself? (Select all that apply)

- White/Caucasian
- African American
- Asian
- Native American
- Pacific Islander
- Other

Q17

What is the number of years you have attended college?

Q18

What is your geographic location within the United States?

- Southwest
- Northwest
- Upper central
- Lower central
- Upper northeast
- Lower northeast

Q19
Are you a first generation college student?

- [ ] Yes
- [ ] No

Q20 Please identify the program level of your OT coursework.

- [ ] Occupational Therapy Assistant
- [ ] Entry Level Occupational Therapy Masters
- [ ] Entry Level Occupational Therapy Doctorate
Appendix E: More Research Questions

1. What are effective means to recruit minority students in OT programs?

2. What factors motivate potential OT candidates to follow up and pursue an education in OT?

3. What do minority groups consider important when selecting an OT or OTA program?

4. What do minority students experience as challenging when applying for OT/OTA programs? (What part of the application process do specific groups experience as most stressful?)

5. What do OT and OTA application candidates believe contributed to their success in the OT/OTA application process?

6. A) What supports do OT and OTA students identify as important to successful completion of their academic coursework while in an OT/OTA program? To what degree do specific demographic groups find specific supports helpful?

   B) Are minority students satisfied overall with the supports provided/available in their OT/OTA program?

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