A Mixed-Methods Study of the Relationship Between Attitude Toward Accommodations and Self-Disclosure Behavior of Students with Hearing Loss in the Technical College System

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ABSTRACT

Due to the self-reported number of students with a hearing disability in post-secondary technical education, students with hearing loss are not formally self-disclosing their disability and, therefore, are not requesting accommodations. To determine the root cause of the low self-report rate for hearing disabilities, this study explores the self-disclosure behavior of adult students with hearing loss and their attitudes toward requesting accommodations through the use of an explanatory sequential mixed-methods design. This study's results are intended to guide policy and procedures at an institutional and system level to identify and remove barriers for students with hearing loss.

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DEDICATION

I dedicate my dissertation to my family and friends who have supported me through this process. My parents, David and Alicia Williams, who are not only the source of my intelligence, but who also installed in me a strong sense of work ethic and the value of education. My grandparents, C.M. and Sandra Mills, who, like the best kind of grandparents, have always cheered me on in everything I do. My sister, Rachel Williams, for being the voice of reason that provides much needed perspective, and my best friend, the soon-to-be-Dr. Rachel Faller, for surviving this graduate school journey with me and hiding her frustration at having to explain multiple regression to me for the hundredth time.

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Chapter I:

INTRODUCTION

The purpose of this explanatory sequential mixed-methods study was to determine why students with hearing loss at a post-secondary technical education system in the southeastern United States were not self-reporting their disability. The results of this exploration of the self-disclosure behavior of adult students with hearing loss and their attitudes toward requesting accommodations are intended to be used to guide policy and procedure at an institutional and system level to identify and remove barriers for students with hearing loss.

According to the post-secondary technical education system's reports, only 162 of the 92,991 students enrolled statewide formally self-disclosed a hearing impairment or deafness for fall 2017. Blackwell, Lucas, and Clarke (2014) reported that 15.2% of surveyed adults aged 18 and over reported hearing trouble. Based on the percentage reported in Blackwell et al. (2014), the technical college system may have served approximately 14,135 students with hearing loss, based on fall 2017 enrollment data; however, only 1% of this hypothetical population formally disclosed their hearing loss. Since no studies have been conducted on the self-disclosure of students with hearing loss in technical colleges, there was a clear need for an explanatory study to begin the process of identifying possible causes for the low self-report rate in this system.

According to Newman (2005), only 40% of students with disabilities who utilize accommodations services in secondary school disclose their disability upon entering post-secondary institutions. To measure the attitudes of post-secondary students with disabilities toward requesting accommodations, Barnard-Brak, Sulak, Tate, and Lechtenberger (2010) developed the Attitudes Toward Requesting Accommodations (ATRA) scale. Use of the scale found that the more positive a student's attitude, the more likely he was to request accommodations and the higher his academic outcomes were likely to be (Barnard-Brak et al., 2010).

Attitudes toward disclosure are not the only factor that affects the willingness of students with hearing loss to self-disclose. Cole and Cawthon (2015) found that university students who had not disclosed their disability had incorrect information about the accommodations available and the application process. In addition, they had an overwhelmingly negative view of their disability and felt they did not need accommodations or that an accommodation would not be helpful to them. Finally, students who did not disclose a disability also were motivated by the desire to maintain a typical identity and avoid negative reactions or comments from their peers.

The intersection of one's identity as a person with a disability with their other social identities provided a framework for this study. Current criticisms of disability research include the limitations of ignoring or minimizing the impact of racial, ethnic, gender, and age identity in the examination of experiences of people with disabilities, especially those that are "hidden" from view. To address the problem of low self-disclosure rates, differences between groups must first be explored.

This study's results were intended to guide administrators and policymakers at technical colleges in the implementation of changes that foster self-disclosure, remove barriers in the accommodation request process, and, ultimately, improve the academic performance of students with disabilities. In addition, the results can help guide the development of policy and practice of educators and administrators who want to improve the employment outlook and career success of students with hidden disabilities in career and technical education

Statement of the Problem

Students with hearing loss do not formally self-disclose their disability while enrolled at technical colleges in a southeastern state in the United States. This affects the students' ability to access resources and services, such as academic accommodations, that could positively affect their academic success. Demographic differences between students in the state's technical college and university systems, combined with the lack of literature concerning technical college students, support the need for research into the experience of students with disabilities within the technical college system. However, the mere replication of existing studies in the technical college setting was not sufficient, as it would not address another significant gap in disability studies literature, the tendency to essentialize the category of people with a disability (Erevelles, 2011).

Purpose of the Study

The purpose of this explanatory sequential mixed-methods study was to explore the self-disclosure attitudes toward requesting accommodations held by students with hearing loss to begin to examine the low formal self-disclosure rates reported by the technical college system. By examining how and if demographic characteristics affect individual students' attitudes toward self-disclosure of a hearing disability, this study sought to provide insight into how colleges could foster an environment that encourages adult technical college students with hearing disabilities to self-disclose their disability and request accommodations.

Scope of the Study

This study explored the type of disability self-disclosure and the attitudes toward requesting accommodations among college-age students with hearing loss in post-secondary technical institutions in the southeastern United States. Since the self-disclosure rate of students with hearing loss for the state college system fell below the rate that one would expect to see based on population demographics, it was important to extend the reach of the sample beyond those students who have disclosed their disability to their institution to those who have not disclosed to determine if their attitude toward disability, self-identity, or other unknown factors affected their decision to self-disclose. As a result, the survey was emailed to all students enrolled at the colleges in the sample, not just those who have formally self-disclosed their disability. Those selected for the interview portion were chosen to help the researcher determine why some students with hearing loss did not formally self-disclose to their institution.

Due to the complicated interplay of an individual's multiple social self-identities, the researcher collected information about the participants' age group, ethnic identity, racial identity, and gender to determine if there were differences among these groups in their type of self-disclosure and attitudes toward requesting accommodations. Due to the small number of students who formally self-disclosed to the institutions in the sample, it was determined that there would not be enough responses collected to utilize inferential statistical tests. As a result, descriptive statistics were used to describe the participants in the study.

Research Questions

To identify the factors affecting the willingness of students with hearing loss to self-disclose their disability, the sequential strands of this mixed-methods study attempted to answer the following questions:

1. To what degree, if any, are there differences in (a) type of self-disclosure and (b) attitudes toward requesting accommodations by age group, ethnic identity, racial identity, or gender?
2. Why do some students with hearing loss not formally self-disclose to their institution?

The purpose of the first research question was to explore the degree to which age, racial/ethnic identity, or gender impacts an individual's self-disclosure and attitudes toward requesting accommodations. Disability identity, as a social construct, is constructed through an individual's experiences as a member of a stigmatized social group. The intersectional framework in this study argued that age, ethnic and racial identity, and gender cannot be isolated from the study of disability since these variables can shape an individual's experience of disability in different ways. The second research question sought to determine why some students with hearing loss did not formally self-disclose to their institution. This question was answered during the qualitative phase in an exploration of the quantitative responses to the survey. The intent of the interviews was to seek a deeper understanding of the concepts under study.

Conceptual Framework for the Study

Social identity theory (Tajfel & Turner, 1979) describes the interplay between an individual's personal and social identities. As members of the socially stigmatized broad category of "people with disabilities," students with hearing loss face a choice when it comes to improving their self-concept: either assimilate into the in-group or "affirm" their out-group identity. Hearing loss is a "hidden disability" in that people with hearing loss can conceal the stigmatizing characteristics of their disability. Therefore, students with hearing loss can more easily assimilate into the majority group by denying their disability identity and distancing themselves from the minority "disabled" group (Bogart, 2014). Many people with hidden disabilities view their disability disclosure as a personal choice (Jans, Kaye, & Jones, 2012). For them, their identity as a person with a disability is affected by their choice to disclose. While this appears on the surface to be a decision with determining factors shared by all group members, it is, in reality, more complex due to the interplay of age, race and ethnic identity, and gender.

Just as hearing loss identity is a subset of the broader category of disability identity, there are other marginal or invisible subsets of disability identity based on age, race and ethnic identity, and gender. As a framework, intersectionality (Crenshaw, 1989) argues that there is a more privileged group even within a marginalized group. Focus only on this more privileged group creates a distorted analysis of a more complex phenomenon than it may seem. Because of the layers of age, gender, disability, and racial discrimination that people with hearing loss may experience due to multiple marginalized social identities, the decision to assimilate or affirm their disability identity can be complex. These variables were crucial to obtaining a more complete understanding of the participant experience in this study of the low self-disclosure rates among technical college students with hearing loss.

To measure the attitudes of post-secondary students with disabilities toward requesting accommodations, Barnard-Brak et al. (2010) developed the *Attitudes Toward Requesting Accommodations* (ATRA) scale based on the work of Wheeless (Wheeless, 1978; Wheeless & Grotz, 1977). For students with hearing loss to self-disclose their disability, a certain level of interpersonal trust is required since disclosure in the general sense is a type of interpersonal communication that implies interpersonal trust between the sender and receiver (Wheeless, 1978). Interpersonal trust is a process of engaging in types of dependent behaviors related to the perceived trustworthiness of another person (individualized) or people in general (generalized) in situations characterized as risky or where the expected outcomes are not known with certainty (Wheeless & Grotz, 1976, 1977). An individual with hearing loss is influenced by personal and contextual antecedents as he weighs the costs and benefits associated with disclosure (Jennings, Southall, & Gagné, 2013), paying particular attention to the social cost of revealing one's hearing loss in a social setting (Croteau, Anderson, & VanderWal, 2008).

Since people with hearing loss can often "pass" as members of the hearing community due to their hidden disability, they can often decide when, how, and to whom they wish to self-disclose their disability (Jennings et al., 2013). While there is little research on the self-disclosure behavior of post-secondary students with hearing loss, previous studies into the workplace disclosure of hearing loss suggest that employees with hearing loss often choose not to disclose their disability to coworkers, especially when prejudicial attitudes are present (Hétu, 1996). To encourage self-disclosure, institutions must design and implement policies and procedures that build interpersonal trust by fostering an organizational culture that minimizes the stigma around the social label of disability.

This is complicated by the use of the medical model of disability in post-secondary institutions due to the reliance of the Americans with Disabilities Act on a broad definition of "legitimate" disability. Scotch (2000) argued that this flexibility may have resulted in an increased reliance by the courts on "popular and limited conceptions of what people with various impairments can and should be allowed to do" (p. 218). In seeking a method to conceptualize the intentionally broad concept of disability as defined under the Americans with Disabilities Act (ADA), higher education institutions have also relied heavily on the medical model of disability to identify students with disabilities and determine what reasonable accommodations they can receive.

By shifting the conceptualization of disability to the social model of disability, which "encourages society to accept disability as another form of human diversity and to develop societal structures and programs that accommodate and include all forms of disability" (Meeks &

Jain, 2015, pp. 15-16), higher education institutions can begin to address the low self-disclosure rates and improve the educational outcomes of students with hearing loss.

Research Design

Due to the need for an intersectional framework in this study's design, using a mixed methodology gave voice to the experience of marginalized subgroups within the larger population of students with hearing loss. The use of a quantitative design alone would have allowed for the identification of differences between gender, racial and ethnic identity, or age group but would not have addressed the second research question, "Why do some students with hearing loss not formally self-disclose to their institution?" Likewise, a qualitative design would address the second research question but would not allow for the exploration of the relationship between the variables in the first research question. A mixed-methods design helped address both research questions and identified multiple participant meanings (Creswell & Plano Clark, 2017), especially marginalized subgroups.

According to Creswell (1999), a explanatory sequential mixed-methods design is appropriate for examining educational policy. This method's emphasis on an in-depth exploration of the participants' experiences was appropriate due to the transformative nature of mixed-methods research (Creswell & Plano Clark, 2017). The "use of multiple worldviews, or paradigms (i.e., beliefs and values), rather than the typical association of certain paradigms with quantitative research and others with qualitative research" (Creswell & Plano Clark, 2017, p. 13) in mixed-methods research supported the purpose of the study to provide insight into how colleges can foster an environment that encourages and supports the self-disclosure of hearing disabilities. The accomplishment of this goal required a transformative approach because of the change in basic assumptions needed to change how higher education institutions approach students with disabilities.

In this study, a explanatory sequential design, comprised of an initial quantitative phase followed by a qualitative one, was used to investigate the attitudes toward requesting accommodations and type of self-disclosure among students with hearing loss in a technical college setting (Creswell & Plano Clark, 2017). When analyzing the results of the two phases, primary emphasis was given to the quantitative results. In the quantitative phase of this study, data were collected using an online survey, and the findings were analyzed to identify factors that affected students' willingness to request accommodations, type of self-disclosure, and demographic data. During this phase, students willing to participate in the qualitative phase were also identified.

The purpose of the second phase of the explanatory sequential design was to build upon or explain the initial quantitative results. This design was also used since the researcher needed to choose a purposeful sample for the qualitative phase (Creswell, Plano Clark, Gutmann, & Hanson, 2003). The participant selection model used was the follow-up explanations model, which explained the quantitative results and further explained specific findings such as statistical differences or outliers. The qualitative strand attempted to explain the findings of the initial survey results through semi-structured interviews. In the qualitative phase, students with hearing loss were interviewed via teleconference to help explain and provide depth for the quantitative findings. This qualitative phase helped explain how identity shaped participants' attitudes toward requesting accommodation and type of self-disclosure behavior. More specific information about the design of this study is provided in Chapter III.

Significance of the Study

This study's results were intended to guide the development of policies and practices in higher education to serve students with hearing loss more effectively. Suppose the technical college setting is the vehicle chosen by the government and society to be responsible for the community's workforce development. In that case, it is responsible for the preparation of all students across the spectrum of abilities. The results of this study provide insight into how institutions can better support adult students with hearing loss through the modification of existing policies and procedures. The demographics of our increasingly diverse society require that educators consider how students' needs have changed and change accordingly.

To end the use of disability services policies and procedures that have the unintended effect of further marginalizing students with disabilities, higher education institutions will need to undergo a change in basic assumptions from conceptualizing disability under the medical model of disability to the use of the social model of disability. The social model of disability holds that disability is caused by how society is arranged and not by impairment or illness. In this model, the way processes and procedures are developed and implemented by post-secondary institutions can be viewed as disabling. As a result, it is crucial for administrators to understand not only if but how institutional processes and procedures inhibit self-disclosure and attitudes toward requesting accommodations.

Definition of Terms

Accommodation: support provided to a student to access course content and/or demonstrate knowledge (Williamson, 2011).

Adult student: any student 18 and older.

Attitude: "a relatively enduring organization of beliefs, feelings, and behavioral tendencies toward socially significant objects, groups, events or symbols" (Hogg & Vaughan, 2005, p. 150).

Disability: "disadvantage or restriction of activity caused by a society which takes little or no account of people who have impairments and thus excludes them from mainstream activity" (Thomas, Gradwell, & Markham, 1997, p. 2).

Faculty: instructors who teach credit courses in academic and technical areas within technical colleges.

Formal disclosure: a type of communication between the student and the institution involving formal bureaucratic steps (De Cesarei, 2015; Kranke, Jackson, Taylor, Anderson-Fye, & Floersch, 2013).

Hearing loss: diminished ability to hear. In this study, mild to moderate hearing loss is distinguished from severe to complete hearing loss (deafness).

Informal disclosure: disclosure that occurs between the student and his professors or peers that does not involve the exchange of formal documentation describing the student's disability diagnosis or a formal request for accommodations (De Cesarei, 2015; Kranke et al., 2013).

Learning environment: a physical or digital setting in which technical college students learn. It can include laboratories, classrooms, clinical settings, internship sites, and the online learning management system.

Self-disclosure: the purposeful release of personal information by an individual can impact situational outcomes (Lynch & Gussel, 1996).

Student support services: the division of services at post-secondary institutions that support student growth and development. In the technical college system sampled, student support services fall under the Department of Student Affairs and oversee the following programs and services: Career Services; Financial Aid; Enrollment Management; Special Populations; Student Activities; Student Navigators; and Veteran Benefits and Audits.

Technical college: degree-granting post-secondary institutions that offer associate degrees, diplomas, and technical certificates of credit, and their mission is to provide workforce development in their service area.

Workplace: the physical location where people are employed; in this case, it is where people with hidden disabilities are employed after graduation from a technical college.

Summary

This study sought to explore adult students' self-disclosure with hearing loss in a technical college system and their attitudes toward requesting accommodations. Key to understanding their experiences was the inclusion of demographic characteristics in the analysis to determine if there were differences between groups since people with disabilities are members of multiple, and sometimes conflicting, social groups that shape their worldview and experiences. The results of this study are intended to begin the process of better describing the characteristics of students with hearing loss in the technical college setting so that administrators, policymakers, and student support services can improve policies and services that support the academic outcomes and employability of students with hearing disabilities and impairments. The following four chapters of this document provide an overview of the conceptual framework, a description of the methodology, the results of the data analyses, and the conclusions drawn from the data.

Chapter II:

CONCEPTUAL FRAMEWORK

Post-secondary students with hearing loss enrolled in a technical college system located in the southeastern United States are not formally self-disclosing their disability and, therefore, are not receiving academic accommodations. Post-secondary students with disabilities graduate at a lower rate than their peers (U.S. Department of Education, 2018), calling into question the effectiveness of accommodations for students with disabilities (Alster, 1997; Berry & Mellard, 2002; Keim, McWhirter, & Bernstein, 1996; Salzer, Wick, & Rogers, 2008; Sharpe, Johnson, Izzo, & Murray, 2005; Vogel & Adelman, 1990; Zuriff, 2000). While research suggests that appropriate accommodations and supports are academically beneficial to and increase the retention of students with disabilities (Mull, Sitlington, & Alper, 2001; Pierangelo & Crane, 1997; Stodden & Dowrick, 2000; Stodden, Conway, & Chang, 2003), only 28% of post-secondary students considered to have a disability by their secondary school are formally disclosing their disability to their post-secondary institutions (Newman et al., 2011). As a result, most (81%) do not receive accommodations (Newman et al., 2011).

The examination of the experience of students with disabilities requests for and use of accommodations is in its early stages. Lyman et al. (2016) identified barriers to requesting accommodations in post-secondary environments: desire for self-sufficiency; desire to avoid negative social reactions; insufficient knowledge; quality and usefulness of disability student services and accommodations; negative experiences with professors; fear of future ramifications; and, questioning of the fairness of receiving accommodations. Barnard-Brak et al. (2010) found that university students with disabilities consider four attitudinal factors when deciding to request accommodations: disability disclosure, disability acceptance, academic integrity, and the accommodations process. The more positive a student's attitude toward these four factors, the more likely he or she was to request accommodations and the higher the academic outcomes were likely to be. However, no studies have specifically examined the behaviors and attitudes of technical college students with disabilities when seeking accommodations.

According to the Technical College System of Georgia's "Total Credit Enrollment" (2020) report, the system's unduplicated enrollment for academic year 2020 was 140,840, and of those enrolled, 4,762 duplicated students self-disclosed a disability (Technical College System of Georgia, 2019). For academic year 2020, the system served approximately 76,660 students that were 18 and older. Blackwell et al. (2014) reported that 15.2% of surveyed adults aged 18 and over reported hearing trouble. Based on the percentage reported in Blackwell et al. (2014), the technical college system may have served approximately 11,652 students with hearing loss, based on fall 2019 enrollment data. However, internal reports list only 218 students statewide who formally self-disclosed a hearing impairment or deafness (Technical College System of Georgia, 2019).

Adults who have reported hearing loss are part of the target enrollment audience for technical colleges. Blackwell et al. (2014) reported that among adults with hearing loss, 17.4% had less than a high school diploma, 18.4% had earned a high school diploma or GED, and 18.9% had earned some college credit. With 54.7% of adults without college degrees reporting some kind of hearing loss, it is crucial that they enroll in and are academically successful in post-secondary intuitions.

The Georgia Budget & Policy Institute's *2019 Georgia Higher Education Data Book* provided a demographic overview of Georgia's colleges at the beginning of the 2019-2020 academic year. The University System of Georgia (USG) is comprised of research universities, comprehensive universities, state universities, and state colleges. State colleges offer associate degrees and bachelor's degrees in select programs but no graduate programs, making them the closest in comparison to the colleges that comprise the Technical College System of Georgia (TCSG), which offer technical certificates of credit, diplomas, and associate degrees.

In 2019, there were 26 university system institutions and 22 technical colleges in Georgia's public higher education systems. There were two notable demographic differences between the two systems. First, black students represented a higher percentage of total enrollment at technical colleges (39%) than that university system (28%). Also, significant were the age differences between students in the state and technical colleges. USG undergraduate students enrolled for Fall 2019, on average, were 22.1 years of age, whereas as 53% of technical college students were over the age of 21. Lee (2019) does note the recent changes in enrollment by age among technical college students due to the recession and the statewide push for dual enrollment:

> Technical college students are diverse in age. Forty-three percent are younger than 21; 22 percent are 21 to 25; and 36 percent are older than 25. But for the first time, students under 21 outnumber those over 25. The recession dramatically increased the number of students older than 25, but enrollment in this age group decreases as job opportunities improve for older workers. Enrollment of students under age 21 grew the past few years, bolstered by high school students in Dual Enrollment.

Technical colleges have found themselves in the unique situation of having to serve a growing number of high school dual-enrollment students while the enrollment numbers from their traditionally largest age group (25 and older) shrink.

The demographic differences between the student bodies of the Technical College System of Georgia and the University System of Georgia are important to note, and these differences, combined with the lack of literature concerning technical college students, support the need for research into the experience of students with disabilities within the technical college system. However, the mere replication of existing studies in the technical college setting is insufficient because this would not address another significant gap in disability studies literature.

Disability research has traditionally conceptualized “disability” as an identity category with primacy over age, gender, socioeconomic status, cultural background, and other social identities (Goethals, De Schauwer, & Van Hove, 2015). The tendency to essentialize the category of people with a disability (Erevelles, 2011) is a significant weakness of mainstream disability research because this approach assumes that all persons with disabilities share the same worldview and experiences. Researchers have begun to argue for more attention to be paid to the diversity of people with disabilities to address inequities in the research, broaden the understanding of the disabled experience, and represent marginalized voices within the community (Erevelles, 2011; Jacob, Köbsell, & Wollrad, 2010; Raab, 2007). Researchers have begun to apply an intersectional framework to post-secondary disability research (Cuthbert, 2015; Friedensen & Kimball, 2017; López, Javier Chavez, Erwin, & Binder, 2018; Pearson, 2017; Sullivan & King Thorius, 2010).

Intersectionality

Crenshaw (1989) introduced the concept of “intersectionality” in examining the multidimensional nature of Black feminism. In their work, they argued that a single-axis analysis of feminist theory erases Black women “in the conceptualization, identification and remediation of race and sex discrimination by limiting inquiry to the experiences of otherwise-privileged members of the group" (Crenshaw, 1989, p. 140). Central to their argument is the idea that even within a marginalized group, there exists a more privileged group, and focus only on this more privileged group creates a distorted analysis of a phenomenon that is, in reality, more complex.

A limitation of intersectionality is that it is not a theory in the scientific sense because it cannot generate testable hypotheses (Harris & Leonardo, 2018). As a result, it can only be used as a theoretical framework that enhances experimental methodologies (Bowleg, 2012). When applied to the study of marginalized groups, intersectionality disrupts the traditional academic use of broad group labels such as "disabled" and "women" in three primary ways:

> First, intersectionality calls attention to social identities that are consistently treated as marginal or invisible because they are conceptualized as mere subsets of broader, larger, or more 'significant' assemblages. Second, intersectionality points to the complex nature of power, undermining all reductive theories of oppression. [. . .] Third, intersectionality points to the gap between social categorization and the complexity of intersubjective experience: the fact that no single social label—female, Black, bisexual, poor—can ever exhaust what it means for an individual to travel in the world, and therefore that no analysis or label is ever complete. (Harris & Leonardo, 2018, p. 5)

This framework calls for a nuanced examination of the formation of identity and stigmatization, which makes it an important framework for exploring disability identity.

The focus of intersectionality on the complex relationship between power and marginalization makes it a useful framework for exploring the experiences of those with hearing disabilities since defining disability as a social practice that is an exercise of power (Wendell, 1996). Studies examining power as a social construction have explored how language and social interactions shape the perception of disability, illness, and impairment, and how interactions shape the reality people with disabilities experience (Hahn, 1988; Luckner, Slike, & Johnson, 2012).

Hearing loss identity is a social identity that, until recently, has been treated as a subset of disability identity; as a result, the experience of people with hearing loss has been largely invisible. As members of the socially stigmatized broad category of people with disabilities, students with hearing loss, according to social identity theory (Tajfel & Turner, 1979), face a difficult choice: either assimilate into the in-group or "affirm" their out-group identity. Since hearing loss is a "hidden disability," they can conceal the stigmatizing characteristics of their disability and can more easily assimilate into the majority group by denying their disability identity and distancing themselves from the minority "disabled" group (Bogart, 2014). Many people with hidden disabilities view their disability disclosure as a personal choice (Jans et al., 2012), and for them, their identity as a person with a disability is affected by their choice to disclose. While this appears, on the surface, to be a decision with determining factors shared by all members of the group, in reality, the decision is more complex due to the interplay of age, race and ethnic identity, and gender.

Social Identity Theory

Social identity theory (Tajfel & Turner, 1979) suggests that social identity can explain intergroup behavior and attempts to predict intergroup behaviors based on perceived group status differences. In social identity theory (SIT), an individual's self-concept is derived from perceived membership in a social group. The theory posits that individuals seek a positive self-concept and social identity. Additionally, individual behavior is said to exist on an interpersonal and intergroup continuum driven by a compromise between the two extremes and is impacted by social structures. Examples of social structures on the macro level include class structure or social institutions such as government, while on the meso level include social networks or norms.

Hogg, Terry, and White (1995) outlined how social category affects an individual's self-concept:

> The basic idea is that a social category (e.g., nationality, political affiliation, sports team) into which one falls, and to which one feels one belongs, provides a definition of who one is in terms of the defining characteristics of the category—a self-definition that is a part of the self-concept. (p. 259)

Individuals can have multiple discrete category memberships that vary in importance to their overall self-concept and represent a prescriptive social identity in terms of how they should think, behave, and feel as a member of a particular group. An individual develops an internalized concept of normative behavior for his or her dominant, specific social identity and seeks to maintain that norm to remain a member of the group.

Social identity in SIT not only describes and proscribes normative behavior and characteristics for groups, but it also creates a motivation for members to "adopt behavioral strategies for achieving and maintaining in-group/out-group comparisons that favor the in-group, and thus the self" (Hogg et al., 1995, p. 260). Those whose social identity is defined by out-group membership often find themselves stigmatized since individuals show favoritism to those they perceive to be in the same group (Tajfel & Turner, 1979).

Crocker and Major (1989) clarified that social hierarchy is important in defining a stigmatized group, "a stigmatized group is an out-group relative to the dominant group in a culture or society, whereas an out-group is defined by reference to any particular in-group, regardless of which group holds the dominant position in the social hierarchy" (p. 609). This idea is key to understanding how individuals in stigmatized groups can improve their self-concept. Using the framework of SIT, Bogart (2014) proposed two methods that members of stigmatized groups, specifically those with disabilities, can use to improve their self-concept. The first method is assimilating into the in-group, and the other is to "affirm" their out-group identity.

Individuals with disabilities who choose to assimilate into the majority group must do so "by denying their disability identity, distancing themselves from the minority group, and adopting the majority group to negative evaluation of the minority group" (Bogart, 2014, p. 108). This is easiest for individuals with a disability considered "hidden" because they can conceal the stigmatizing characteristics of their disability. The term *hidden disability* refers to a disability that is not readily apparent and that cannot be identified without the administration of a diagnostic test. Association of the term *disability* with limitations to physical mobility that require assistive devices, and as a result, are noticeable to an observer is the direct result of the use of the medical model of disability to define disability in our society. However, proponents of disability rights argue that this model leads to the social degradation of people with disabilities, and instead, they support the use of the social model of disability.

Models of Disability

Models of disability provide a framework for the definition of impairment and disability. Two popular models of disability that impact this study are the medical model and the social model. The medical model of disability supports the in-group/out-group concept within SIT. The medical definition of disability is:

> based on the notion that disabilities are a physical or mental deficiency and that the individual with disabilities should be "fixed" or otherwise conform to society's definition

> of normal. This model also assumes that people with disabilities will never be full participants in society. (Meeks & Jain, 2015, p. 15)

This model has fallen out of favor in educational research due to its emphasis on an individual's limitations and the idea that people with disabilities should seek to conform to society's definition of normality; however, the medical model of disability still has a significant impact on social institutions, such as the law and educational policy.

Our society currently operates in the space between these two models, which leads to conflict and uncertainty. Having largely fallen out of favor in disability literature, the medical model of disability still impacts the educational experience of people with disabilities. While the ADA reflects an attempted cultural shift from the use of the medical model of disability to the social model of disability, the ADA's reliance on a broad definition of "legitimate" disability has had the unintended consequence of further supporting the medical model of disability. Scotch (2000) argued that this flexibility may have resulted in an increased reliance by the courts on "popular and limited conceptions of what people with various impairments can and should be allowed to do" (p. 218). In seeking a method to conceptualize the intentionally broad concept of disability as defined under the ADA, higher education institutions have also relied heavily on the medical model of disability to identify students with disabilities and determine what reasonable accommodations they can receive.

In the social model of disability, the term disability is not focused on the characteristics of an individual with an impairment; instead, the term disability in this model focuses on society's collective, disabling response to what it perceives to be different from the norm and calls for the removal of social barriers such as negative attitudes and inaccessible environments (Barnes & Mercer, 2005; Dirth & Branscombe, 2017). Thus, under the social model, disability is defined as the “disadvantage or restriction of activity caused by a society which takes little or no account of people who have impairments and thus excludes them from mainstream activity” (Thomas, Gradwell, & Markham, 1997, p. 2).

Advocates of disability rights tend to prefer using the social definition of disability, which arose in the 1970s and 1980s, as it emphasizes equality for people with a disability. According to Meeks and Jain (2015), the social model of disability:

> asserts that it is society’s environmental, cultural, and attitudinal barriers, as opposed to the disability itself, that prohibit people with disabilities from participating fully in all aspects of society. The social model encourages society to accept disability as another form of human diversity and to develop societal structures and programs that accommodate and include all forms of disability, thus reducing the need for individualized accommodations. (pp. 15-16)

Under this model, ability is viewed as existing on a continuum rather than being a dichotomy. This is an important distinction because the social model of disability acknowledges that society categorizes people into in-groups and out-groups based on their impairments but ultimately argues against the dichotomous classification of people with and without impairments.

The characterization of people into social in-groups and out-groups is not limited to disability or impairment but also extends to other characteristics such as race, ethnicity, gender, and age. As a result, people with disabilities may have multiple, sometimes conflicting, identities. For those with hidden disabilities, such as hearing loss, group boundaries can be permeable, and self-identity as a group member can be shaped by the age of onset of their impairment or disability and their gender, racial, and ethnic identities.

Other Social Identities

Social categorization is a complex issue, and individuals can belong to multiple social groups, both marginalized and dominant, that affect their identity development. To begin exploring the attitudes and behaviors of students with hearing loss in the technical college setting toward disability disclosure, the use of an intersectional framework requires that one must also examine how age, gender, and racial/ethnic identity impact the phenomenon.

Age.

The inclusion of age is necessary for a study of the attitudes and behaviors of students with disabilities in the technical college system because age can influence "perceptions of the requestor as a member of a social identity group (i.e., disabled, old)" (Baldridge & Swift, 2016, p. 386). Since social identity affects normative expectations regarding the appropriateness of certain behaviors like asking for help (Mackenzie, Gekoski, & Knox, 2006) or requesting disability accommodations (Baldridge & Swift, 2016), it is important to understand the role that age plays in disability identity.

Because the perception of what is considered acceptable behavior for an individual is impacted by his social group memberships, those who do not exhibit acceptable group behaviors are considered deviant or unsuccessful (Hogg et al., 1995; Watts & Carter, 1991). An example of this can be seen in the model of successful aging, which is defined by three characteristics (Rowe & Kahn, 1987): First, those who have successfully aged have avoided disease and disability; second, successful older adults have maintained typical cognitive and physical functions; and finally, successful aging is defined by continual social engagement. This model of successful aging reflects the medical model of disability since it places the concept of aging into a dichotomy of successful versus unsuccessful based on the avoidance of disease and disability.

Rather than viewing ability as a scale of difference on which all people can be measured, this model supports a stigmatized/dominant view of disease and disability where people are either sick/well or able/disabled. This model is inherently ableist because it encourages "discrimination and prejudice against people with disabilities, based on assumptions of inferiority, abnormality, or diminished humanity" (Berridge & Martinson, 2017, p. 84).

The label "incapable" is often associated with older or disabled identities, and this identity is imposed on older adults and those with disabilities by external parties, often by gatekeepers to dominant societal groups (Berridge & Martinson, 2017). In Raich and Loretto's (2009) study of how older unemployed adults managed their self-identity in relation to work, the authors found, "the notion of being 'incapable' was still being conflated with their 'older' or 'disabled' identities in the minds of employers" (p. 109). Participants in the study believed this negative association of age and disability with capability presented a barrier to employment, and the only way this association could be avoided was by lying about their health and disability on job application forms.

Gender.

When Crenshaw (1989) first proposed using an intersectional framework for the study of Black feminism, she argued that even within marginalized groups, a more privileged subset can exist. Within the category of "disabled," feminist disability scholars argue that women with disabilities experience the double oppression of sexism and ableism (Bogart, Rottenstein, Lund, & Bouchard, 2017). As a result, the inclusion of gender in the study of disability is necessary if one seeks to understand the entirety of the experience.

When viewing disability through a feminist lens, the portrayal of the body, bodily variety, and normalization in mainstream society are key concepts (Hall, 2011). The body is often conceptualized into two categories: normal and abnormal. According to Garland-Thomson (2011), "Western thought has long conflated femaleness and disability, understanding both as defective departures from a valued standard" (p. 18). Examples of this dichotomous in/out-group categorization of the body can be seen in how gender is described and conceptualized.

Gender is a varied and nuanced construct that significantly impacts identity development, especially for those whom society views as deviant to the gender binary since society ascribes normative behaviors to gender identity based on biological sex. Disability studies have focused primarily on the experiences of cisgender individuals—those whose gender identity matches the sex assigned at birth (Baril, 2015; Landen & Rasmussen, 1997; Thomson, 2007; Williams, Allard, & Sears, 1996), and few studies have included trans-identified participants with disabilities (Martino, 2016).

Race and ethnicity.

Society also associates normative behaviors with racial and ethnic identities. As with gender, societal in-groups have historically pathologized race, and perceptions of racial groups have focused on bodily differences. In the antebellum South, scientific racism was used to justify White landowners' racial superiority and the enslavement of African Americans. For example, physician Samuel A. Cartwright hypothesized that mental illnesses such as *Drapetomania* and *Dysaesthesia Aethiopis* resulted in intense urges in slaves to run away and evade labor (Rose, 2017).

Just as women with disabilities face the double oppression of ableism and sexism, people of color with disabilities also experience both ableism and racism (Bignall & Butt, 2000; Stuart, 1992, 1993; Vernon, 1999). According to Bogart et al. (2017), "experiences of ableism in one's racial community and racism in one's disability community may lead many people of color with disabilities to feel that they do not fully belong to or identify with either a racial or disability identity" (p. 555). As Crenshaw (1989) proposed, intersectionality suggests that within a marginalized group lies further marginalized subsets and attempts to understand the experience of people with disabilities cannot be divorced from an investigation of the role race plays in their experiences. Whereas ethnic identity is derived from self-selected membership in a cultural group that shares a language and cultural traditions, racial identity is a socially imposed, hierarchical grouping based on shared physical traits. Race is primarily unitary, while one can have multiple ethnic identities; however, the fundamental and most significant difference between the two is the inherent inequality built into racial classification (Conley, 1999).

This study proposed that the experience of people with hearing loss is shaped, in part, by their age, gender, racial, and ethnic identities and that they should not be studied as a homogenous group. As a result of their participation in multiple and sometimes conflicting social groups, their self-disclosure behavior and attitudes toward accommodations may be impacted by these differences. The next section describes the theoretical framework supporting the ATRA scale used in this study.

Attitudes Toward Accommodations

In post-secondary institutions and the workplace, it is the responsibility of the student or employee to self-disclose, whereas, in primary and secondary schools, federal law places the responsibility on the state to identify students with disabilities and provide accommodations. Under the ADA, public and private educational institutions must provide equal access to students with disabilities. One method for ensuring equal access is accommodations. In a higher education context, accommodation is generally defined as a student's support to access course content and/or demonstrate his or her knowledge (Williamson, 2011).

The process for requesting accommodations in a post-secondary institution differs from that of primary and secondary education environments, and while documentation requirements for those seeking accommodations vary from institution to institution, most include the same general components: documentation that outlines the diagnosis of a student's disability, the date of the diagnosis, and a description of how the diagnosis was reached. This documentation also usually includes the credentials of the diagnosing professional and a narrative about how the student's disability affects his or her daily life and academic performance.

Barnard-Brak et al. (2010) found that students with disabilities consider four attitudinal factors when deciding to request accommodations: disability disclosure, disability acceptance, academic integrity, and the accommodations process. To measure the attitudes of post-secondary students with disabilities toward requesting accommodations, Barnard-Brak et al. (2010) developed the ATRA scale. The more positive a student's attitude toward these four factors, the more likely he or she was to request accommodations and the higher his or her academic outcomes were likely to be.

Disability Disclosure.

The first subscale, disability disclosure, measures students' attitudes toward disclosing their disability to obtain accommodations (Barnard-Brak et al., 2010). In broad terms, disclosure is defined as the process of making the self known to others (Jourard & Lasakow, 1958). It is a type of interpersonal communication that implies interpersonal trust between the sender and receiver (Wheeless, 1978), and as a result, it is considered a behavioral indicator of interpersonal trust.

Interpersonal trust is a process of engaging in types of dependent behaviors related to the perceived trustworthiness of another person (individualized) or people in general (generalized)

(Wheeless & Grotz, 1976, 1977). This process occurs in situations characterized as risky or where the expected outcomes are not known with certainty. This definition closely links self-disclosure communication with interpersonal trust (Wheeless, 1978) since studies have shown that dependent or risky behaviors can indicate trust (Bridges, 1970; Pearce, 1974).

To request accommodations, a student with a disability must self-disclose his or her disability to a post-secondary institution. Willingness to self-disclose is an important psychological element in obtaining accommodations (Cole & Cawthon, 2015). An individual with hearing loss is influenced by personal and contextual antecedents that affect his or her willingness to self-disclose (Jennings et al., 2013). As one weighs the costs and benefits associated with disclosure, one must pay particular attention to the social cost of revealing one's hearing loss in a social setting (Croteau et al., 2008).

Since people with hearing loss can often "pass" as members of the hearing community due to their hidden disability, they often decide when, how, and to whom they wish to self-disclose their disability (Jennings et al., 2013). While there is little research on the self-disclosure behavior of post-secondary students with hearing loss, previous studies into the workplace disclosure of hearing loss suggest that employees with hearing loss often choose not to disclose their disability to coworkers, especially when prejudicial attitudes are present (Hétu, 1996). According to Newman (2005), only 40% of students with disabilities who had utilized accommodation services in secondary school disclosed their disability upon entering post-secondary institutions. Students with disabilities often must assess the advantages and disadvantages of disclosing their disability or requesting accommodations (Lynch & Gussel, 1996).

The disclosure of disability can be both informal and formal (De Cesarei, 2015). In a higher education setting, informal disclosure can occur between the student and his professors or peers, while formal disclosure is a type of communication between the student and the institution involving formal bureaucratic steps (De Cesarei, 2015; Kranke et al., 2013). In a study of the timing of disability disclosure in higher education, Jacklin, Robinson, O'Meara, and Harris (2007) found that half of the students with disabilities disclosed their application or during the registration process. One-quarter disclosed during their first year. The remainder of the students either disclosed during the second to third year or had unknown statuses (Jacklin et al., 2007), which might be explained by the finding that, for most of the students, the purpose of their disclosure was to obtain accommodations.

Disability Acceptance.

Disability acceptance, the second subscale, measures students' personal acceptance of their disability and the use of accommodations (Barnard-Brak et al., 2010). In rehabilitation research, disability acceptance refers to the psychosocial adaptation process that serves as a marker of quality of life in people with chronic illness and disability (CID) (Livneh, 1988). Disability acceptance involves the successful management of both the external and internal environment. The model of psychosocial adaptation to CID proposed by Livneh (1988) comprises three hierarchical levels. The highest level includes three functional domains: intrapersonal, interpersonal, and extrapersonal. Relevant to this study is the third domain—extrapersonal—since it outlines outcomes associated with successful psychosocial adaptation within the learning and school domain, found within the intermediate level of Livneh's (1988) model. Successful adaptation to CID within this domain is characterized by participation and engagement in learning and/or training activities and outcome measures such as degree completion and GPA.

Few hard of hearing students request support services due to personal denial of their hearing loss and/or poor understanding of the significance of their hearing loss (Schroedel, Kelley, & Conway, 2002; Schroedel, Watson, & Ashmore, 2003). Marshak, Van Wieren, Ferrell, Swiss, and Dugan (2010) found that insufficient knowledge of how to explain their disability and not knowing their specific disability were clear barriers to seeking and utilizing the services in university students with disabilities. This combination of factors can negatively affect their communication with others and negatively impact their academic success since high levels of self-awareness have been critical for the academic success of students with disabilities (Getzel & Thoma, 2008). Personal denial of disability, poor understanding of their impairment, and insufficient knowledge about how to explain their disability could help explain why Schroedel, Watson, and Ashmore (2003) found that post-secondary enrollment rates of deaf and hard of hearing students may be significantly underestimated.

The development of self-identity impacts the disability acceptance levels of individuals with disabilities. The age of onset and type of disability (congenital or acquired) of disabling conditions or chronic illnesses affects individuals' development differently. For example, people with disabilities resulting from accident or disease may have unstable and unrealistic self-representations (Langer, 1994). Among children and adolescents, Jemta, Fugl-Meyer, Oberg, and Dahl (2009) found that those with acquired impairments reported lower levels of global self-esteem than congenital impairments; further, those with acquired impairments expressed feelings of loss and regret concerning their change in self-identity.

According to Darling (2003):

> preexisting beliefs also seem to play a role in whether or not an individual internalizes stigmatizing appraisals of the self. People who acquire disabilities later in life may remember negative, often stereotypical, images of people with disabilities from their childhood. (p. 43)

However, preexisting beliefs do not necessarily define an individual's appraisal of the self. Individuals with disabilities who do not support stigmatized groups' marginalization are not likely to incorporate negative social views of disability into their self-concepts (Major & O'Brien, 2005). However, they may seek to separate themselves from the stigmatized group to protect themselves.

Major and O'Brien (2005) suggested that this dissociative behavior may be related to an individual's level of group identification; they stated, "whereas highly identified group members may respond to threats to the group by increasing their identification with the group, members who are low in identification may cope by decreasing their identification even more" (p. 406). In a 2015 study, researchers found that university students who did not disclose a disability were motivated, in part, by the desire to maintain a typical identity and avoid negative reactions or comments from their peers (Cole & Cawthon, 2015).

Academic Integrity.

The third subscale, academic integrity, describes the student's attitude toward accommodations as an indicator of integrity (Barnard-Brak et al., 2010). In their examination of the experience of post-secondary students with disabilities who had faced barriers in requesting accommodations, Lyman et al. (2016) identified six themes. Relevant to this study is the third theme, Insufficient Knowledge. Many of the participants questioned the fairness of the use of accommodations and struggled with the guilt that they represented an "unfair advantage." A possible reason for this perception may have stemmed from the participants' lack of understanding about their disability and/or their legal rights concerning accommodations. This is supported by Cole and Cawthon's (2015) findings that university students who did not disclose their disability had an overwhelmingly negative view of their disability, felt that they did not need accommodations, or thought that an accommodation would not be helpful to them.

Accommodations Process.

The fourth subscale, accommodations process, measures students' attitudes toward requesting accommodations and navigating the associated processes (Barnard-Brak et al., 2010). The accommodations process can be confusing for post-secondary students. Those with congenital or early-onset disabilities may have been guided through the process by a caregiver or school official in primary and secondary school. Those who experience a disabling condition later in life may have no experience or knowledge of the process or accommodations available. The first step in the process is the disclosure of one's disability. This is a crucial step in beginning the process and ensuring that one receives the correct information about available accommodations. Cole and Cawthon (2015) found that university students who had not disclosed their disability had incorrect information about the accommodations available and the application process.

Frank and Bellini (2005) explored the ADA's accommodation request process through telephone interviews with 20 participants who were blind. The participants varied in age, level of education achieved, work experience, and income. From the results of these interviews, seven themes emerged: Betrayal and Broken Trust; Multiplicity of Barriers; Fear of Retaliation; Problems with Technology; Concept of Print; Habit; and, Successful Means of Acquiring Accommodations (Frank & Bellini, 2005). Except for Concept of Print, all of these themes can be reasonably extended to studying the accommodations request process for individuals with all types of disabilities. Of particular interest to this study were the themes Betrayal and Broken Trust, Multiplicity of Barriers, Problems with Technology, Habit, and Successful Means of Acquiring Accommodations.

According to Frank and Bellini (2005), Betrayal and Broken Trust was one of the worst barriers faced by the participants because this theme describes the failure of those whose professional role is to provide support and care for those with disabilities. In educational settings, these people are the Special Services staff whose responsibilities are to facilitate the request process or ensure that approved and required accommodations are received in the classroom. People's failure in these types of roles to provide support to people with disabilities goes outside the norm of everyday discrimination and signifies a betrayal of trust.

Often, the accommodation process and the attitudes of those involved can appear to people with disabilities as a deliberate attempt to obstruct or dissuade them from requesting accommodations (Frank & Bellini, 2005). The accommodation request processes can involve many bureaucratic steps and be repetitious for those who seek multiple accommodations. Facing the multiplicity of barriers can be emotionally draining and condition people with disabilities not to request accommodations. As a result, some individuals with disabilities forgo the accommodations request process because of the inconvenience the process presents. For those who have successfully developed alternative strategies to accomplish tasks, force of habit and the inconvenience that would be involved in breaking personal habits dissuade them from seeking accommodations.

The theme Problems with Technology is specific to the study of individuals who are blind since the focus "is on request for information that is available in print to sighted individuals and that is needed in order to access computers" (Frank & Bellini, 2005, p. 35). However, one interviewee, Carol Davis, raised an interesting concern that intersects with the subscale Academic Integrity. Carol was embarrassed by the actions of a coworker who was blind who asked for all the technology he could get. She felt this gave blind people as a group a bad image by appearing too greedy. (Frank & Bellini, 2005, p. 35). The implication of this for the study of academic accommodations is that students with disabilities may contribute to the social pressure to avoid requesting accommodations.

The last theme identified by Frank and Bellini (2005) was Successful Means of Acquiring Accommodations. Simply stated, experience has taught those with disabilities that the best way to ensure they receive required accommodations is to bypass the established process. Of particular note to this study, the participants expressed that strategies such as going over the head of the person who handles requests and threatening with a higher authority were often learned in the school environment.

Summary

More research is needed to understand why students with hearing loss do not disclose their disability or request accommodations when attending technical college. As institutions with a workforce development mission, the low employment and educational attainment rates of people with disabilities in the United States should be an area of intense focus for technical college administrators. Additionally, student enrollment trends showing that technical college students are older than traditional four-year institution students combined with the correlation between age and hearing impairment makes this study especially relevant.

To understand the complex experiences of people with hearing loss, characteristics such as age, gender, race, and ethnic identity should not be omitted. The intersection of these provides a framework that allows the researcher to explore how social identity development and conflict shape the self-identity and worldview of people with hearing loss. The barrier between a hearing identity and disabled identity is permeable. Some people with hearing loss move freely between the two. Exploring how and when they make these choices to disclose and assume a disabled identity begins the process of better understanding the attitudes toward requesting accommodations and self-disclosure behavior of students with hearing loss in technical colleges.

Chapter III:

METHODOLOGY

This chapter describes the research design and methodology implemented in this study. The purpose of this explanatory sequential study was to first determine and then explain the factors affecting the willingness of students with hearing loss to self-disclose their disability. In this chapter, the research questions driving the study are presented first. Then, the methods by which the study data were collected and analyzed, including a description of the population, sample, and data collection instruments, are presented. Finally, the limitations of the study are presented and discussed.

Research Questions

To identify the factors that affect the willingness of students with hearing loss to self-disclose their disability, the sequential strands of this mixed-methods study attempted to answer the following questions:

1. Are there differences by age group, ethnic identity, racial identity, or gender in (a) type of self-disclosure and (b) attitudes toward requesting accommodations?
2. Why do some students with hearing loss not formally self-disclose to their institutions?

Research Design

In this study, an explanatory sequential design comprised of an initial quantitative phase followed by a qualitative one was used to investigate the attitudes toward requesting accommodations and self-disclosure levels among students with hearing loss in a technical college setting (Creswell & Plano Clark, 2017). This design helped first determine the type of disclosure behaviors and attitude toward requesting accommodations in the population using survey questions and standardized measurement scales. In addition, the quantitative results allowed for the comparison of the responses based on age group, ethnic identity, racial identity, and gender. Next, the explanatory sequential design allowed the qualitative data analysis to begin to explore the nuances of the experiences of participants who did not formally self-disclose their disability to their institution.

The use of a quantitative design alone would have allowed the identification of differences between gender, racial identity, ethnic identity, or age group but would not have provided a depth of understanding for the second research question, "Why do some students with hearing loss not formally self-disclose to their institution?" Likewise, a qualitative design would have addressed the second research question in depth but would not have allowed for exploring the relationship between the variables in the first research question. The use of a mixed-method design assisted in addressing both research questions and can help identify multiple participant meanings, especially among marginalized subgroups (Creswell & Plano Clark, 2017).

According to Creswell (1999), an explanatory sequential, mixed-methods design is appropriate for examining educational policy. This method's emphasis on an in-depth exploration of the participants' experiences was appropriate due to the transformative nature of mixed-methods research (Creswell & Plano Clark, 2017). The "use of multiple worldviews, or paradigms (i.e., beliefs and values), rather than the typical association of certain paradigms with quantitative research and others with qualitative research" (Creswell & Plano Clark, 2017, p. 13) in mixed-methods research supports the purpose of the study to provide insight into how colleges can foster an environment that encourages and supports the self-disclosure of hearing disabilities. This accomplishment of this goal requires a transformative approach because of the change in basic assumptions needed to change the way higher education institutions approach students with disabilities.

When analyzing the results of the two phases, primary emphasis was given to the quantitative results (Creswell et al., 2003). In this study's quantitative phase, data were collected using an online survey and then the findings were analyzed. The purpose of the online survey of students enrolled at a sample of technical colleges was to identify factors that affected their willingness to request accommodations, type of self-disclosure, and demographic data. The data collected through the survey were used to identify differences in the levels of self-disclosure and the attitudes toward requesting accommodations by age group, ethnic identity, racial identity, and gender. To further explore the self-disclosure behavior of students with hearing loss, the survey also identified students willing to participate in the qualitative phase.

The purpose of the second phase of an explanatory sequential design was to build on or explain the initial quantitative results, and this design should be used when one wants to choose a purposeful sample for the qualitative phase (Creswell et al., 2003). As a result, the goal of the second qualitative phase was to answer the second research question by further exploring, through semi-structured interviews, why some students with hearing loss did not formally self-disclose to their institution.

Population and Samples

The quantitative sample was drawn from a population of two-year post-secondary technical colleges located in the southeastern United States. This sample was chosen based on two factors: convenience and FTE. The system's unduplicated enrollment for academic year 2020 was 140,840 (Technical College System of Georgia, 2020). Of those enrolled in the system, 4,762 students (duplicated) self-disclosed a disability for Fall 2019 (Technical College System of

Georgia, 2019). Of that number, 170 disclosed a hearing impairment and 48 disclosed deafness (Technical College System of Georgia, 2019).

The system collects data on the following demographic characteristics of students enrolled in the system: age group, race/ethnicity, gender, and disability. In the age group category, the enrollment count was separated into under 21, 21-25, 26-30, 31-35, 36-40, and over 40. Race/ethnicity was reported together without distinction between the two. Students self-reported as American Indian, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or other Pacific Islander, two or more races, White, or unknown (those who do not respond). Gender is also self-reported as either male or female. If students officially self-disclose a disability, their disability type is also recorded. The categories relevant to this study were hearing impairment and deafness. In Chapter IV, the system demographics are compared to the sample in detail.

The state's technical college system divides its colleges into academic year peer groups based on the fall semester FTE enrollment of the colleges. Peer Group 3 was comprised of colleges A, S, and U. The researcher requested the participation of college A; however, it was not granted. As a result, the sample for the quantitative phase of this study comprised the remaining two Peer Group 3 colleges, plus college G. College G was added to the sample based on convenience and to increase the potential number of responses. The total enrollment of the sample for the colleges in the sample during fall 2019 was 12,181, or 12.32% of the total system Fall 2019 enrollment (Technical College System of Georgia, 2020).

In the quantitative phase, the survey was sent to all students enrolled at the colleges in the sample. This choice was made to gather responses from students who had not self-reported a hearing disability or impairment to their institution in addition to those who have. In the population of colleges sampled, only 33 students had formally self-disclosed a hearing impairment or deafness to their institution. Based on the assertion by Newman et al. (2011) that only 28% of post-secondary students considered to have a disability by their secondary school are formally disclosing their disability to their post-secondary institutions, it is likely that there is a hidden subpopulation of students with hearing loss that do not appear in the system reports. This choice also protected the privacy of those who had self-disclosed their disability to the institution, as identifying information regarding their disability or impairment was not provided to the researcher.

Based on their responses to the survey's screening questions, the participants were separated into two groups: group A and group B. Students who self-reported hearing loss were separated into group A, regardless of whether they had self-disclosed to the institution. Students who self-reported that they do not have hearing loss were separated into group B and were directed to the end-of-survey thank you page.

Before data collection began, it was expected that the number of responses would be too small for the use of inferential statistics during the data analysis phase of the study since the actual number of students with hearing loss in the technical college system was unknown. As a result, descriptive statistics were used to describe the individuals who responded to the survey in an attempt to answer the first research question: "To what degree, if any, are there differences by age group, ethnic identity, racial identity, or gender in (a) type of self-disclosure and (b) attitudes toward requesting accommodations?" The data analysis process is described in more detail in Chapter IV.

The qualitative sample was selected from the students who volunteered for the semi-structured interviews upon completing the survey. A list of those who were willing to participate, their demographic information, their type of hearing loss, and their self-disclosure status was compiled. Cleary, Horsfall, and Hayter (2014) discussed the importance of sample size in data collection and qualitative research sampling. They pointed out that sample size depends on the methodology used, the researcher's level of experience, and the quality of the data collected (Cleary et al., 2014). As a result, the initial goal was to select a purposeful sample of 8 to 10 students who represent the quantitative data results, and if it was determined that more participants were needed as the data were analyzed, more would be interviewed.

In reality, while 14 potential participants were identified, the sample was ultimately comprised of 6 participants and relied on voluntary response sampling. The limitations of this sampling method were that the researcher did not have control over the makeup of the sample and, as a result, was limited in the degree to which the demographic variables could be explored during the interview phase. While limiting, the sampling method was still successful. It ultimately provided the researcher with access to students who had not disclosed their hearing disability or impairment to their college.

Instrumentation

The following data sources were used to collect the quantitative and qualitative data in this explanatory sequential mixed-method study: ATRA, demographic self-disclosure survey questions, and open-ended interview questions.

Online survey.

The online survey, provided in Appendix A, was comprised of three sections. The first section collected data on the participants' demographical information, diagnosis of hearing loss, and self-disclosure behaviors. This section was used to identify groups A and B. The demographic questions in the first section of the survey were closed-ended questions that collected data about the participants' age, gender, racial identity, and ethnic identity. The second section of the survey contained the ATRA (Barnard-Brak et al., 2010). The third section directed the participants to a separate survey to self-disclose their contact information if they were willing to be interviewed. Those willing were asked to provide their name, contact information, and demographic data.

Whether a person had hearing loss was determined using one of two methods. The first method was a close-ended question asking if they had ever been diagnosed with a hearing impairment or disability. The second method was the use of three closed-ended questions: "Do you feel you have a hearing problem?" (Q1), "Do you feel that people mumble?" (Q2), and "Has anybody told you that you don't hear well?" (Q3).

To be included, participants either had to respond "Yes" to at least two of the screening questions or self-identified as having hearing loss. Ishak, Mukari, Maamor, and Hasim (2017) found that using these three questions to determine self-reported hearing loss had a better performance than the use of just Q1. The performance of these questions in identifying hearing loss was measured by comparing the responses to the questions to pure tone averages and cutoff points of the participants. Ishak et al. (2017) found that the use of Q1 "demonstrated poor accuracy (38.6%-49.1%) in identifying at least mild hearing loss and better accuracy for at least moderate loss (57.7%-74.4%)" (p. 3). The use of all three questions generated a sensitivity score range of 54.9%-73.3% while using Q1 alone generated a sensitivity score range of 30.8%-58.2% (Ishak et al., 2017).

The ATRA (Barnard-Brak et al., 2010) was used to measure the attitudes of college students with disabilities toward requesting accommodations. Using a score derived from four subscales (i.e., Academic Integrity, Disability Disclosure, Disability Acceptance, and

Accommodations Process), the ATRA measures the full range of attitudes and suggests that attitude impacts subsequent behavior (Barnard-Brak et al., 2010). The original scale is comprised of 32 items scored on a 5-point Likert scale with responses that range from 1 (strongly agree) to 5 (strongly disagree); however, this study inverts the response range to 1 (strongly disagree) to 5 (strongly agree) to mirror the negative to positive response range of the Likert scale used in the Revised Self-Disclosure Scale and improve survey response reliability.

Internal consistency measurement by Barnard-Brak et al. (2010) found that the ARTA demonstrated an acceptable level of internal consistency ($\alpha = .91$), and the coefficient alpha scores of each subscale ranged from .88 to .94 (Barnard-Brak et al., 2010). Barnard-Brak et al. (2010) found that the ARTA has acceptable construct validity through the use of the chi-square test statistic; the ratio of the chi-square statistic to degrees of freedom (χ^2 / df); the Tucker-Lewis index; the comparative fit index; and the root mean square error of approximation. Standardized path analysis determined the strength of the causal relationships between ATRA (higher-order factor) and each of the four subscale concepts (lower factors); the values ranged from .38 to .86. and were statistically significant at .05 or less (Barnard-Brak et al., 2010).

Semi-structured interviews.

A protocol that outlined the procedures to be followed before, during, and after the interviews assisted in preparing for the interview and reflection on the central objective of the interview. An interview protocol modified from the one developed by Hamilton and Hillier (2006) for the Changing Faces Project at Lancaster University was used to outline the steps that a researcher should follow prior to, during, and after an interview.

Semi-structured interview questions (Appendix B) that probe students' experiences with self-disclosure were created for use in the interview phase. The types of questions that were asked further explored the data analysis results in the quantitative stage. Since this study was intended to examine a particular phenomenon, a less structured interview approach was deemed appropriate (Maxwell, 2012). Specifically, semi-structured open-ended interview questions were used, with adjustment in the sequence of questions as needed. The needs of each interview required changes in question sequence, wording, or time spent on certain questions (Robson, 2002). Semi-structured questions also allowed the interviewee to provide factual and subjective information, such as their experience, opinions, and perceptions (Yin, 2003), which were necessary information when exploring a phenomenon.

Data Collection

The sequential stages of this study involved a survey and semi-structured interviews. This was to allow for identifying trends in the quantitative data and then exploring those trends to seek a deeper understanding of the phenomenon under study. To protect participants from any potential harm and ensure their privacy protection, approval was sought from the Institutional Review Board at Valdosta State University (Appendix B) and the central office of the technical college system.

Survey Protocol

The first step in the implementation of the survey was sample selection. During the first week of the study, the report "Disability" from the system's data center for spring 2019 was pulled to provide the total number of students who self-identified as disabled in the individual colleges in the sample. To encourage participation, a chance was offered to win a $50 Amazon gift card for completing the survey (see Appendix C). The contact information for the drawing was collected separately from the survey to maintain anonymity (Appendix C). To obtain a sample large enough to be representative of the population, 379 responses were required. This calculation was based on the enrollment (25,662) of the sample colleges. Of the 810 initial responses, only 165 participants made it past the screening questions and into the primary section of the survey.

To address privacy concerns, the reports that were pulled did not contain the identities or identifying characteristics of the sample. Prior to the beginning of the semester, approval was gained from the technical college's central office. Participation was solicited from the colleges in the selected peer group (see Appendices D and E). During the first week of the study, the President's Office at each college was contacted. It was requested that the initial email solicitation and the link to the survey be distributed to all students enrolled for the term. Four of the five colleges selected agreed to participate.

Once the initial email solicitation and the link to the survey were distributed to all students enrolled for the term (Appendix F), participants were reminded three times before the survey closed (weeks 3, 5, and 7). Each reminder was sent two weeks apart, and the survey remained open for a total of eight weeks. According to Balch (2010), the ease of delivery and creation of online surveys "is offset by a variety of usability issues including formatting, delivery success, and interpreting responses" (p. 7). In addition, it can often be difficult to obtain enough survey responses to achieve the desired confidence interval. The intent of sending three reminders spaced two weeks apart was to increase the response rate. The survey was built in the online survey software Qualtrics. This online survey tool was chosen because it meets Balch's (2010) four criteria in evaluating survey authoring system features, and it makes navigation and question intent clear.

The email contained the following: a disclosure stating the general topic of the study, why they have been chosen, how the results would be used, and information about how to opt in or out. Students who decided to participate were instructed to select the hyperlink embedded in the email that took them to the online survey. The survey contained the ATRA scale and questions about the participants' demographics, self-disclosure behavior, and hearing impairment screening questions.

Interview Protocol

Prior to the interview, the interviewees were identified, and their essential background information was collected. This was done using the first section of the online survey. At the end of the email survey, participants who were willing to be interviewed were directed to a second, separate survey where they were asked to self-disclose their name, demographic information, and contact information. By separating the two surveys, all participants maintained their anonymity.

Next, a standard set of interview questions based on the data analysis results in the quantitative stage was determined. Then, the interviewees were contacted to set a date and time of interview. The interviews were supposed to occur in a conference room at the institution where the student is enrolled; however, the COVID-19 pandemic occurred during this phase of the study. Interviews were instead conducted via private, individual Zoom meetings. The interviewees were sent a copy of the questions ahead of the interview with a cover letter explaining the project's scope and how the data would be used. The cover letter also requested permission for recording the interview (Appendix G).

During the interview, background information about the study was provided. Next, permission to record the interview was reconfirmed. Processes to ensure confidentiality were restated, and after checking that the recording equipment was functioning correctly, the interview began, and notes were taken throughout. The interviews were an hour in duration, and only the interviewer and participant were present.

In qualitative research, building rapport with research subjects has been viewed as a requisite component of the researcher's interview technique. Lincoln (2001) defined rapport as "the researcher's achievement of sufficient sympathy and/or empathy with the interviewee that s/he will be willing to share critical, confidential and/or intimate data with the researcher" (p. 3). The idea that researchers can and should build rapport with respondents is an assumption of the consensus model of social research and does not consider the conflicts and disparities inherent in respondents' social lives. Lincoln (2001) argued:

> rapport may be so tied to modernist concerns for objectivity, and so implicated in the treatment of respondents as data sources, needing coaching in how to be 'proper' interview subjects, that it lacks real utility as a methodological concern transferable to phenomenological and postmodern models of qualitative research. (p. 9)

The intersectional framework of this study called for a nuanced look at the formation of identity and stigmatization of individuals with hearing disabilities, and the concept of universal rapport with respondents was unrealistic due to the complicated relationships between disability and age, gender, racial, and ethnic identities.

Rather than view rapport building through the modernist lens, Lincoln (2001) suggested fieldwork under conditions of social conflict, like this study, can seek to build solidary between the researcher and the respondents. When developing relationships between dominated or oppressed people, Beverley (1999) believed "the desire for solidarity can move academic and institutional knowledge closer and more proximate to the lives of those for whom we have previously believed we spoke" (p. 11). In this process, the researcher did not seek to speak for the respondents; instead, both came "together in a sense of mutuality (and shared destiny), to create and transform knowledge into useful praxis and action" (p. 11).

The practical application of this concept was conducted through an initial conversation with the respondents. During the initial rapport-building stage, the researcher explained the purpose of the study and invited the participant to work collaboratively to create knowledge about the experience of students with hearing loss in the technical college setting.

Once an interview was concluded, the project was completed using a final protocol. First, interview notes were written, and the recordings were sent to be transcribed. A follow-up letter of thanks was sent to the interviewee. Once the transcripts are returned, they were checked, edited, and prepared for data analysis.

Data Analysis

The following qualitative data analysis procedure was based on the expectation that the number of responses would be too small to use inferential statistics. In the population of colleges that were sampled, only 33 students had formally self-disclosed a hearing impairment or deafness to the institution. While the survey was sent to the entire enrolled population at the sample colleges, not just those who had disclosed a disability, the expected number of responses was still too low to use inferential statistical analysis. As a result, the descriptive statistics mean and standard deviation were used to describe the individuals who responded to the survey in an attempt to answer the first research question: "To what degree, if any, are there differences by age group, ethnic identity, racial identity, or gender in (a) type of self-disclosure and (b) attitudes toward requesting accommodations?"

Qualitative data analysis took place in two cycles. In the first cycle, simultaneous coding (Saldana, 2016) was used to analyze two types of artifacts: researcher memos and interview transcripts. Due to the relationships between the multiple social identities and nuanced social interactions experienced by the participants during the self-disclosure communication, it was sometimes necessary to apply two or more codes to the data to interpret both the manifest (apparent) and latent (underlying) participant meanings (Saldana, 2016). Simultaneous coding was also necessary due to the likelihood that data had multiple meanings (Saldana, 2016) since social interaction is complex and does not occur in isolated units (Glesne, 2006).

After the first cycle, the codes that emerged from the three-step process were mapped in three iterations (Saldana, 2016). The first iteration of code mapping involved the random listing of all the codes identified in the first cycle. The second iteration involved the initial, broad categorization of the initial codes. The third iteration subcategorized the broad categories identified in iteration two. This resulted in fewer top-level categories containing hierarchical subcategories.

The second cycle of coding further developed this initial attempt to begin the organization of the codes that emerged in the first cycle through pattern coding (Saldana, 2016). Pattern coding was used to identify the emergent explanation why some students with hearing loss did not formally self-disclose to their institutions, addressing the second research question of this study. The primary patterns that emerged from this analysis were ultimately developed into a narrative that explained the possible interrelations and causations that created the top-level patterns that emerged.

Chapter IV:

RESULTS

This chapter presents the findings of the analyses of the quantitative and qualitative data. It is organized into three main headings based on the research phases: the initial quantitative phase, the subsequent qualitative phase and a discussion that synthesizes the results of both phases. The quantitative section addresses the first research question: "To what degree, if any, are there differences in (a) type of self-disclosure and (b) attitudes toward requesting accommodations, by age group, ethnic/racial identity, or gender?" The second qualitative section addresses the second research question: "Why do some students with hearing loss not formally self-disclose to their institution?" Data preparation, analysis, and findings for both phases of the study are provided.

Analysis of Research Question One

The quantitative section of this study was guided by one research question with two parts: "Are there differences in (a) type of self-disclosure and (b) attitudes toward requesting accommodations, by age group, ethnic/racial identity, or gender?" Before this question was addressed, the data were prepared, and the demographic profile of the sample was compiled. The first part of this narrative providing detailed information about the preparation of the data for analysis in SPSS is outlined in the first section. Additionally, it provides a demographic profile of the sample compiled after the responses were screened and the data prepared for analysis.

Following the profile, the sections are organized by the research questions subsection and variable. First, the differences between the demographic characteristics and type of self-disclosure are examined. Then, the differences between those same variables and attitude are examined. Finally, a conclusion summarizing the findings is presented.

Data preparation.

Of the 1,127 initial responses to the survey, 810 provided informed consent and began the study. During the data preparation stage, responses to the hearing screening questions were separated into groups and included in the raw data file used for analysis. To be included, participants had to have responded "Yes" to at least two of the screening questions or self-identified as having hearing loss. Fifty-nine participants responded "Yes" to all three screening questions. There were 135 "Yes" responses to questions two and three. Five participants responded "Yes" to questions one and two. To questions one and three, only three participants responded "Yes." The screening questions identified 202 participants that might have undiagnosed hearing loss or impairment. Of those, 165 completed at least 75% of the survey. These 165 comprised the sample.

In response to the fourth question about formal diagnosis, 13 participants responded "Yes." Interestingly, six participants responded "Yes" to this question regarding diagnosis but "no" to all three screening questions. Based on the assumption that the screening questions allow for the identification of undiagnosed hearing loss or impairment, the inclusion of the screening questions allowed for identifying 117 participants who would have been otherwise excluded based on the fact that they had not been diagnosed with hearing loss or impairment.

Demographics.

After determining which responses to discard and include for analysis in SPSS, the raw data were coded. Appendix H provides a breakdown of all variables by label, question number, question text, and data type. Once the data were coded, they were entered into SPSS, and descriptive statistics for the variables were identified. These descriptive statistics are reported in the relevant subsections below.

A demographic profile was compiled for the results of the survey. Table 1 outlines the sample by gender identity. The technical colleges only collect and report male or female gender. According to academic year 2020 (Table 2), those with a female gender identity comprised 62.75% of the total system enrollment, and those with a male identity comprised 37.25%. Compared to the system percentages, the sample of survey participants included more females (6.95) and fewer males (11.80). Due to the lack of data regarding transgender, gender non-conforming and intersex gender identities at a system level, those percentages, provided below, cannot be further analyzed in the context of population representation.

Table 1

Sample by Gender Identity

Identity	*n*	Percent
Woman, female, or feminine	115	69.70%
Man, male, or masculine	42	25.45%
Prefer not to answer	5	3.03%
Gender non-conforming or genderqueer	2	1.21%
Intersex	1	0.61%
Transgender man	0	0.00%
Transgender woman	0	0.00%
Totals	165	100.00%

Table 2

System-wide Gender Distribution for Academic Year 2020

Identity	System	Percent of Total Enrollment
Male	52,464	37.25%
Female	91,218	62.75%
Totals	143,750	100.00%

Table 3 outlines the sample by ethnic/racial identity. The survey was designed to allow participants to select more than one identity. Of the 165 participants, 19 reported a multiethnic and/or racial identity. The technical college system racial and ethnic identity distribution (Table

4) is similar for some identities but very different for others. Whites comprised 46.72% of the system total and 46.67% of the sample. This is where the similarity ended. Hispanic or Latino comprised 8.89% of the system total but 6.06% of the sample. The representation of Asian and Black identities in the sample was lower than the system by 1.58 and 12.35%, respectively. There was a higher percentage (2.11%) of American Indian, unknown (5.58%), and multiethnic (9.25%) participants in the sample than in the system distribution. No other racial or ethnic identities were included in the sample.

One possible explanation for the differences in percentages could be population differences by ethnicity and race across the state. Another explanation for these differences could also be how the technical college categorizes and collects racial and ethnic identity statistics. For example, the survey asked participants to select any of the identities that they identified with, whereas the system required that they select one. While there was a two or more races category for the system data, this was a multiracial identity not a multiethnic one. It could be that students considered themselves to be a single race but multiethnic, or the question could contain biased wording. Further exploration of how racial and ethnic identity is collected by the system and its accuracy in describing student self-identities could provide a deeper understanding.

Table 3

System-wide Race/Ethnicity Distribution for Academic Year 2020

Identity	Enrollment	% of Total Enrollment
White	65,796	46.72%
Black or African American	54,098	38.41%
Hispanic or Latino	12,517	8.89%
Two or more races	3,195	2.27%
Asian	3,080	2.19%
Unknown	1,539	1.09%
American Indian	438	0.31%
Native Hawaiian or other Pacific Islander	177	0.13%
Totals	140,840	100.00%

Table 4

Sample by Ethnic/Racial Identity

Identity	*n*	Percent
White	77	46.67%
Black or African American	43	26.06%
Multiethnic	19	11.52%
Prefer not to answer	11	6.67%
Hispanic, Latino or Spanish origin	10	6.06%
American Indian or Alaska Native	4	2.42%
Asian	1	0.61%
Total	165	100.00%

Table 5 outlines the distribution of the sample by age group. The numbers must be approximated due to the difference between the survey age categories and the system data. The system divided age into four categories between 21 and 40, with everyone over 40 in one group. For a study regarding adults with hearing loss, it was necessary to divide age into multiple categories for those over 44 to determine differences since age-related hearing loss is more of a factor for older adults than younger age groups.

When compared to the age distribution within the system's enrollment, the sample follows a opposite distribution pattern. There were approximately 33.04% fewer participants in between the ages of 16 and 24 than the system (Table 6); however, but there were approximately

18% more participants in the sample who were over between the ages of 25 and 44 and 15% more participants who were over the age of 45 than in the system. The larger percentage of participants over the age of 25 is likely due to hearing loss associated with age and occupation.

Table 5

Sample by Age Group

Identity	*n*	Percent
16-18 years	12	7.27%
19-24 years	42	25.45%
25-44 years	71	43.03%
45-59 years	29	17.58%
60 and older	4	2.42%
Prefer not to answer	7	4.24%
Total	165	100.00%

Table 6

System-wide Age Group Distribution for Academic Year 2020

Identity	Enrollment	% of Total Enrollment
Under 21	63,589	45.15%
21-25	29,032	20.61%
26-30	16,963	12.04%
31-35	10,458	7.43%
36-40	7,547	5.36%
Over 40	13,251	9.41%
Totals	140,840	100.00%

In summary, the sample collected indicates that participants were older, female, and White. As discussed in the later section of this chapter, there is evidence to suggest that this is an accurate representation of the actual population. The following sections address this in greater depth by examining differences between participants' type of disclosure and attitude toward accommodations by age group, gender, and race/ethnicity.

Research question 1.a findings.

To answer the first research question: "To what degree, if any, are there differences by age group, ethnic/racial identity, or gender in (a) levels of self-disclosure," means and standard deviations were calculated. This first part of the research question involved the type of self-disclosure by age group, gender, and ethnic/racial identity. This subsection is organized into an overview that presents how many participants reported each behavior, followed by three subsections that address the responses by age group, gender identity, and racial/ethnic identity.

Overview. Descriptive statistics of the action variables included in the analysis of this question are provided in Table 7. Due to the categorical nature of the data and the low cell counts that did not meet the Pearson's chi-squared test's assumptions, only counts and percentages of the total population were calculated. The participants were able to select multiple behaviors in this section of the survey. Also, the counts were of participants who reported the behavior, not a count of how many times they did the specific action. Most of the participants (n = 104) did not exhibit disclosure behavior of any kind.

Table 7

Number of Participants Who Reported the Self-disclosure Behavior

Variable	n	Percent
Did not select anything	104	63.03%
Receive accommodations	31	18.79%
Disclose to disability services	28	16.97%
Disclose to professor	28	16.97%
Disclose on an official form	25	15.15%

The survey results indicate that more participants received accommodations than requested them, which on the surface appears contradictory; however, it is important to note that participants were asked if they had ever received accommodations for *any* disability or impairment, not specifically for a hearing disability or impairment. However, the request for accommodations was specifically a request for accommodations for a hearing disability or impairment and was defined in the question text as “a support provided to a student to access course content and/or demonstrate their knowledge.” The results indicate that participants could have multiple disabilities for which they were receiving accommodations.

While the percentages of participants who reported that they disclosed to their professor, Disability Services, and on an official form were almost the same, there was a much lower number of participants who requested an accommodation for their hearing loss or impairment. One possible explanation could be that students with multiple disabilities disclose their disabilities and seek accommodations for their non-hearing-related disabilities or impairments. Another explanation could be that those with a hearing disability or impairment discuss their needs with support personnel or faculty but ultimately decide not to request accommodations. During the interviews, participants did express that they often attempted to “get by on their own” and only requested accommodations as a last resort when they could not get by with their usual coping mechanisms. Finally, the participants could have discussed their needs and determined that there was no available accommodation that would work for them and, therefore, did not request support.

Self-disclosure by age group. Table 8 provides the disclosure on official college form by age group. This statement read, “I officially identified myself as a student with a disability using my college’s Voluntary Self-Identification of Disability form.” The colleges in the state system use their local version of this form to collect data reported to the state office for statistical reporting and as the first step in requesting accommodations.

Table 8

Number of Yes Responses by Age and Disclosure on Official Form

Identity	*n*	Yes	Percent
25-44 years	71	15	21.13%
19-24 years	42	4	9.52%
45-59 years	29	4	13.79%
60 and older	4	2	50.00%
16-18 years	12	0	0.00%
Prefer not to answer	7	0	0.00%
Total	165	25	15.15%

When comparing these numbers to the counts for how many disclosed to disability services (Table 9) and their professor (Table 10), the data indicate that the 25-44 group reported disclosing on a form ($n = 15$) more than they disclosed to disability services ($n = 11$). As discussed in the section above, interview participants reported that they only requested accommodations if their usual coping mechanisms were unsuccessful. It could be that the participants in this age group were disclosing on a form but waiting until they had an immediate need to discuss their options with the Disability Services office.

Since there were only two participants in the 60 and older age group, this finding's generalizability is limited. Interestingly, the largest age group, 25-44 years, is also the group with the largest percentage of "yes" responses, excluding 60 and older. Further study should examine those between the ages of 25 and 59 in more detail to determine if disclosure on official documentation increases with age and the possible explanation for the phenomenon. It could be that the data are skewed here due to the 19-year age gap between ages 25 and 44.

The nondisclosure on a college form of the 16-18 years old age group could possibly be explained by the dual-enrollment programs at the colleges having different paperwork processes for high school students. It could also be explained by the differences between the processes to receive accommodations for secondary and post-secondary institutions. As discussed in Chapter

II, it is the responsibility of the student or employee to self-disclose his or her disability in post-secondary institutions, whereas in secondary schools, federal law places the responsibility on the state to identify students with disabilities and provide accommodations.

Table 9 provides the breakdown of disclosure to Disability Services by age group. This statement read, “I have talked to my college’s Student Disability Services about my disability or impairment and the support I need to be successful in the classroom.” Again, the low rate of disclosure to Disability Services among 16-18 years old participants could be attributed to dual enrollment and/or a lack of knowledge about how the accommodation process differs upon entering a post-secondary institution, as described above.

Table 9

Number of Yes Responses by Age and Disclosure to Disability Services

Identity	*n*	Yes	Percent
25-44 years	71	11	15.49%
45-59 years	29	9	31.03%
19-24 years	42	4	9.52%
Prefer not to answer	7	2	28.57%
16-18 years	12	1	8.33%
60 and older	4	1	25.00%
Total	165	28	16.97%

The results indicate that the older the participant’s age, the more likely they were to disclose to disability services. A possible explanation for this could be that a disabled or impaired identity is more normalized for older populations due to the correlation between age and disability, illness, and impairment. Another explanation could be that adults develop better self-advocacy skills as they age. Self-advocacy is a process in which one identifies one’s goals, determines what is necessary to achieve them, and develops the skills necessary to speak and act on one’s own behalf to help move toward those goals. According to Daly-Cano, Vaccaro, and Newman (2015), the four components of self-advocacy include knowledge of self, knowledge of one's rights, and the ability to communicate them. Self-disclosure to the Disability Services office may be the first step in self-advocacy for older adults with disabilities.

Table 10 provides the counts by age group and disclosure to a professor ("I have talked to my professors about my disability or impairment and the support I need to be successful in the classroom."). The largest percentage (50%) who chose to disclose to their professor was the 60 and older age group, but this was only 4 participants. The second-largest was the 25-44 years old group (19.72%). Interestingly, the 16-18 years old group (8.33%) and 45-59 years old group (10.34%) were the least likely to disclose.

Table 10

Number of Yes Responses by Age and Disclosure to Professor

Identity	*n*	Yes	Percent
25-44 years	71	14	19.72%
19-24 years	42	7	16.67%
45-59 years	29	3	10.34%
60 and older	4	2	50.00%
16-18 years	12	1	8.33%
Prefer not to answer	7	1	14.29%
Total	165	28	16.97%

The responses for this section follow a different pattern than for disclosure to Disability Services. Those aged 19-24, 24-44, and 60 plus were more likely to disclose to their professor than Disability Services, whereas those aged 45-59 were more likely to disclose to the Disability Services office than their professor. The explanation for this could have to do with a desire for a sense of normality for students older than the "traditional" college student. System data show that 43.13% of students in the technical college system are 21 or younger. An adult student who is already differentiated from others in their class due to their age may not want to draw further attention due to their disability or impairments. The 24-44 group is a large span, and students in their late 20s are much closer to the norm regarding age than those in their late 30s or early 40s.

Just as there are differences between how many participants disclosed to their professor versus to the Disability Services office, there are differences between how many have requested accommodations versus how many received them. Table 11 provides the counts by age group of those who requested accommodations for their hearing disability or impairment while enrolled in college. As mentioned previously, the question regarding accommodation requests is specifically a request, at any point in time, for an accommodation for their hearing disability or impairment. It is not a count of how many accommodations they have received. Also, the counts of how many received accommodations are inclusive of all disabilities, meaning that a person with a hearing impairment could also have a learning disability, for example. The person in this example could have received an accommodation for the learning disability but not hearing impairment.

Table 11

Number of Yes Responses by Age and Requesting Accommodations

Identity	*n*	Yes	Percent
25-44 years	71	7	9.86%
45-59 years	29	4	13.79%
60 and older	4	1	25.00%
19-24 years	42	1	2.38%
16-18 years	12	0	0.00%
Prefer not to answer	7	0	0.00%
Total	165	13	7.88%

Table 12 provides counts by the age of those who reported receiving accommodations in one or more of their courses. This section’s results are very interesting since they vary so much from the number of participants who received accommodations. As discussed, one possible explanation for the discrepancy is that the participants could have multiple disabilities or impairments, and while they have received accommodations, it was not for their hearing impairment or disability.

Table 12

Number of Yes Responses by Age and Receiving Accommodations

Identity	*n*	Yes	Percent
25-44 years	71	12	16.90%
19-24 years	42	10	23.81%
45-59 years	29	7	24.14%
60 and older	4	1	25.00%
Prefer not to answer	7	1	14.29%
16-18 years	12	1	8.33%
Total	165	31	18.79%

Generally, the counts follow the same pattern for requesting and receiving accommodations, with one exception. Those 45 and older reported the highest counts, and those 16-18 reported the lowest counts. This could be explained by differences in self-advocacy skills or lack of knowledge about post-secondary accommodation processes, as described in earlier sections. The one exception is that more participants aged 25-44 reported that they had requested accommodations for their hearing disability than those aged 19-24; whereas more participants aged 19-44 reported that they had received accommodations for any disability than those aged 25-44. A possible explanation could be that participants aged 19-24 have a desire to conform to a "normal" college student identity and not associate themselves with an impairment that is so often associated with old age.

The results indicated that students 16-18 years old were not disclosing to anyone, either officially or unofficially, and not receiving accommodations. This warrants further exploration to determine if the low counts are due to coordination between colleges and dual-enrollment sites, if students lack knowledge about the difference between secondary and higher education accommodation procedures, or some other yet unknown factor.

Self-disclosure by gender identity. The majority of participants identified as either "man or male or masculine" or "woman or female or feminine." Females represented 69.70% of responses, and males represented 25.45% of responses. A study of data from the National Health and Nutrition Examination Survey cited by the National Institute of Health found that men are almost twice as likely as women to have hearing loss among adults aged 20-69 (Hoffman et al., 2017). When compared to this statistic, the larger number of female participants is unexpected. The larger number could be attributed to women being twice as likely as men to disclose their hearing loss and offer suggestions on effectively communicating with them than men (West, Low, & Stankovic, 2016).

As a result of lifestyle factors, such as loud occupations and hobbies, men are more likely to have hearing loss than women, but, interestingly, only two male participants, both in the 25-44-year age group, had been formally diagnosed with hearing loss. The rest were identified using the three screening questions. This indicates that men may not be aware of their hearing disability. This is a concerning possibility since men are more likely to have a hearing impairment than women and experience an earlier onset of hearing loss than women (Walling & Dickson, 2012).

The fact that only two male participants had been formally diagnosed with hearing loss is a likely cause for the low number of reported disclosure behaviors among male participants. However, this also supports the hypothesis that participants experience more than one disability or impairment. The lack of a formal diagnosis could help explain the low number of males who disclosed on their college's voluntary self-identification form (Table 13).

Table 13

Number of Yes Responses by Gender and Disclosure on Official Form

Identity	*n*	Yes	Percent
Woman, female, or feminine	115	20	47.62%
Man, or male, or masculine	42	5	4.35%
Prefer not to answer	5	0	0.00%
Gender non-conforming or genderqueer	2	0	0.00%
Intersex	1	0	0.00%
Totals	165	25	15.15%

Compared with the number of male participants who disclosed to the Disability Services office (Table 14) and to their professors (Table 15), men were more likely to disclose to those parties than on an official form. Further, when the counts for disclosure on an official form, to professors, and disability services were averaged, 4.84% of males disclosed compared to 47.62% of females. Men may view formal disclosure on an official form as problematic if they do not want this information to become part of their official college file. Alternatively, informal disclosure through conversation at the point of need may feel less threatening to their masculine identity, as they may feel pressure to conform to masculine cultural norms.

Table 14

Number of Yes Responses by Gender and Disclosure to Disability Services

Identity	*n*	Yes	Percent
Woman, female, or feminine	115	21	50.00%
Man, male, or masculine	42	6	5.22%
Prefer not to answer	5	1	20.00%
Gender non-conforming or genderqueer	2	0	0.00%
Intersex	1	0	0.00%
Totals	165	28	16.97%

Table 15

Number of Yes Responses by Gender and Disclosure to Professor

Identity	*n*	Yes	Percent
Woman, female, or feminine	115	19	45.24
Man, male, or masculine	42	8	6.96
Gender non-conforming or genderqueer	2	0	0.00
Intersex	1	0	0.00
Prefer not to answer	5	0	0.00
Totals	165	27	16.36

When exploring the counts by gender, it is apparent that a much higher percentage of female participants requested and received accommodations than males (see Tables 16 and 17). This is supported by King et al.'s (2020) findings, which indicated that men with a disability reported greater conformity to self-reliance norms. The pressure to adhere to this cultural norm may result in lower self-disclosure rates among males.

Table 16

Number of Yes Responses by Gender and Requesting Accommodations

Identity	*n*	Yes	Percent
Woman, female, or feminine	115	12	28.57%
Man, male, or masculine	42	1	0.87%
Gender non-conforming or genderqueer	2	0	0.00%
Intersex	1	0	0.00%
Prefer not to answer	5	0	0.00%
Totals	165	13	7.88%

Table 17

Number of Yes Responses by Gender and Receiving Accommodations

Identity	*n*	Yes	Percent
Woman, female, or feminine	115	25	59.52%
Man, male, or masculine	42	5	4.35%
Gender non-conforming or genderqueer	2	1	50.00%
Prefer not to answer	5	1	20.00%
Intersex	1	0	0.00%
Totals	165	32	19.39%

The exploration of disclosure behavior by gender identity identified areas of further study. First, the small number of men who had been formally diagnosed with hearing loss is a concern when men are more likely to experience hearing loss and at an earlier age. The system data did not divide the gender distribution by age group. Because the gap between men and women who experience a hearing impairment widens at age 30 (Agrawal, Platz, & Niparko, 2008), male students' age is an important variable. Additionally, men may experience a more gradual loss of hearing as a cumulative effect of environmental and occupational factors, which could result in a lack of awareness of their impairment. All of these considerations are worthy of further study.

Next, the current binary categories used to report gender identity may not adequately describe the system population since this study has identified participants who identified as "Gender Non-Conforming or Genderqueer" and "Intersex." Albeit the population may be small, but the correct codification of gender is a step toward greater precision in understanding the demographic characteristics and lived experiences of students with disabilities.

Those who identified as "gender non-conforming or genderqueer" and "intersex" did not disclose on their college's voluntary self-identification form, to their college's Disability Services office, or to their professors, or request accommodations for their hearing disability or impairment. Supporting the call from scholars to address the concerns of Crip theory, the experience of these participants warrants further investigation. Just as how participants' age and gender identities have intersected with their disability identity, racial/ethnic identity may also impact the disclosure behavior of students with hearing loss.

Self-disclosure by racial/ethnic identity. Participants were able to select multiple racial/ethnic identities in this section of the survey. Those who selected two or more racial/ethnic identities are reported below as "multiracial." The largest racial/ethnic group represented was White ($n = 77$). This finding is supported by the literature, specifically examining data from the National Health and Nutrition Examination Survey. Hoffman et al. (2017) determined that non-Hispanic White adults aged 20-69 are more likely than adults in other racial/ethnic groups to have hearing loss. Furthermore, non-Hispanic Black adults have the lowest hearing loss prevalence among this same age group (Hoffman et al., 2017).

Lin et al. (2012) used the same dataset to determine if skin type as classified by Fitzpatrick (1988) and Roberts (2009) is associated with hearing loss independent of race/ethnicity. Their findings "suggest that skin color, hence melanocyte functioning, may be the mechanism underlying the association between race and hearing loss" (Lin et al., 2012). There may be a biological explanation for the higher number of White participants with hearing loss; however, it is important to note that the literature currently points only to an association between skin type and hearing loss. It also would not explain the variance in disclosure behavior between racial/ethnic groups seen in this study's results. As a result, the examination of disclosure in the context of SIT and intersectionality is still valuable.

Interestingly, even though participants who identified as White comprised the largest percentage of the sample, they did not also disclose at the highest rate. Excluding the American

Indian or Alaska Native identity (25.00%), which was comprised of only 4 participants, the racial/ethnic identity with the highest number of responses to the questions about disclosure on the voluntary self-identification form, the identity with the largest percentage of "Yes" responses, was multiracial (21.05%) followed by Black (18.60%), White (12.99%), and Hispanic, Latino or Spanish origin (10.00%) (see Table 18).

Table 18

Number of Yes Responses by Racial/Ethnic Identity and Disclosure on Official Form

Identity	*n*	Yes	Percent
White	77	10	12.99%
Black or African American	43	8	18.60%
Multiracial	19	4	21.05%
Prefer not to answer	11	1	9.09%
Hispanic, Latino or Spanish origin	10	1	10.00%
American Indian or Alaska Native	4	1	25.00%
Asian	1	0	0.00%
Totals	165	25	15.15%

It does not appear that there were important differences between racial/ethnic groups and their disclosure on an official form.

The results concerning disclosure to the college's Disability Services office (Table 19) and professors (Table 20) were the same in the total count but different in their distribution. The highest percentage of "Yes" responses question about whether they had talked to their college's Disability Services about their disability or impairment and the support that they needed to be successful in the classroom was among those with a Black identity (25.58%), but when it came to having a similar disclosure conversation with their professors, those with a Black identity were the least likely to disclose. This is excluding the one person with an Asian identity.

Table 19

Number of Yes Responses by Racial/Ethnic Identity and Disclosure to Disability Services

Identity	*n*	Yes	Percent
White	77	11	14.29%
Black or African American	43	11	25.58%
Multiracial	19	3	15.79%
Prefer not to answer	11	1	9.09%
Hispanic, Latino or Spanish origin	10	1	10.00%
American Indian or Alaska Native	4	1	25.00%
Asian	1	0	0.00%
Totals	165	28	16.97%

Table 20

Number of Yes Responses by Racial/Ethnic Identity and Disclosure to Professor

Identity	*n*	Yes	Percent
White	77	11	14.29%
Black or African American	43	6	13.95%
Multiracial	19	4	21.05%
Prefer not to answer	11	2	18.18%
Hispanic, Latino or Spanish origin	10	4	40.00%
American Indian or Alaska Native	4	1	25.00%
Asian	1	0	0.00%
Totals	165	28	16.97%

A possible explanation for this difference is complex and rooted in racial power dynamics, institutionalized racism in the primary and secondary education systems, and the misidentification of children of color for special education services. Racism in itself is a combination of racial prejudice and power. Power, or authority granted through social structures and access to resources, is relational. Student-faculty relationships are based on a social—and institutional—power dynamic where the faculty member controls access to resources that a student desires and/or needs. When race is factored into this equation, a relationship that is already prone to imbalance favoring the instructor can become even more harmful to students and increase their fear that their access to resources (e.g., course material, learning environment, feedback, equitable grading) will be restricted or cut off.

This is not an unfounded fear. Seth Galanter, an attorney at the National Center for Youth Law, stated that some within the civil rights community believe that in-school segregation has been implemented under the guidance of special education in primary and secondary systems (qtd. in Barnum, 2019). The Georgia Department of Education (2017) reported, "Many children of color—particularly Black and American Indian youth—are identified at substantially higher rates than their peers" (para. 10). When combined with Fish's (2017) findings, the potential cause for this difference in identification rates suggests the intersection of ableism and racism. According to Fish (2017), the third and fourth grade teachers in their study were more likely to suspect a disability as the root cause of low academic performance among White students but more likely to suspect a disability as the cause of disruptive behavior for Black and Hispanic students.

Regarding how many reported receiving accommodations in one or more of their courses, there was a difference (1.72%) between White (16.88%) and Black (18.60%) participants (Table 21). After the American Indian or Alaskan Native identity (50.00%), the largest percentage of "Yes" responses was from the participants with a Hispanic, Latino or Spanish Origin identity and then multiracial (26.32%). When comparing those who received accommodations for any disability to those who reported requesting accommodations for their hearing disability or impairment (Table 22), the counts indicate that almost half of the reported requests were by those with a Black identity (46.15%). White participants comprised another 38.46% of the requests for hearing accommodations among participants.

Table 21

Number of Yes Responses by Age and Receiving Accommodations

Identity	*n*	Yes	Percent
White	77	13	16.88%
Black or African American	43	8	18.60%
Multiracial	19	5	26.32%
Prefer not to answer	11	1	9.09%
Hispanic, Latino or Spanish origin	10	3	30.00%
American Indian or Alaska Native	4	2	50.00%
Asian	1	0	0.00%
Totals	165	32	19.39%

Table 22

Number of Yes Responses by Age and Requesting Accommodations

Identity	*n*	Yes	Percent
White	77	5	6.49%
Black or African American	43	6	13.95%
Multiracial	19	0	0.00%
Prefer not to answer	11	0	0.00%
Hispanic, Latino or Spanish origin	10	1	10.00%
American Indian or Alaska Native	4	1	25.00%
Asian	1	0	0.00%
Totals	165	13	7.88%

The difference in the total number of students who received an accommodation for any disability and requested one for their hearing disability or impairment was largely in the White identity and multiracial group. Further, those with a White identity who had requested accommodations were all female and had not received accommodations. A possible explanation is that White women with hearing loss might decide that they want to continue to pass as hearing and remain a part of the White and able-bodied social in-groups. Those with a multiracial identity may also want to continue to pass. Whether a decision to pass is in relation to their race or able-bodiedness is unknown.

The exploration of disclosure behavior by demographic characteristics identified some possible areas of interest and further exploration. First, there was a discrepancy between how many people voluntarily disclosed on the official self-identification form (15.15%) and received accommodations for their hearing loss (18.79%). If officially self-identifying is the first step in requesting accommodations, then the number who identified on the form should be larger than or equal to those who receive accommodations. This could be attributed to differences between procedures and processes from college to college or participants simply not remembering that they had self-disclosed on the form, especially if it was done during orientation.

The possible intersection of multiple disabilities as a factor in disclosure is also an area that should be further explored, as it could explain the discrepancy between the number of students who request accommodations for their hearing disability or impairment (7.88%) and the number who receive accommodations for any of their disabilities or impairments (18.79%). Additionally, the difference between age groups of those who disclosed to their professor compared to whether they received accommodations also warrants further study. The intersection of multiple disabilities and age is a factor that may correlate with their disclosure decisions.

Answer to research question 1.a

The first research question that this study sought to answer was to what degree, if any, are there differences in (a) type of self-disclosure and (b) attitudes toward requesting accommodations by age group, ethnic identity, racial identity, or gender? The analysis of this section was divided into two subsections that addressed type of self-disclosure and then attitudes toward requesting accommodations.

Based on the findings for the first subsection, there are differences between age, gender, and racial/ethnic identity and some of the self-disclosure variables. Most notable were the findings that indicated that gender maybe related to whom one self-discloses, that white and multiethnic participants received accommodations at a lower rate than other racial/ethnic groups, that non-white participants more likely to disclose to Disability Services than a professor, and that 16-18 years old not disclosing to anyone, either officially or unofficially, and not receiving accommodations.

Research question 1.b findings.

Subsection B of the first research question involved attitudes toward requesting accommodations by age group, gender, and ethnic/racial identity. The full scale is divided into four subscales: Academic Integrity, Disability Disclosure, Disability Acceptance, and Accommodations Process. The section that addresses question one, part b is organized into an overview that includes the means and standard deviations for each subscale followed by a more in-depth analysis of each subscale. The following sections examine the subscales in the context of age, gender, and racial/ethnic identity. Due to the categorical nature of the data and the low cell counts that did not meet the Pearson's chi-squared test assumptions, only means for the scales, subscales, and items could be calculated.

Overview of subscales. The means and standard deviations for each subscale are presented in Table 23 and then further examined in the subsequent sections. The mean values for each subscale indicate that, overall, the participants were undecided regarding the items on the Academic Integrity, Disability Disclosure and Accommodations Process scales. The only mean that indicated agreement was for Disability Acceptance. Four of the items on this scale were negatively worded (e.g., "I don't know sometimes whether I am really all that disabled"), so agreement does not necessarily imply that the participants accept their disability.

Table 23

Means and Standard Deviations for ATRA Subscales

Subscale	*M*	*SD*
Academic integrity	3.16	1.24
Disability disclosure	3.16	1.24
Disability acceptance	3.54	1.17
Accommodations process	2.59	1.21

Academic integrity. The means of the subscale "Academic Integrity" items indicate an overall positive attitude toward accommodations in the context of academic integrity (Table 30). There was a strong agreement among participants that they want to prove that they can "do college" and "stand on their own two feet." Where the standard deviation values indicated more variance in opinion were the two statements that addressed not feeling like they needed accommodations ($M = 3.10$, $SD = 1.25$) and that people should try to get along without accommodations ($M = 2.34$, $SD = 1.20$). The mean values indicated, overall, the participants believed they needed accommodations and that students should not get along without them; however, only 7.87% ($n = 13$) requested accommodations.

Table 24

Means and Standard Deviations for Academic Integrity

Item	*M*	*SD*
Accommodations are unfair to other students.	1.81	1.05
I want to prove that I can do college.	4.73	0.52
Accommodations are for academically weaker students.	1.72	1.00
I want to stand on my own two feet.	4.64	0.66
Accommodations are for lazier students.	1.45	0.79
Students should try to get along without accommodations.	2.34	1.20
I have never felt like I needed accommodations.	3.10	1.25

Wanting to prove to themselves and others that they can be successful college students on their own was a theme that was repeated in the interviews as well. This phenomenon appears elsewhere in disability and education literature. The results of the Lyman et al. (2016) study that sought to determine why students with disabilities at a private university did not use accommodations revealed that the participants placed a high value on independence, and as a result, they intentionally did not use accommodations for which they had been approved. The participants reported their sense of pride was often what stood in the way of them asking for help. The students in their study believed they needed accommodations since they requested them but ended up not using them.

When responding to the Academic Integrity scale statements, 61 of the participants in this study agreed or strongly agreed that they had never felt like they needed accommodations. This could help explain why only 31 participants had requested them for their hearing loss, as none of those who believed they did not need them requested them.

Disability disclosure. Responses to the items on the subscale "Disability Disclosure" (Table 25) indicate that participants are undecided about how comfortable they are in admitting their disability (*M* = 3.09, *SD* = 1.36), talking about it (*M* = 3.08, *SD* = 1.33), and disclosing their disability to friends (*M* = 2.84, *SD* = 1.32). They are also undecided about whether the cost outweighs the benefit of talking about their disability (*M* = 2.71, *SD* = 1.18).

Table 25

Means and Standard Deviations for Disability Disclosure

Item	*M*	*SD*
I don't like to admit that I have a disability.	3.09	1.36
I don't like talking about my disability.	3.08	1.33
I don't want professors to know that I have a disability.	2.88	1.24
I don't like people knowing private and personal information about me, such as my disability.	3.28	1.37
The cost of talking about my disability to get accommodations outweighs the benefits.	2.71	1.18
I have a right to privacy regarding my disability.	4.26	0.91
I don't want friends to know that I have a disability.	2.84	1.32

As discussed in Chapter II, an individual with hearing loss is influenced by personal and contextual antecedents that affect his or her willingness to self-disclose (Jennings et al., 2013). As one weighs the costs and benefits associated with disclosure, one must pay particular attention to the social cost of revealing one's hearing loss in a social setting (Croteau et al., 2008). It could be that the participant does not want to self-identify as a person with a disability because he or she does not want to be viewed or treated differently (Lyman et al., 2016). It could also be due to past trauma or public embarrassment associated with disclosure, a theme that a few participants brought up during the interviews.

Disability acceptance. Participants' responses to the items on the subscale "Disability Acceptance" (Table 26) indicated that the participants were unsure if they were disabled enough to need accommodations (*M* = 3.26, *SD* = 1.26) and unsure if they were really all that disabled (*M* = 2.99, *SD* = 1.31). They wanted to be treated like other college students (*M* = 2.52, *SD* = .831) and have a normal college experience (*M* = 2.73, *SD* = .744). They also expressed that they were uncertain about whether they feared being labeled (*M* = 3.03, *SD* = 1.48).

Table 26

Means and Standard Deviations for Disability Acceptance

Item	*M*	*SD*
My family doesn't think I am disabled enough to need accommodations.	2.90	1.28
I don't think I am disabled enough to need accommodations.	3.26	1.26
I don't know sometimes whether I am really all that disabled.	2.99	1.31
I prefer to be treated as a non-disabled person.	4.00	1.00
I want to be like other college students.	3.96	1.09
I want to have a normal college experience.	4.40	0.73
There's nothing wrong with me.	3.49	1.30
I was afraid of being labeled.	3.03	1.48
People don't think I am disabled.	3.82	1.06

The desire to be treated as a non-disabled person, have a normal college experience, and be like other college students could explain the finding of Newman et al. in a 2011 report on the post-high school outcomes of young adults with disabilities:

> nineteen percent of post-secondary students who were identified as having a disability by their secondary schools were reported to receive accommodations or supports from their post-secondary schools because of their disability. In contrast, when these post-secondary students were in high school, 87% received some type of accommodation or support because of a disability. (p. xv)

The transition between high school and post-secondary environments is a significant event in a young person's life. The desire to conform to social norms regarding the characteristics of a "typical" college student can be a powerful motivator. Age as a variable is discussed in later sections in greater detail.

Another possible explanation for participants' indecision about their self-identity as someone with a disability could be due to the age of onset of their hearing disability or impairment. Age of onset is relevant as a factor in identity development. As discussed in Chapter II: "people who acquire disabilities later in life may remember negative, often stereotypical, images of people with disabilities from their childhood" (Darling, 2003, p. 43). The label of "disabled" may be incompatible with the self-identity they have already developed, resulting in cognitive dissonance.

Accommodations process. In response to the final subscale (Table 27), "Accommodations Process," participants reported that the Disability Services offices at their colleges were helpful ($M = 2.39$, $SD = 1.14$), approachable ($M = 2.09$, $SD = 0.99$), and assisted them ($M = 2.34$, $SD = 1.14$). They indicated that they trusted that their information would remain private. The largest standard deviation was for the item regarding not knowing anything about accommodations when starting college (*M* = 3.25, *SD* = 1.45). This variance could be related to the fact that 137 of the 165 participants did not disclose to their professor or the disability services office.

Table 27

Means and Standard Deviations for Accommodations Process

Item	*M*	*SD*
The Student Disability Services office was unhelpful.	2.39	1.14
The Student Disability Services office was unapproachable.	2.09	0.99
The Student Disability Services office did NOT assist me.	2.34	1.14
I don't trust Student Disability Services to keep my information confidential.	2.23	1.17
I don't trust professors to keep my information confidential.	2.29	1.22
I didn't know anything about disability accommodations when I started college.	3.25	1.45
Going to Student Disability Services is awkward.	2.90	1.22
Requesting accommodations from professors can be awkward.	3.25	1.31
Student Disability Services were NOT discussed at my new student or transfer orientation.	2.53	1.26

The results of this scale are interesting since it appears that there was no procedural explanation for why students did not request accommodations. They viewed disability Services as approachable and helpful and trusted that their information would be kept private. A possible explanation about why they still did not request accommodations was revealed during the interviews: participants wanted to try to get by independently and only request accommodations when their usual coping mechanisms had failed. This is explored in more detail in the qualitative results section.

The discussion of the subscale results in the section above alluded to the possibility that age could influence participants' responses. The further examination of differences between responses based on age, gender, and racial/ethnic identity uncovered some interesting trends that warrant further study. Due to the low counts for some groups, a cutoff point of 10 was established for the determination of means and standard deviations. When groups were not included in the analysis, it is noted.

Attitudes by age group. Since only four participants reported that they were 60 or older, that group was not included below. Additionally, the data did not meet the cell count assumption required to perform the Pearson's chi^2 test, as some cell counts were less than five. The standard deviations and means presented in Table 34 for each age group by subscale indicated that three of the four subscales should be examined in depth.

Table 28

Means and Standard Deviations by Age Group for ATRA Subscales

Subscale	16-18		19-24		25-44		45-59	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Academic Integrity	3.04	1.62	3.00	1.50	2.77	1.65	2.65	1.56
Disability Disclosure	2.71	1.52	3.05	1.19	3.18	1.44	3.30	1.18
Disability Acceptance	3.55	1.83	3.60	1.16	3.56	1.38	3.40	1.23
Accommodations Process	2.48	1.18	2.78	1.20	2.42	1.34	2.69	1.27

An examination of the Academic Integrity responses indicated that 16- to 18-year-old participants were different from the other age groups in their responses to whether students should try to get by without accommodations and whether they believed they needed accommodations (see Table 29). The means for all the other age groups indicated that they disagreed that students should get by without accommodations, but the group of 16-18-year-olds was undecided ($M = 2.92$). Additionally, the participants in the 16-18 age group agreed that they had never believed they needed accommodations ($M = 3.50$), whereas the other age groups were undecided.

Table 29

Means for Selected Items by Age Group for Academic Integrity Subscale

Item	*M*			
	16-18	19-24	25-44	45-59
Students should try to get along without accommodations.	2.92	2.48	2.19	2.21
I have never felt like I needed accommodations.	3.50	3.26	3.07	2.86

When presented by age groups, the Disability Disclosure results indicated that 16- to 18-year-old participants had a different attitude than the other age groups for three statements (see Table 30). Regarding the statements "I don't like talking about my disability," "I don't want professors to know that I have a disability," and "The cost of talking about my disability to get accommodations outweighs the benefits," the youngest age group disagreed while every other group was undecided. The youngest age group, 16-18 years old, could have a different attitude due to having an individualized education plan or a 504 plan. These plans offer formal help for K-12 students with disabilities. They could be used to communicating with their teachers about their disability and have direct experience with how these plans and their accommodations can benefit them. For older students, the difference in attitude toward whether the costs outweigh the benefits could be due to a lack of knowledge about available accommodations (Lyman et al., 2016).

Table 30

Means for Selected Items by Age Group for Disability Disclosure Subscale

Item	*M*			
	16-18	19-24	25-44	45-59
I don't like talking about my disability.	2.33	3.08	3.10	3.34
I don't want professors to know that I have a disability.	2.25	2.65	2.94	3.04
The cost of talking about my disability to get accommodations outweighs the benefits.	2.16	2.95	2.60	2.64

Past experiences may also impact how comfortable participants were with talking about their disability. As previously mentioned, some interview participants recounted past traumatic events or public embarrassment associated with disclosure. Additionally, older adults may have internalized ableist views toward disability that impacted their self-appraisal (Darling, 2003). Even those who did not have internalized stereotypical views of disability, like the association of the term *incapable* with older or disabled identities (Berridge & Martinson, 2017), and who did not support the marginalization of stigmatized groups may still seek to separate themselves from a stigmatized group to protect themselves (Major & O'Brien, 2005).

Regarding Disability Acceptance, the variance of responses was greatest for the statement "I was afraid of being labeled." When the individual responses for the 16-18 age group were examined, there was a difference among racial and ethnic groups in their responses. The participants who feared being labeled in this age groups were Black or African American (*n* = 3) or Hispanic, Latino, or Spanish origin (*n* = 1), whereas those who disagreed with the statement were White (*n* = 3), Hispanic, Latino, or Spanish origin (*n* = 1), or American Indian or Alaskan Native (*n* = 1). The remaining White (*n* = 2) and Black or African American (*n* = 1) participants were undecided. A possible explanation for this result, discussed in the section on self-disclosure behavior by racial and ethnic identity, could be that non-White participants' experiences with racism and ableism in high school made them fear being labeled. Clearly, there were differences between the responses by age group. The next section furthers the analyses by examining the differences by gender identity.

Attitudes by gender identity. Since the only gender identity categories with more than 10 responses were male and female, the other gender categories were excluded from the analysis. Additionally, the data did not meet the cell count assumption required to perform the Pearson's

chi^2 test, as some cell counts were less than five. The means and standard deviations (Table 31) for male and female participants' responses to the ATRA scale indicated that there were differences between the genders for the Academic Integrity subscale.

Table 31

Means and Standard Deviations for Males and Females by Subscale

Subscale	Male		Female	
	M	*SD*	*M*	*SD*
Academic integrity	3.00	1.62	2.78	1.59
Disability disclosure	3.27	1.34	3.10	1.34
Disability acceptance	3.54	1.40	3.55	1.29
Accommodations process	2.65	1.31	2.55	1.23

The responses to the Academic Integrity subscale items indicated that the difference was concentrated in two areas. The first difference was the response to the statement: "Students should try to get along without accommodations." Female participants' scores indicated that they were closer to being undecided (*M* = 2.17), but men strongly agreed (*M* = 2.83) with the statement. A possible explanation for this previously discussed in earlier sections is the finding by King et al. (2019) that men with a disability reported greater conformity to self-reliance norms. Men (*M* = 3.52) agreed more strongly than women (*M* = 2.99) with the statement, "I have never felt like I needed accommodations." Self-reliance norms and their rejection of the label of "disabled" could also explain men's stronger agreement with this statement.

In their intersectional investigation of the mental health inequalities among disabled men, King et al. (2019) argued that men with disabilities develop and view their identity through the intersection of ableism and hegemonic masculine ideals. Those with male, disabled identities may feel conflict or "status inconsistency" (Gerschick, 2000, p. 1265). In this study, men were less likely than women to disagree with the statements: "Students should try to get along without accommodations" and "I have never felt like I needed accommodations." The cognitive dissonance that results from the intersection of two opposing social identities (male and disabled) is a possible explanation.

King et al.'s (2019) findings indicate that men with a disability reported greater conformity to self-reliance norms. In this study, Participant B expressed strong feelings of self-reliance and a desire to succeed based on his own merit and abilities without accommodations or use of social services, even those that he was entitled to due to his military service:

> I gave up social security to go back to school because, like I told you earlier, the military retired me, so I was done. I gave up a free $1,200 a month to go back to school because I didn't want to take and try to gain at the same time. (Participant B)

Due to the small sample size, this cannot be generalized to the larger population, but it does support the findings of previous studies and suggest an area for future exploration.

Attitudes by racial/ethnic identity. The categories American Indian or Alaska Native, and Asian were excluded from the analysis since there were fewer than 10 participants with those racial/ethnic identities. Additionally, the data did not meet the cell count assumption required to perform the Pearson's chi-squared test, as some cell counts were less than five. The means and standard deviations are presented in Table 32.

Table 32

Means and Standard Deviations for Selected Racial/Ethnic Groups by Subscale

Subscale	Black		Hispanic or Latino		White		Multiracial	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Academic Integrity	2.76	1.66	2.70	1.68	2.90	1.18	2.84	1.57
Disability Disclosure	3.13	1.36	2.57	1.50	3.07	1.23	3.27	1.32
Disability Acceptance	3.49	1.31	3.01	1.51	3.60	1.26	3.74	1.25
Accommodations Process	2.54	1.39	2.55	1.28	2.59	1.54	2.72	1.37

The Academic Integrity scale's standard deviation indicates that participants with a Black and multiracial identity had a higher variance in their responses than the other racial/ethnic groups. Those with a Hispanic identity had a consistent pattern in standard deviation across the scale. They were also undecided about the Disability Acceptance scale compared to the other racial/ethnic groups who reported agreement with the items on the scale. Graf et al. (2007) pointed out that treating ethnic groups as homogenous is a problematic approach to a complex phenomenon. The Hispanic or Latino ethnic/racial identity is a very broad demographic category, and treating it as homogenous can be misleading (Carter, Yeh, & Mazzula, 2008; Graf et al., 2007). This indecision among Hispanic participants is an area that should be further explored.

An explanation for the difference between White and non-White participants' disclosure behavior can be found in the conversations surrounding White privilege and intersectionality. The complex interplay of racial/ethnic, disability, age and gender identities and its role in and impact on social marginalization cannot be ignored. For the White participants, there simply may be more at stake when deciding to adopt a disabled identity.

Answer to research question 1.b

The second subsection of the first research question addressed the degree to which there are differences between age, gender, and racial/ethnic identity and attitudes toward requesting accommodations. The findings indicate that there are differences for some of the ARTA scale variables, most notably that age may be related to attitudes about the concepts of academic integrity and disability disclosure, gender may be related to self-identity and attitude towards concept of academic integrity, and race/ethnicity may be related to attitudes or the methodology explain the variances among participant responses.

Analysis of Research Question Two

The qualitative section of this study was guided by the research question: "Why do some students with hearing loss not formally self-disclose to their institutions?" This section presents the description of the subjects included in the qualitative phase of the study, the preparation of the data for coding analysis, and a description of the primary patterns that emerged. The conclusions drawn from the findings are presented in more detail in Chapter V.

Data preparation.

After gaining participant consent to participate, the interview began with a set of standard questions (Appendix B). While the participants describe their experiences, probing questions were asked to prompt elaboration and specific examples when necessary. Additionally, the first phase of data analysis results provided key areas that were probed as they arose during the interview. After the interview, each interview's audio files were transcribed through the website GoTranscript as Clean Verbatim, which removes speech errors, false starts, and filler words. Once the transcripts of the interviews were returned and reviewed by the participants for errors, the interviewees' responses were copied into a spreadsheet to prepare for coding. Each response was also tagged by a unique interviewee ID code and question reference. The researcher's memos were also copied into a separate spreadsheet for coding.

Demographics.

Of the 14 survey participants who self-identified as willing to be interviewed for phase two, six responded to the follow-up invitation and consented to participate. A demographic profile of the interview participants is presented in the section below. Table 33 outlines the sample by gender identity.

Table 33

Qualitative Sample by Gender Identity

Gender Identity	*n*	Percent
Woman, female, or feminine	5	83.33%
Man, male, or masculine	1	16.67%

Table 34 outlines the sample by ethnic/racial identity. The survey was designed to allow participants to select more than one identity; however, none of the participants reported a multiethnic and/or racial identity.

Table 34

Qualitative Sample by Ethnic/Racial Identity

Ethnic/Racial Identity	*n*	Percent
White	3	50.00%
Black or African American	3	50.00%

Table 35 outlines the distribution of the sample by age group.

Table 35

Qualitative Sample by Age Group

Age Group	*n*	Percent
25-44 years	5	83.33%
45-59 years	1	16.67%

Data coding processes.

Qualitative data analysis took place in two cycles. In the first cycle, simultaneous coding (Saldana, 2016) was used to analyze the researcher's memos and interview transcripts. Due to the relationships between the multiple social identities and nuanced social interactions experienced by the participants during the self-disclosure communication, it was necessary in some cases to apply two or more codes to the data to interpret both the manifest (apparent) and latent (underlying) participant meanings (Saldana, 2016).

After the first cycle, the codes that emerged from the three-step process were mapped in three iterations (Saldana, 2016). The first iteration of code mapping involved the random listing of all the identified codes in the first cycle. The first iteration revealed 370 codes, some of which were duplicated through the interviews and across participants. Five of the six participants had received a formal diagnosis of hearing loss. Two were either born with hearing loss or were diagnosed as a child. The remainder of the participants were diagnosed or self-identified their hearing loss as an adult.

The second iteration involved the initial, broad categorization of the initial codes. This revealed 233 slightly narrower codes. Even at this point in the coding process, interesting patterns began to emerge. Four participants expressed mixed feelings about their disability identity, specifically whether they considered themselves to be “disabled.” The concept of “passing as hearing” was also a topic that four participants expressed through their statements. The frequency of these codes and the researcher’s memos indicated early on in the coding process that identity as a person with hearing loss could be part of the explanation about why students did not disclose or request accommodations.

The third iteration subcategorized the broad categories identified in iteration two. This resulted in fewer top-level categories that contained hierarchical subcategories. The result of this iteration of coding was the identification of 9 top-level categories supported by 37 broader hierarchical subcategories. The top-level categories included: Accommodations Experience, Disability Identity, Lived Experience, Cost of Hearing Loss, Ableism, Passing as Hearing, Disclosure as a Last Resort, Classroom Experience and Instructor Relationships, and Lack of Diagnosis.

Primary patterns.

The second cycle of coding further developed the initial attempt to begin the organization of the codes that emerged in the first cycle through pattern coding (Saldana, 2016). Pattern coding was used to identify the emergent explanation why some students with hearing loss did not formally self-disclose to their institutions, addressing the second research question of this study. The primary patterns that emerged from this analysis are identified.

Self-identity. The question of whether the participants considered themselves to be disabled revealed differences based on the age of hearing loss onset. While those diagnosed as children did self-identity as disabled, those diagnosed as adults expressed mixed feelings about that label or a fluid sense of self-identity. Participant A, a woman diagnosed in their early 20s with moderate hearing loss, explained that the difficulty came from feeling like she did not really experience life as she imagined a person with a disability might:

> That is a question that I myself go back and forth on a lot. To cut a long story short, because I do wear hearing aids and I did lose my hearing post when you were after really wanting to speak and everything, I feel that I am not really affected as much and I can get by, and I really pass as hearing for the most point. I would say on paper, and per the medical definition, yes, I am disabled, but my lived experience is I don't feel like what I really experience has been what I would consider a disability.

Participants who were diagnosed as an adult also expressed that their impairment was not physically limiting enough to justify the classification as a disability. An ongoing theme was that there is a kind of threshold that their impairment would need to cross before they considered themselves to be disabled. Participant B compared his experience after a serious motorcycle accident to his hearing loss:

> [I] ended up damaging my femur, humerus and spine. For six months, I couldn't walk because they had to do the whole spinal surgery, and apparently, my body forgot how to walk. I think it was at that point where I felt disabled.

When asked if he considered himself to be disabled due to his hearing impairment, he replied, "No, I guess it's because it's not so much as a physical thing. I can still physically do everything; I just can't hear really well (Participant B)."

The concept of "passing as hearing" was also shared by the participants diagnosed as adults. When asked about whether other people would consider them disabled, Participant A replied, "I would say probably most people would say no just because I do pass so well and they probably wouldn't put too much thought into it. They'd be like, 'Oh, no, you're not disabled.'" Participants expressed that they could continue interacting and living as a hearing person after their diagnosis and that other people usually had no idea that they were hard of hearing. Often, only those very close to them, such as family members or partners, were aware of their impairment and its severity.

Those who were diagnosed as adults with hearing loss expressed a lack of belonging. For Participant A, it was the feeling that they did not belong to either the hearing or Deaf community:

> Like I said, I'm pretty passing, but I still struggle at times, even with them in, but it's still just a weird area because I'm not hearing, but I'm not capital D Deaf or profound loss. I'm not Deaf deaf, but I'm not hearing. The Deaf kids said I can't sit at their table, and I can't hear the hearing kids at their table.

Participant C expressed that he or she felt that the label of "disabled" did not fit him or her comfortably:

> It's not that I think that labeling yourself as disabled is a terrible label by any means. It just doesn't fit me. I guess if I was to put on a 5X t-shirt, it's on me, but it doesn't fit. I feel that's how the disable thing is. It's like, "Yes, you could label me as disabled, but I don't see myself that way."

There was no consistent trend among participants in whether they considered themselves to be disabled. From the interviews, it became clear that those who could pass as hearing would often make a careful, conscious decision about when to disclose their impairment and thereby assume a disabled identity.

Disclosure as a last resort.

For those who could pass as hearing and who did not have a fixed disabled identity, disclosure was viewed as a sort of "last resort" that participants would undergo if they felt that they could not no longer compensate on their own. One participant described how this was a situational decision that usually was made at a point during the term when she began to struggle academically. In this situation, the course that Participant A was enrolled in was discussion-based: "That was the part I remember the most—just struggling. I think everything else just got by. I was just like, "I can't fake it." [. . .] I can't just read the textbook and figure it out."

Participant B expressed that while he had requested accommodation in the past, he decided at one point to try to achieve on his own without accommodations: "Starting spring semester of this year, I didn't have [the Disability Services Coordinator] send over the paperwork to the teachers and everything because I honestly just wanted to complete it on my own." The idea that one should try to get by on one's own before resorting to accommodations was shared, to a varying degree, among the participants who had been diagnosed as adults.

For Participant D, who reluctantly viewed herself as disabled ("I don't really like to, but I do."), the decision to disclose was also viewed as a last resort, something to be done after all other options had failed:

> When my grades are slipping a little bit or if I didn't do so well on a test, it's like sometimes I will open up and see if the teacher can really help me so that my grade don't continue to drop. That's the only thing that makes me really disclose my information.

If possible, she preferred to ask a classmate for notes or help without disclosing why she needed them. This was often because of the past trauma associated with self-disclosure:

> I've had a professor in the middle of their lesson, they's like, "Can you hear me?" They didn't necessarily do anything wrong, but it was just the fact that I'm already embarrassed by the fact that I have hearing impairment, and I don't want nobody to know because I don't want nobody to pick on me and look at me differently. When they did that, I'm like, "Why are you calling me out like that?" I was so embarrassed in that moment, I wanted to walk out of the classroom, but I was just like, "Yes, I can hear you."

Being involuntarily outed by an instructor was an experience shared by four of the participants, and even for those who had not been outed, concern about it occurring was a barrier to disclosure.

One participant also expressed believing that if no benefit would come from disclosure, then there was no point in it. Most of the participants expressed that disclosure was personal and that a relationship must exist prior to the disclosure for him or her to feel safe sharing. When explaining why she did not disclose to instructors, Participant A stated:

> I don't really feel like I had that relationship with them and became what's the point of telling them? It'd be one thing if I told disability services and disability services told

> them, and they could work for accommodation. Otherwise, it's like, "Why would I show you? What could you do with this information?" [. . .] I wouldn't tell unless it was need to know or if I thought the professor was a jackass, like, "I don't really want to tell you. It's a personal thing. It's not your business."

The participants who could pass as hearing viewed self-disclosure as a situational and personal choice that was often made when no other option was left. For them, there needed to be a clear need for self-disclosure that outweighed the costs.

Cost versus benefit.

The cost of self-disclosure weighed against the benefits was another reoccurring theme throughout the interviews. Previous negative experience as a result of disclosure of their impairment influenced their decisions. For Participant D, negative experiences as a child in the classroom still influenced her perspective on self-disclosure now as an adult:

> I got picked on a lot. I got ridiculed and bullied a lot because if I wore hearing aids, it was like, all the guys and all the girls, they would make fun of me. [. . .] They were so cruel and rude. I think a lot of that have shaped my perspective and even my behavior of why I do what I do now because of the shame and all of that that I've dealt with.

Another participant, B, explained how he did not want their instructors to view him negatively by disclosing him disability: Even though the teachers are going to give me their best effort, I didn't want that thing in the back of their head to go, "Just give him a little bit of slack," I didn't want that.

Participant C, who was diagnosed as an adult, expressed that the fear of discrimination did not prevent him or her from requesting accommodations but instead uncertainty about whether the time and effort required to complete the process would offset the benefit he or she would receive. For him or her, the process would need to be easy with a clear benefit to be worth it:

> If there was an easy process where my professors would know and I felt like I was getting a benefit out of it, then I would. If it was a long process and I'm not really sure what was going on, I wouldn't tell them unless one of those circumstances popped up that I felt like I had to disclose it for some reason, that I couldn't hear him during a certain part or whatever would be the reason. (Participant C)

All but two of the participants expressed a lack of knowledge about available services that impacted their decision to request accommodations since they did not have a clear understanding of what the college could offer and whether it would be worth disclosing.

Lack of knowledge about available accommodations.

The participants who were diagnosed as adults were less aware of both the college's accommodations and what kind of accommodation would benefit them academically. According to the participants, each college provided Disability Services to different degrees (in orientation, the syllabus, in-class announcements), but the overall feeling was that the available accommodations were not communicated well or consistently to students. Interestingly, two of the participants chalked this up to colleges not wanting "fakers" with a sense of entitlement or people without disabilities applying:

> I get that they don't want to come out with all the accommodations that you will get because they don't want people applying, trying to get stuff that they don't need, but to me, that's a huge benefit, is to see what I could get by doing it. Like I said, I don't want to go through all of this work and effort if it's not going to get me anything. (Participant C)

Those who had not requested accommodations expressed the desire for colleges to be upfront with what they offer so that they could make an informed decision about whether to disclose:

> If they could just be upfront with, 'Hey, listen, if you have a hearing problem, these are the things that we can do for you. We can provide you a headset or whatever.' If I knew what I was going to get, that would be worth me going through all of that trouble, then I probably would do it. (Participant C)

While most of the participants did want to know what accommodations were available, Participant D expressed the feeling shared by some of the others that her disability could be difficult to accommodate, especially in the classroom:

> It's hard to accommodate people like us really because everything that we feel like we missed and [. . .] don't know that we have missed that, what can we do about it unless somebody will put it on a sheet of paper, something for us to read it, learn it through reading it [. . .]?

When they have requested accommodations, Participant E shared that his or her instructor did not understand and question why he or she needed his or her accommodation and even go so far as to tell him or her that he or she would not need it for their course: "[. . .] I've had a professor who was like, 'Oh, you'll be fine. You don't need an interpreter or anything. You just sit up front, and you can hear me pretty well.'" The lack of understanding about accommodations extends beyond the participants themselves into the communication that students have with their instructors, a serious barrier that may further limit their willingness to access services.

Conclusion

It is clear from the data analysis results that self-identity, interpersonal trust, and the perceived cost of disclosure versus the benefits are key to understanding the self-disclosure behavior and attitude toward requesting accommodations of technical college students with hearing loss. The next chapter includes recommendations on how technical college administration can improve services and processes to better support these students based on the findings presented in this chapter.

This chapter contains the results of the data analysis for the quantitative and qualitative phases of the study. It connects the analysis to the research questions and presents the email survey findings and semi-structured interviews. The quantitative data were analyzed using descriptive statistics. From this analysis, the researcher determined that differences in self-disclosure behavior and attitudes toward accommodations due to age, gender, and ethnic/racial identity warrant further study. From this quantitative phase, a few key themes continued through the following phase, the semi-structured interviews. First, students felt a need to prove themselves without accommodations. Students also considered the cost-benefit of disclosure, and self-identity as a person with a disability varied.

The qualitative data were coded in multiple phases to identify emergent themes. The four themes that emerged from this analysis summarize the contributing factors that prevent students with hearing loss from disclosing their disability and requesting accommodations: Self-Identity, Disclosure as a Last Resort, Cost Versus Benefit, Lack of Knowledge about Available Accommodations. Chapter V includes the discussion of these themes and the survey findings in the context of the theoretical framework.

Chapter V:

CONCLUSIONS

This chapter includes a discussion of major findings related to the literature on adult students with hearing loss in higher education and what implications may be valuable for use by technical college administrators when creating and evaluating policies and services. Also included is a discussion of the limitations of this study and areas for future research.

Overview

Students with hearing loss are not formally self-disclosing their disability while enrolled at technical colleges in a southeastern state in the United States, impacting their ability to access resources and services, like academic accommodations, that could positively affect their academic success. The purpose of this explanatory sequential mixed-methods study was to explore the self-disclosure behavior of and attitude toward requesting accommodations held by students with hearing loss to provide insight into how colleges can foster an environment that better supports adult technical college students with hearing disabilities.

In this study, an explanatory sequential design, comprised of an initial quantitative phase followed by a qualitative one, was used to investigate the attitudes toward requesting accommodations and self-disclosure levels among students with hearing loss in a technical college setting (Creswell & Plano Clark, 2017).

In the quantitative phase of this study, data were collected using an online survey of students enrolled at a sample of technical colleges in the southeastern state to identify factors that affect their willingness to request accommodations, type of self-disclosure, and demographic data. Of the 1,127 initial responses to the survey, 810 provided informed consent and began the study. To be included, participants needed to have responded “Yes” to at least two screening questions or self-identified as having hearing loss. The screening questions identified 202 participants who might have undiagnosed hearing loss or impairment. Of those, 165 completed at least 75% of the survey. These 165 comprised the sample.

During the quantitative phase, students’ willing to participate in the interview phase were also identified. Of the 14 survey participants who self-identified as willing to be interviewed for phase two, six responded to the follow-up invitation and consented to participate. The purpose of the second phase of the study was to build upon or explain the initial quantitative results and helped explain the participants’ attitudes toward requesting accommodation and the type of self-disclosure uncovered through the survey.

Findings

This study was designed to address two research questions. The first phase used a survey to examine the first question: “To what degree, if any, are there differences in (a) type of self-disclosure and (b) attitudes toward requesting accommodations, by age group, ethnic identity, racial identity, or gender?” After analyzing the survey results, a secondary interview phase examined the second question: “Why do some students with hearing loss not formally self-disclose to their institution?”

The survey results indicated differences between the type of self-disclosure and attitude toward requesting accommodations based on demographic characteristics. Due to the categorical nature of the data and the low cell counts that did not meet the Pearson’s chi-squared test assumptions, only counts and percentages of the total population could be calculated.

The data collected indicate differences between age, gender, and racial/ethnic identity and some of the self-disclosure variables. The most obvious were the differences between men and women. Females represented the majority of the sample (69.70%), an unexpected outcome since, among adults aged 20-69, men are almost twice as likely as women to have hearing loss (Hoffman et al., 2017). Only two male participants were formally diagnosed with hearing loss, which could explain the low number who reported any type of self-disclosure behavior. Women are twice as likely as men to disclose their hearing loss and offer suggestions on how to effectively communicate with them than men (West et al., 2016), which could also help explain the difference between male and female self-disclosure behavior.

The differences between White and non-White participants in terms of self-disclosure behavior indicated that participants with a White or multiethnic identity receive accommodations at a lower rate. As members of the racial/ethnic "in-group," White participants may be hesitant to assume the out-group disabled identity and may perceive it as a loss of social power. Social power dynamics could also explain why non-White participants were more likely to disclose to the Disability Services office than their professors.

There were also differences between age groups. One important finding was that 16-18 years old were not disclosing to anyone, either officially or unofficially, and not receiving accommodations. It is also important to note the differences between age groups when disclosing to a professor versus Disability Services. This could be explained by adult students not wanting to stand out further from the norm when older than the "traditional" college student. System data show that 43.13% of students in the technical college system are 21 or younger. An adult student who is already differentiated from others in their class due to their age may not want to draw further attention due to their disability or impairments.

The data collected also indicate differences between age, gender, and racial/ethnic identity for some of the ATRA scale variables. First, it appears that age may be related to attitudes about the concepts of academic integrity and disability disclosure. The analysis of the Academic Integrity subscale determined that the means for all the other age groups indicated that they disagreed that students should get by without accommodations, but the 16- to 18-year-old group was undecided ($M = 2.92$). Additionally, the participants in the 16- to 18-year-old group agreed that they had never felt that they needed accommodations ($M = 3.50$), whereas the other age groups were undecided.

The analysis of the Disability Disclosure subscale indicated that 16- to 18-year-old participants had a different attitude than the other age groups for three statements: "I don't like talking about my disability," "I don't want professors to know that I have a disability," and "The cost of talking about my disability to get accommodations outweighs the benefits." For these statements, the youngest age group disagreed while every other group was undecided. Younger participants' attitudes may be related to a connection between their identity development and age of onset of hearing disability or impairment.

The data also revealed differences between male and female self-identity as a person with a disability. The Academic Integrity subscale analysis indicates that the difference was concentrated in two areas: whether students should try to get by without accommodations and feeling like they need accommodations. Self-reliance norms and their rejection of the label of "disabled" could also explain men's stronger agreement with these statements.

Finally, there were attitude differences in racial/ethnic groups that could be explained by limitations that arise from the categorization of racial and ethnic identity. The higher variance in responses between Black, Hispanic, and multiracial identities than other racial identities could be explained by the fact these identities are not homogenous groups and that cultural differences within the larger Black and Hispanic communities may impact attitudes.

Additionally, the survey results revealed that those with hearing loss were receiving accommodations for other disabilities or impairments but not necessarily their hearing disability or impairment. This was an unexpected finding that could possibly be explained in two ways. First, it may be that people with a hearing disability or impairment may decide to pass as hearing. They may be selective about when to assume a disabled identity based on their perceptions of the costs versus the benefits of disclosure. They may also not be aware of what accommodations are available. The interview phase further examined these ideas as the first phase of research identified areas of deeper exploration for the interview phase.

Limitations to the Study

There were limitations to this study's design and in the generalizability of the results. One of the most significant limitations was that the sampling methods for each phase of the study impacted the results' generalizability. The data collection instrument's design also presented limitations that impacted the data analysis. Finally, societal stigmas surrounding this study's subject, disability identity, may have resulted in social desirability biases among participants.

During the first quantitative phase, screening questions were used to help identify participants who may have hearing loss and not be formally diagnosed. This was necessary since one of the assumptions of this study was that lack of knowledge about one's impairment may cause the low self-disclosure rate among students with hearing loss at technical colleges. The use of the self-screening questions may have allowed people without hearing loss to complete the survey, as it is not as accurate as a physical hearing examination to diagnose hearing impairment. In the second interview phase, the participants were chosen using voluntary sampling due to the low number of students willing to participate. While this sampling method had limitations, it had the benefit of reducing any researcher bias since the sample was not created using the researcher's judgment.

The limitations of the sampling methods used in both phases also meant that the researcher did not have control over the makeup of the sample and, as a result, was limited in the degree to which the demographic variables could be explored during the interview phase. While the sampling methods limited the generalizability of the findings, the sampling methods ultimately provided the researcher with access to students who had not disclosed their hearing disability or impairment to their college and began the study of students with hearing loss in technical colleges.

The use of the ATRA scale in this study also presented a limitation to this study. While initially found to have acceptable construct validity, the ATRA requires further analysis of its psychometric properties to determine if the results are generalizable due to sample size (Barnard-Brak et al., 2010). The researchers concluded that the results were only generalizable to similar educational settings because the methodology and data analysis did not determine if the sample was representative of college students with disabilities across the United States (Barnard-Brak et al., 2010). In addition, the study also sampled universities, whose populations are different from technical colleges in their admission standards, levels of degrees offered, etc.

The age groups and racial/ethnic categories used in the survey to collect demographic information also presented challenges when the data were analyzed. With the larger number of older adults in the technical college setting than four-year institutions, their reporting of the exact age of participants would be more useful in future studies. Also, categorizing all Latino and Hispanic participants into one category should be addressed in future studies. This would address criticisms in the literature that argue that Latino and Hispanic cultures are not homogenous and that categorizing members into a broad group erases cultural nuances that could be important to studying people with disabilities.

The effects of social desirability bias in the participants may have also limited participants' candor, affecting the survey and interview responses. Students may have also been sensitive to questions about their disability. Ensuring the participants' privacy through the data collection procedures helped minimize the effects of social desirability bias. The researcher also applied Fowler's (2014) suggestion that the sense of judgment in the survey and introduction language be minimized. The utilization of voluntary response sampling for the qualitative strand reduced any researcher bias since the sample was not created using the researcher's judgment.

Conclusions

While each participant's experience was unique, shaped by their individual life experiences, two overarching conclusions can be drawn from the data. First, people with hearing loss do not always consider themselves disabled and may not want to permanently assume the label of "disabled." Self-identity was a consistent theme throughout the interviews and is supported by the conceptual framework of the study. Additionally, people with hearing loss are not aware of the accommodations colleges offer and what accommodations could benefit them, a conclusion already well supported by the literature. However, this finding still furthers the understanding of students with hearing loss in the technical college setting since the analysis did identify areas of further research.

Participants in this study varied as to whether they self-identified as "disabled." Based on the initial quantitative and subsequent qualitative analyses, it appears that self-identification as a person with a disability varied based on the age of onset of hearing loss. This finding is supported by the social model of disability and research by Bat-Chava (2000), who explored the types of social identities developed by the deaf, and Bell, Carl, and Swart (2016), who investigated how those deaf identities impact students' self-disclosure.

According to SIT (Tajfel & Turner, 1979), members of out-groups desire a positive social identity, which they achieve through either individual mobility or social change. To increase their self-esteem through individual mobility, a member will leave the out-group physically or psychologically. Alternatively, through social change, some group members will choose to reframe their membership as a positive attribute, reaffirm their identify with the group, and work toward social change to increase their self-esteem.

Age of onset may also impact the identity development of people with disabilities, which could account for adults who become disabled at an older age not identifying as "disabled." The intersection of identity development, type of disability (congenital or acquired), and age of onset could impact a person's view of disability. Langer (1994) explained that the losses that occur through disability are not only of physical function but also of aspects of the self: "Many aspects of the experience of illness, loss of function, and treatment can be profoundly dehumanizing; in early phases, the onset of disability may be fundamentally disintegrating to the sense of unity of self" (p. 182).

Additionally, family support and views of disability have a significant impact on identity development. Bat-Chava (2000) argued that deaf children of hearing parents whose view of deafness is framed by the medical community will assume a culturally hearing identity and view deafness as a disability. One interview participant echoed this sentiment when asked if he or she considered himself or herself to be disabled, stating, "I don't really like to, but I do. For me, it's like I'm abnormal, like I'm an oddball or something because nobody in my family have hearing impairment, nobody that I grew up with, nobody in my school where I'm from. I didn't have that around me."

The school environment is also important in developing one's identity. For some, attending a hearing school can facilitate a view of deafness as a disability and affirm the sense of "otherness" (Bat-Chava, 2000). Those who attend a deaf school often view deafness as a cultural identity (Johnston, 1997) rather than a disability, which can lead to a positive social identity. Those with a bicultural (hearing and deaf) identity can exist in both spheres and navigate successfully between them. Bat-Chava (2000) asserted that deaf people with culturally deaf and bicultural identities have higher self-esteem than people with hearing identities. Based on the results of this survey and interview questions, most participants in this study likely had a hearing identity, and lower levels of self-esteem combined with uncertainty over their self-identity could explain their desire to "pass" as hearing and assume a "normal" social identity.

Younger participants may have desired to conform to a perceived "normal" identity, which could explain why they did not request or receive accommodations. The research of Bat-Chava (2000) can help explain why the results of this study revealed that there was a difference between age groups in terms of their agreement with the statement, "I was afraid of being labeled," as the interviews revealed that the age of onset of the participants' hearing loss could be a possible explanation. Those diagnosed with hearing loss as adults expressed that they felt like they lived between the hearing and deaf worlds, not really a part of either.

The pressure to conform to social norms could also explain why males disclose their disabilities or impairments at a much lower rate than female participants, they may feel pressure to conform to masculine gender norms such as self-reliance that contradicts a disabled identity and negatively impacts their decision to ask for help (accommodations). When this was further explored in the interview phase, Participant B was very adamant in his rejection of the label of disabled and the view of his physical impairments as disabilities. He chose to stop requesting accommodations because he reached a point where he told himself, “Okay, you have to complete this without anybody knowing there’s things wrong with you. Well, besides the people who already know there’s things wrong with [you], that’s truly the only way you’re going to get over this disability thing.”

The findings also revealed that participants were unsure if they were disabled enough to need accommodations or had not felt like they needed them. While those diagnosed as children did self-identity as disabled, those diagnosed as adults expressed mixed feelings about that label or a fluid sense of self-identity. Disability acceptance attitude scores revealed that participants were undecided about the statement, “I don’t know sometimes whether I am really all that disabled.” According to Bell et al. (2016), “one’s personal construction of disability is a multifarious phenomenon, resulting in people with disabilities often having complex identities, seeing themselves as ‘normal’ and with limited identification with their hearing impairment” (p. 4).

This idea that people with disabilities can have complex identities is supported by the findings in this study. Multiple participants who could “pass” as hearing admitted to maintaining a hearing identity and strategically determining when and if to assume a deaf identity based on situational factors. For those interview participants who could pass as hearing and who did not have a fixed disabled identity, disclosure was viewed as a sort of “last resort” that participants would undergo if they felt that they could not no longer compensate on their own and required accommodations. An individual with hearing loss is influenced by personal and contextual antecedents that affect the willingness to self-disclose (Jennings et al., 2013). Those interviewed explained that disclosure was a situational decision that usually was made at a point during the term when they began to struggle academically.

Participants also reported that they attempted to achieve independently without accommodations and only asked for help when their usual coping mechanisms did not work. The decision to disclose and request accommodations was not a decision made lightly and was viewed as a last resort—something to be done after all other options had failed. The research results of Bell et al. (2016) supported this finding. In their study:

> it was found that the willingness of the student participants to disclose their hearing impairment was either purely for administrative purposes or to solicit additional support when encountering specific barriers to learning, such as not being able to lip-read when lecturers walk around in the class, noisy classroom environments, etc. (p. 7)

There must be a clear benefit to self-disclosure that outweighs the cost, or those who are able will continue to pass as hearing in the classroom environment.

When choosing to disclose, participants weighed the costs versus the benefits of disclosure and accommodations, as it is crucial that they pay particular attention to the social cost of revealing one's hearing loss in a social setting (Croteau et al., 2008). Some expressed that they did not want their instructors to view them negatively for disclosing their disability. For others, past trauma resulting from past self-disclosure events had a significant impact on their decision-making and their choice not to disclose to maintain their hearing identity negatively impacted their academic outcome.

For others, the result was the opposite. Past trauma had taught them the importance of self-disclosure to receive the accommodations they needed. Having experienced intense bullying during her primary school years, Participant D explained how she tried to pass as hearing in high school:

> With the awkward teenager phase, I didn't really want anybody to think I'm so different or awkward, so I decided not to tell anybody. Then something happens, and they realize, "Oh, you're supposed to have accommodations." That blew up on my face, and I realized that I should have done things better.

For those interviewed, if no benefit was going to come from disclosure, then there was no point in it.

The difficulty in determining the potential benefits of disclosure lies in the lack of knowledge that participants had regarding available accommodations or even what type of assistance would be helpful to them. Differences between age groups in disclosure behavior could be due to younger students not understanding the differences between secondary and post-secondary processes. Additionally, students of all ages could lack the self-knowledge and self-advocacy skills needed to effectively acquire accommodations.

Self-advocacy is a process in which one identifies one's goals, determines what is necessary to achieve them, and develops the skills necessary to speak and act on one's own behalf to help move toward those goals. According to Daly-Cano et al. (2015), there are four components of self-advocacy: knowledge of self and one's rights, plus the ability to communicate and lead. A lack of self-advocacy skills can result in students not accessing services that could positively impact their academic success. Due to the workforce development mission of technical colleges, it is important that all technical college students, not just those with disabilities, are prepared to be successful self-advocates in the workplace.

Implications for Practice

This study's results were intended to guide administrators and policymakers at technical colleges in the implementation of changes that foster self-disclosure, remove barriers in the accommodation request process, and, ultimately, improve the academic performance of students with disabilities. To improve students' employment outlook and career success with hidden disabilities in career and technical education, it is crucial that barriers to self-disclosure and requesting accommodations are addressed.

The Centers for Disease Control and Prevention estimated that one in every five adults in the United States has a disability (2020). Of adults with functional disabilities, 5.9% have deafness or serious difficulty hearing (Centers for Disease Control and Prevention, 2020). People with disabilities represent a significant proportion of the population, and their low employment and education attainment outcomes make it imperative that technical colleges, with their workforce development missions, begin to work more purposively to adequately prepare students across the spectrum of abilities for employment. Based on the literature and the findings of this study, it appears that there may be a self-advocacy skills gap that needs to be addressed.

By including self-advocacy skill development in the curriculum and by developing student support services that foster the supportive community required to develop positive self-identities, technical colleges, and indeed any higher education institution, can assist students with a hidden disability in developing the skills and behaviors needed to successfully self-advocate in the classroom and workplace. The practice of self-advocacy behaviors in the educational setting allows one to gain confidence, develop a clear sense of one's goals, use one's voice to articulate one's needs, and become autonomous and self-directed, skills that one needs to be successful when one enters the workplace. If one does not learn how to become a successful self-advocate at home, in the community or in secondary schools, it falls to post-secondary career and technical education institutions to fill in the gaps, as the mission of these institutions is to ensure that graduates enter the workplace with the skills and knowledge necessary to be successful in their chosen careers.

This study's results indicate that some students with hearing loss lacked knowledge about the accommodations that would either be helpful for them or that they could seek. While young adults with hearing loss who have recently transitioned from high school to college are likely to have and be familiar with this type of documentation, adult students with late-onset hearing loss may either not be aware of their condition, not know that they need accommodations, or not know how to begin the process to document their disability. As a result, these adults can enter college as students with undocumented hearing loss and fail to seek accommodations.

The adoption of universal design principles in the design of programs, services, instruction, and spaces could address this since improving the usability of products and services for all students results in less need for special accommodations that stigmatize individuals with disabilities (Pilarski, 2015). The universal design gives students options in how they access education and learn (Ballenger, 2013, p. 125). The Association on Higher Education and Disability revised its Program Standards in 2005 to include 90 performance indicators that identify best practices in meeting the standards (Shaw & Dukes, 2005). Of these indicators, some specifically address the implementation of universal design principles in the areas of facilities, curriculum, and instruction. These principles support creating an environment that fosters inclusion and self-determination in students with disabilities and allows them to navigate independently (Scott, McGuire, & Shaw, 2003).

By putting aside the medical model of disability and implementing the social model of disability as the conceptual framework for the design and implementation of services to students with disabilities, institutions can take the first step in addressing the needs of students with hearing loss. To meet the ADA requirements, higher education institutions have relied heavily on the medical model of disability to identify students with disabilities and determine what reasonable accommodations they can receive. The result of this is that students are identified first as their diagnosis, labeling them as disabled without regard for their own identity and effectively disempowering them by limiting the range of identities from which they may choose. Students should be able to make their own decisions about membership in disability culture and assuming a disabled identity.

Institutions should shift from the categorization of students as abled and disabled, a perspective that results in disability services operating as a separate entity from other student support services. In practice, this requires an institutional change in basic assumptions to remove barriers that serve to limit people with disabilities. The integration of disability services into the larger diversity and inclusion offices and initiatives of the institution can help in minimizing the view of students with disabilities as the "other."

When viewing the institution through the social model of disability lens, unintentional audism can be uncovered by examining instruction, services, and facilities. Lane (1999) defined audism as "the hearing way of dominating, restructuring, and exercising authority over the deaf community" (p. 43). Administrators and instructors must be aware of how "audist paradigms influence [their] activities and make a conscious effort to avoid creating such perceptions" (Ballenger, 2013, p. 124). Administrators and instructors often mistakenly believe that compliance with the legal requirements of disability accommodation also means that they have incorporated the spirit of the law. A change in attitude from a compliance mindset toward a focus on overall improvement in course, service, and facility design could help address unintentional audism and improve the academic outcomes of students with hearing loss.

Conclusion

Students with hearing loss are not formally self-disclosing their disability while enrolled at technical colleges in a southeastern state in the United States, affecting students' ability to access resources and services, such as academic accommodations, that could positively affect their academic success. This study's results indicate differences between participants' type of self-disclosure and attitudes toward requesting accommodations by age group, ethnic identity, racial identity, and gender. Some students with hearing loss may not formally self-disclose to their institution due to a lack of knowledge about their impairment, their needs, and what the institutions offer. Most importantly, they may not be self-disclosing due to incongruencies between their self-identity and the social identity, "disabled."

More research into this phenomenon is necessary to better understand it and to be able to generalize the findings to a larger population, but this study has contributed to the literature about a population that has not yet been studied. By examining how and if demographic characteristics affect individual students' attitudes toward self-disclosure of a hearing disability, this study sought to provide insight into how colleges could foster an environment that encourages adult technical college students with hearing disabilities to self-disclose their disability and request accommodations.

Self-advocacy skill development of all technical college students, not just those with disabilities, is one change that could help address this problem, but more importantly, the results of this study, combined with disability literature, suggest that more meaningful and long-lasting change could come from colleges adopting the social model of disability when developing and evaluating their programs, services, and spaces. The rejection of the disempowering medical model and the integration of Disability Services into the institution's larger diversity and inclusion initiatives is the best way to address the needs of students with hearing loss as a diverse population shaped by the intersection of their age, race, ethnicity, and gender.

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APPENDIX A:

Survey components with citation justifications

The following section contains the first page of the survey, which describes the purpose of the study and how the data were used. The questions and answer options, along with the justifying citations, are then presented by section.

A little about my survey:
What am I doing?

This survey is being conducted by a graduate student in the Adult and Career Education program at Valdosta State University. It aims to explore the levels of disability self-disclosure (formal and informal) and the attitudes toward requesting accommodations among college-age students with hearing loss in post-secondary technical institutions. I will be using the findings to influence and develop policies and practices in higher education that will more effectively serve students with hearing loss. This survey has been sent to all students enrolled at your college, no matter their disability status, and at no point will I have access to your student records.

What am I trying to measure in this survey?

I want to identify some of the reasons why students with hearing loss do not disclose their disability to their college or professors. Additionally, I would like to determine the attitudes of students with hearing loss toward requesting accommodations. This survey is completely anonymous. I will be using the summarized information I collect to suggest improvements to policies for technical colleges. The survey contains questions about who you are, your disability, who you have disclosed your disability to, and your attitude toward requesting accommodations.

What will I do with the information?

The report and analysis of the data will be published on the Internet and in partnership with Valdosta State University. I will also share the findings with the technical college staff at your college. Following this survey, I will be conducting interviews to add to the information we collect. Your participation in this survey is completely voluntary, and all of your responses are anonymous. None of the responses will be connected to identifying information. If you are interested in taking part in the interview, you will be able to submit your contact information in a separate form at the end of this survey.

If you need a break at any point, the questionnaire can be saved and returned to. It is not necessary to complete all sections to submit the survey.

Many thanks for your time in taking part.

Survey Section 1

Question Number	Question	Response Options	Relevant Citation
1.	How do you currently describe your gender?	• Man or Male or Masculine • Transgender Man • Transgender Woman • Woman or Female or Feminine • Gender non-conforming or Gender queer • Intersex • No response • Prefer not to answer	Revised from Moody et al. (2013)
2.	What categories describe you? Select that all that apply to you:	• American Indian or Alaska Native— For example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, • Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community • Asian— For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese • Black or African American— For example, Jamaican, Haitian, Nigerian, Ethiopian, Somalian • Hispanic, Latino or Spanish Origin— For example, Mexican or Mexican American, Puerto Rican, • Cuban, Salvadoran, Dominican, Columbian • Middle Eastern or North African— For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, • Algerian • Native Hawaiian or Other Pacific Islander— For example, Native Hawaiian, Samoan, Chamorro, • Tongan, Fijian, Marshallese • White— For example, German, Irish, English, Italian, Polish, French • Some other race, ethnicity, or origin, please specify: • I prefer not to answer.	Cohn (2015)
3.	What is your age group?	• 16-18 years • 19-24 years • 25-44 years • 45-59 years • 60 and older • I prefer not to answer	United States Department of Education (2009)
4.	Do you feel you have hearing problem?	• Yes • No	Ishak, Mukari, Maamor & Wan Hashim (2017)

5.	Do you feel that people mumble?	• Yes • No	Ishak, Mukari, Maamor & Wan Hashim (2017)
6.	Has anybody told you that you don't hear well?	• Yes • No	Ishak, Mukari, Maamor & Wan Hashim (2017)
7.	Would you like to enter a raffle for the chance to win a prize?	• Yes • No	Not Applicable

Notes: Questions 4-6 are conditional. If the response to any of these 3 questions is "yes," participants will be directed to Section 2. If the answer to all 3 questions is "no," participants will end the survey and the final survey page.
Question 7 is conditional. A "yes" response will direct them to a second survey (see Raffle Survey). A no response will send them to the final survey page.

Survey Section 2

1.	Have you ever been diagnosed with any hearing disability or impairment?	• Yes • No	BrckaLorenz, Zilvinskis, & Haeger (2014)
2.	Have you ever requested an accommodation for a hearing disability or impairment while enrolled in college? An accommodation is a support provided to a student to access course content and/or demonstrate their knowledge.	• Yes • No	None
3.	Please select all that apply:	• I have talked to my professors about my disability or impairment and the support I need to be successful in the classroom. • I have talked to my College's Student Disability Services about my disability or impairment and the support I need to be successful in the classroom. • I have received accommodations in one or more of my courses. • I officially identified myself as a student with a disability using my college's Voluntary Self-identification of Disability Form.	None
4.	Accommodations are unfair to other students.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
5.	I want to prove that I can do college.	• Strongly Agree • Agree • Undecided • Disagree	Barnard-Brak, et al. (2010)

		• Strongly Disagree	
6.	Accommodations are for academically weaker students.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
7.	I want to stand on my own two feet.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
8.	Accommodations are for lazier students.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
9.	Students should try to get along without accommodations.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
10.	I don't like to admit that I have a disability.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
11.	I don't like talking about my disability.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
12.	I don't want professors to know that I have a disability.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
13.	I don't like people knowing private and personal information about me such as my disability.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
14.	The cost of talking about my disability to get accommodations outweighs the benefits.	• Strongly Agree • Agree • Undecided • Disagree	Barnard-Brak, et al. (2010)

		• Strongly Disagree	
15.	I have a right to privacy regarding my disability.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
16.	I don't want friends to know that I have a disability.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
17.	My family doesn't think I am disabled enough to need accommodations.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
18.	I don't think I am disabled enough to need accommodations.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
19.	I don't know sometimes whether I am really all that disabled.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
20.	I prefer to be treated as a nondisabled person.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
21.	I want to be like other college students.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
22.	I want to have a normal college experience.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
23.	There's nothing wrong with me. I was afraid of being labeled.	• Strongly Agree • Agree • Undecided • Disagree	Barnard-Brak, et al. (2010)

		• Strongly Disagree	
24.	People don't think I am disabled.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
25.	The Student Disability Services office was unhelpful.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
26.	The Student Disability Services office was unapproachable	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
27.	The Student Disability Services office did NOT assist me.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
28.	I don't trust Student Disability Services to keep my information confidential.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
29.	I don't trust professors to keep my information confidential.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
30.	I didn't know anything about disability accommodations when I started college.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
31.	Going to Student Disability Services is awkward.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)
32.	Requesting accommodations from professors can be awkward.	• Strongly Agree • Agree • Undecided • Disagree	Barnard-Brak, et al. (2010)

		• Strongly Disagree	
33.	Student disability services were NOT discussed at my new student or transfer orientation.	• Strongly Agree • Agree • Undecided • Disagree • Strongly Disagree	Barnard-Brak, et al. (2010)

APPENDIX B:

List of interview questions

These are the open-ended questions that were used to start the interviews.

1. Have you ever been diagnosed with any hearing disability or impairment?
    a. Do you feel you have a hearing problem?
    b. Do you feel that people mumble?
    c. Has anybody told you that you don't hear well?
2. Do you consider yourself to be disabled?
    a. If yes: Do you like talking about your disability?
    b. If yes: Do you want your professors to know that you have a disability?
    c. If no: Why not?
3. Do other people consider you to be disabled?
4. Were Student Disability Services discussed at your new student or transfer orientation?
5. Do you trust the College and your professors to keep your information confidential?
6. Have you ever requested an accommodation for a hearing disability or impairment while enrolled in college?
    a. What was your experience like when you visited the Disability Services office?
7. Have you ever disclosed your hearing disability or impairment to anyone at your college?
    a. Who?
    b. When?
    c. If yes: What made you decide to disclose to that person or department?
    d. If no: Why did you decide not to disclose your hearing disability or impairment?

APPENDIX C:

Raffle and interview self-identification survey wording

This was the wording of the raffle survey and self-identification survey.

Please provide the following information where someone can best reach you if you are a raffle winner.		
1.	First Name:	Open-Ended
2.	Last Name:	
3.	Phone:	
4.	Email:	
5.	Age:	
6.	Country of Residence:	

Please provide the following information where someone can best reach you to follow-up with you about your responses to this survey. Your participation in an interview is completely voluntary, and you may opt out of any question in the interview. All of your responses will be kept confidential.		
1.	First Name:	Open-Ended
2.	Last Name:	
3.	Phone:	
4.	Email:	

APPENDIX D:

Request for permission to survey students and IRB approval email

This is the text of the letter sent to the Technical College System of Georgia to request permission to survey students and a copy of the IRB approval from Valdosta State University.

<Dear IRB Contact>

I am a doctoral student in the Adult and Career Education program at Valdosta State University, as well as the Executive Director of Library and Academic Support Services at Southern Crescent Technical College. I am writing to you today to request permission to survey and interview students at Georgia Northwestern Technical College, Atlanta Technical College, Augusta Technical College, and Southern Crescent Technical College as part of my dissertation. I have received IRB approval from Valdosta State University.

As an adult student with a hearing disability, I have a personal interest in determining why so few of our students in the technical college system self-disclose a hearing disability and request accommodations. As I am sure you are aware, research has shown that the use of course accommodations has a positive influence not only on *students' retention* and *persistence* but also their overall *college success*.

The first phase of my mixed-methods study is comprised of a survey that will be sent to all students enrolled during the term. In order to identity which participants have hearing loss, the survey will first ask them to self-identity a hearing disability. Those who disclose a hearing disability will be directed to complete the survey by providing demographic data and completing questions regarding their attitude toward requesting accommodations. Additionally, the survey will ask the respondents if they are willing to be interviewed during the second phase. If any students are willing to be interviewed, I would then visit their campus to conduct the interviews.

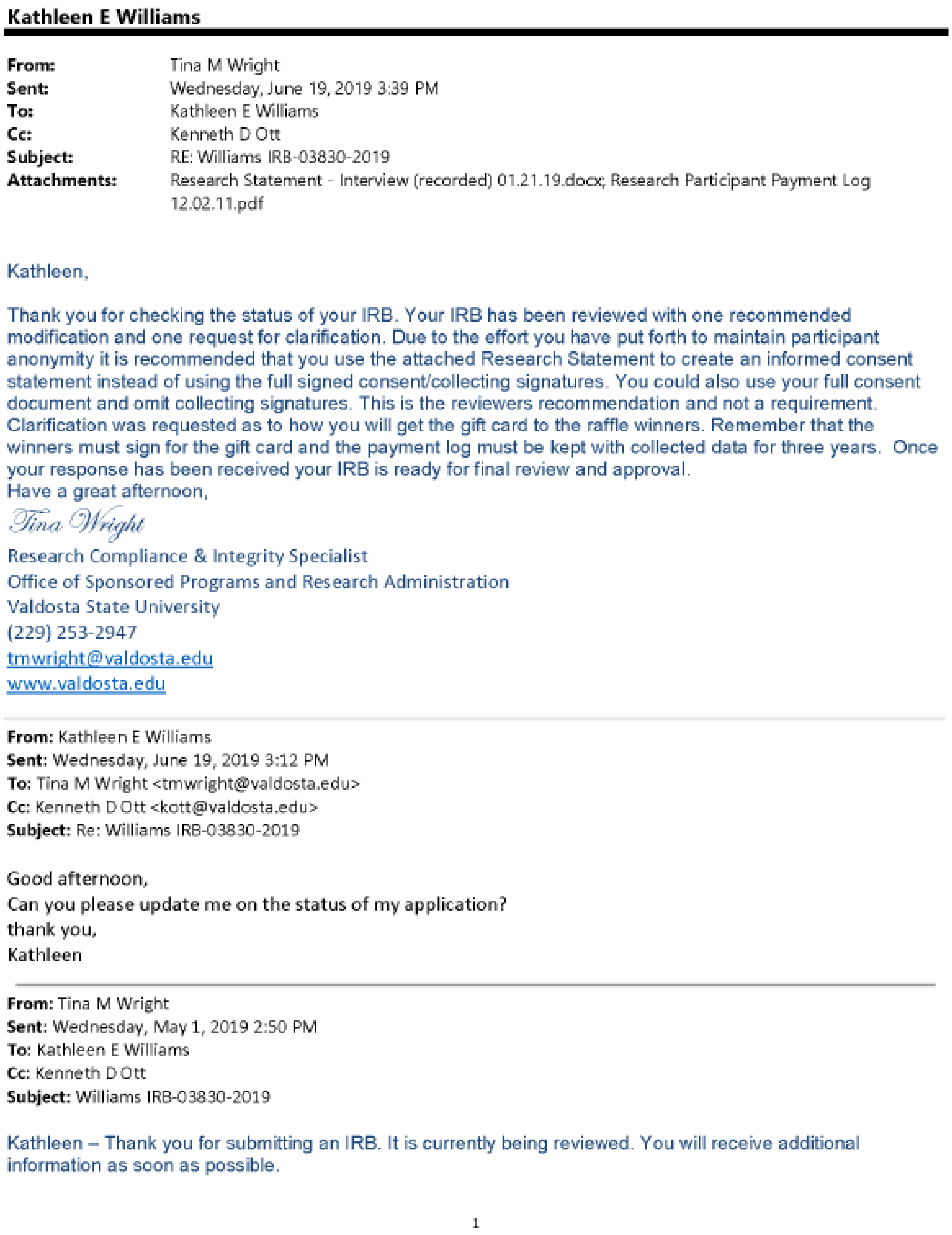
Please note that this survey will only require access to directory information and that at no point will I request the personal or academic records of any students. If you have questions or concerns, please feel free to contact me at this email address or by phone at 334-740-0249.

Thank you for your consideration,

Kathleen Williams

Enclosures:

Student Request to Participate in Survey
Survey
Student Interview Consent Letter
Interview Questions
Valdosta State University IRB Approval



Kathleen E Williams

From: Tina M Wright
Sent: Wednesday, June 19, 2019 3:39 PM
To: Kathleen E Williams
Cc: Kenneth D Ott
Subject: RE: Williams IRB-03830-2019
Attachments: Research Statement - Interview (recorded) 01.21.19.docx; Research Participant Payment Log 12.02.11.pdf

Kathleen,

Thank you for checking the status of your IRB. Your IRB has been reviewed with one recommended modification and one request for clarification. Due to the effort you have put forth to maintain participant anonymity it is recommended that you use the attached Research Statement to create an informed consent statement instead of using the full signed consent/collecting signatures. You could also use your full consent document and omit collecting signatures. This is the reviewers recommendation and not a requirement. Clarification was requested as to how you will get the gift card to the raffle winners. Remember that the winners must sign for the gift card and the payment log must be kept with collected data for three years. Once your response has been received your IRB is ready for final review and approval.
Have a great afternoon,
Tina Wright
Research Compliance & Integrity Specialist
Office of Sponsored Programs and Research Administration
Valdosta State University
(229) 253-2947
tmwright@valdosta.edu
www.valdosta.edu

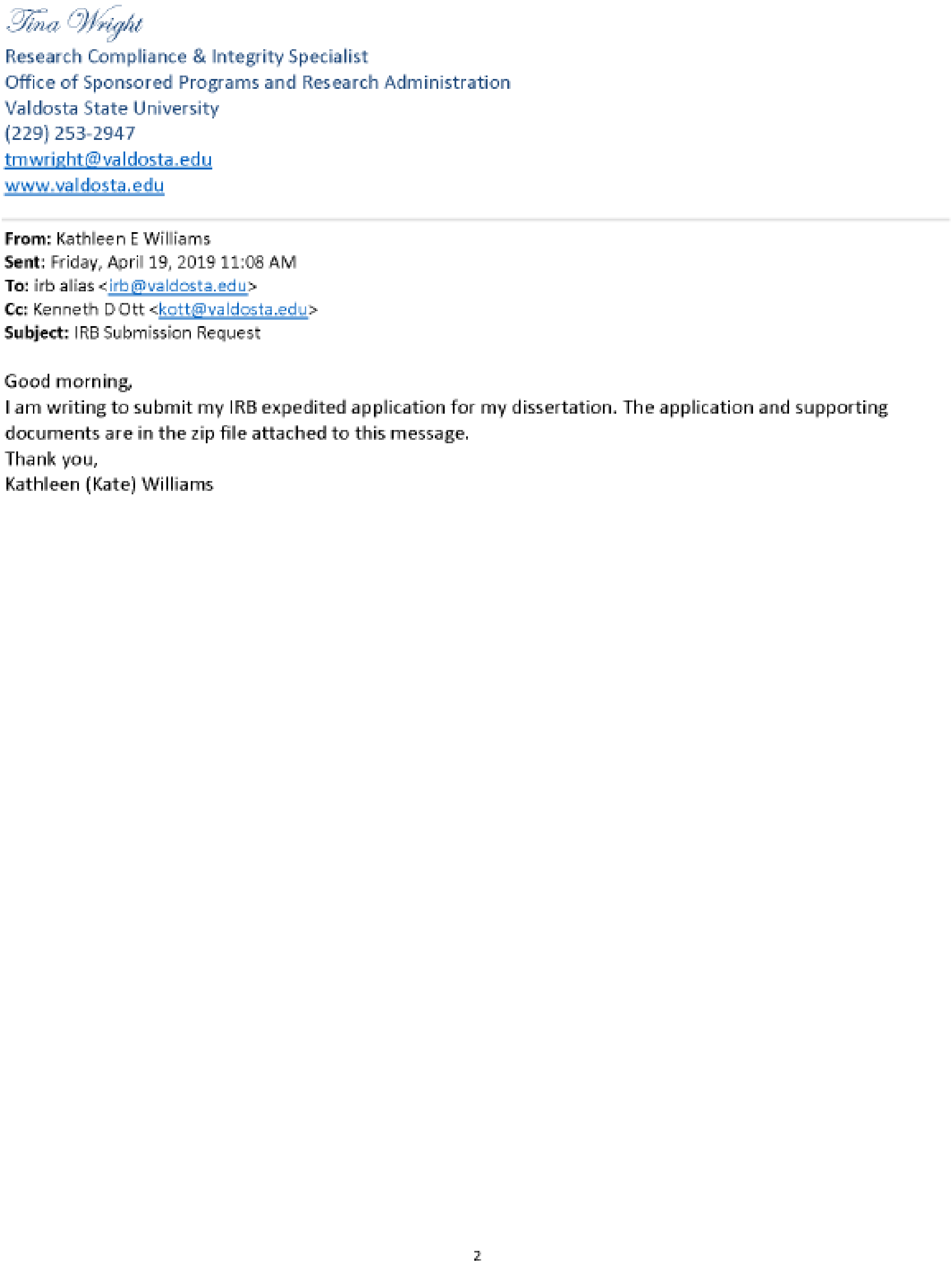
From: Kathleen E Williams
Sent: Wednesday, June 19, 2019 3:12 PM
To: Tina M Wright <tmwright@valdosta.edu>
Cc: Kenneth D Ott <kott@valdosta.edu>
Subject: Re: Williams IRB-03830-2019

Good afternoon,
Can you please update me on the status of my application?
thank you,
Kathleen

From: Tina M Wright
Sent: Wednesday, May 1, 2019 2:50 PM
To: Kathleen E Williams
Cc: Kenneth D Ott
Subject: Williams IRB-03830-2019

Kathleen – Thank you for submitting an IRB. It is currently being reviewed. You will receive additional information as soon as possible.

1



Tina Wright
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From: Kathleen E Williams
Sent: Friday, April 19, 2019 11:08 AM
To: irb alias <irb@valdosta.edu>
Cc: Kenneth D Ott <kott@valdosta.edu>
Subject: IRB Submission Request

Good morning,
I am writing to submit my IRB expedited application for my dissertation. The application and supporting documents are in the zip file attached to this message.
Thank you,
Kathleen (Kate) Williams

APPENDIX E:

Letter of introduction sent to college presidents

This letter was sent to the presidents of the Colleges in the sample to request permission to survey students.

<Dear President Name>

I am a doctoral student in the Adult and Career Education program at Valdosta State University, as well as the Executive Director of Library and Academic Support Services at Southern Crescent Technical College. I am writing to you today to request permission to survey and interview your students as part of my dissertation. I have received IRB approval from my institution, as well as the Technical College System of Georgia.

As an adult student with a hearing disability, I have a personal interest in determining why so few of our students in the technical college system self-disclose a hearing disability and request accommodations. As I am sure you are aware, research has shown that the use of course accommodations has a positive influence not only on *students' retention* and *persistence* but also their overall *college success*.

The first phase of my mixed-methods study is comprised of a survey that will be sent to all students enrolled during the term. In order to identity which participants have hearing loss, the survey will first ask them to self-identity a hearing disability. Those who disclose a hearing disability will be directed to complete the survey by providing demographic data and completing questions regarding their attitude toward requesting accommodations. Additionally, the survey will ask the respondents if they are willing to be interviewed during the second phase. If any of your students are willing to be interviewed, I would then request your permission to visit your campus to conduct the interviews.

Please note that this survey will only require access to directory information and that at no point will I request the personal or academic records of any of your students. If you have questions or concerns, please feel free to contact me at this email address or by phone at 334-740-0249.

Thank you for your consideration,

Kathleen Williams

Enclosure:
Student Request to Participate in Survey
Survey
Student Interview Consent Letter
Interview Questions
Valdosta State University IRB Approval
Technical College System of Georgia IRB Approval

APPENDIX F:

Email invitation to participate in survey

This was the invitation to participate in the email survey that was sent to students.

To: Potential Interview Participant
From: Kathleen Williams
Subject: Request to Participate in Survey

Dear Student:
I am writing to request your participation in an Attitude toward Requesting Accommodations survey among college-age students with hearing loss in post-secondary technical institutions.

This survey is being conducted by a graduate student in the Adult and Career Education program at Valdosta State University. It aims to explore the levels of disability self-disclosure (formal and informal) and the attitudes toward requesting accommodations among college-age students with hearing loss in post-secondary technical institutions. I will be using the findings to influence and develop policies and practices in higher education that will more effectively serve students with hearing loss.

Your participation in this survey is completely voluntary and all of your responses are anonymous. None of the responses will be connected to identifying information.

The survey will take 15-20 minutes to complete.

To participate, please click on the following link: [survey link]

You can enter into a raffle to win one of two $50 Amazon gift cards. Participation in the survey is not required to enter the raffle. A person may remain eligible for the raffle even if he/she withdraws from a study or does not complete every question. This raffle is open to those eighteen (18) years of age and older and who reside within the United States.

This study is being conducted in part to fulfill requirements for my Adult and Career Education Ed.D. degree in the Adult and Career Education program at the graduate school of Valdosta State University at Valdosta, GA. If you have any questions about this survey, or difficulty in accessing the site or completing the survey, please contact Kate Williams at kathlewilliams@valdosta.edu.

The study has been approved by the Institutional Review Board (IRB) of Valdosta State University in accordance *with IRB policy. More information on the policy can be found at* https://www.valdosta.edu/academics/graduate-school/research/office-of-sponsored-programs-research-administration/institutional-review-board-irb-for-the-protection-of-human-research-participants.php. The chairperson of this dissertation is Dr. Kenneth Ott. He can be reached at Kenneth.Ott@valdosata.edu for further questions or concerns about the project/research.

Thank you in advance for providing this important feedback.

Sincerely,

Kathleen Williams

APPENDIX G:

Email invitation to participate in interviews

You are being asked to participate in an interview as part of a research study entitled "A Mixed-Methods Study of the Relationship between Attitude toward Accommodations and Self-Disclosure Behavior of Students with Hearing Loss in the Technical College System," which is being conducted by Kathleen Williams, a student at Valdosta State University. The purpose of the study is to is to identify some of the reasons why students with hearing loss do not disclose their disability to their college or professors. Additionally, it asks questions about the attitudes of students with hearing loss toward requesting accommodations. You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about how colleges can develop policies and services that support students with hearing loss. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. Participation should take approximately 30 minutes. The interviews will be recorded in order to accurately capture your concerns, opinions, and ideas. Once the recordings have been transcribed, the files will be destroyed. No one, including the researcher, will be able to associate your responses with your identity. Your participation is voluntary. You may choose not to participate, to stop responding at any time, or to skip any questions that you do not want to answer. You must be at least 18 years of age to participate in this study. Your participation in the interview will serve as your voluntary agreement to participate in this research project and your certification that you are 18 years of age or older.

Questions regarding the purpose or procedures of the research should be directed to Kathleen Williams at kathlewilliams@valdosta.edu. This study has been exempted from Institutional Review Board (IRB) review in accordance with federal regulations. The IRB, a university committee established by federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

APPENDIX H:

List of quantitative variables

This is a breakdown of all variables by label, question number, question text, and data type.

Table H1

Name of Table

Variable Label	Data Type	Survey Question Number	Question Text
HQ1	Binary	Q4	Do you feel you have a hearing problem?
HQ2	Binary	Q5	Do you feel that people mumble?
HQ3	Binary	Q6	Has anyone told you that you don't hear well?
DIAG	Binary	Q7	Have you ever been diagnosed with any hearing disability or impairment?
REQU	Binary	Q8	Have you ever requested an accommodation for a hearing disability or impairment while enrolled in college? An accommodation is a support provided to a student to access course content and/or demonstrate their knowledge.
PROF	Binary	Q9	I have talked to my professors about my disability or impairment and the support I need to be successful in the classroom.
COLL	Binary		I have talked to my College's Student Disability Services about my disability or impairment and the support I need to be successful in the classroom
ACCO	Binary		I have received accommodations in one or more of my courses
FORM	Binary		I officially identified myself as a student with a disability using my college's Voluntary Self-identification of Disability Form.
SC01	Ordinal	Q10	Accommodations are unfair to other students.
SC02	Ordinal	Q12	I want to prove that I can do college.
SC03	Ordinal	Q13	Accommodations are for academically weaker students.
SC04	Ordinal	Q14	I want to stand on my own two feet.
SC05	Ordinal	Q15	Accommodations are for lazier students.
SC06	Ordinal	Q16	Students should try to get along without accommodations.
SC07	Ordinal	Q45	I have never felt like I needed accommodations.
SC08	Ordinal	Q17	I don't like to admit that I have a disability.
SC09	Ordinal	Q18	I don't like talking about my disability.
SC10	Ordinal	Q46	I don't want professors to know that I have a disability.
SC11	Ordinal	Q19	I don't like people knowing private and personal information about me such as my disability.

Variable Label	Data Type	Survey Question Number	Question Text
SC12	Ordinal	Q20	The cost of talking about my disability to get accommodations outweighs the benefits.
SC13	Ordinal	Q21	I have a right to privacy regarding my disability.
SC14	Ordinal	Q22	I don't want friends to know that I have a disability.
SC15	Ordinal	Q23	My family doesn't think I am disabled enough to need accommodations.
SC16	Ordinal	Q24	I don't think I am disabled enough to need accommodations.
SC17	Ordinal	Q25	I don't know sometimes whether I am really all that disabled.
SC18	Ordinal	Q26	I prefer to be treated as a non-disabled person.
SC19	Ordinal	Q27	I want to be like other college students.
SC20	Ordinal	Q28	I want to have a normal college experience.
SC21	Ordinal	Q29	There's nothing wrong with me.
SC22	Ordinal	Q30	I was afraid of being labeled.
SC23	Ordinal	Q31	People don't think I am disabled.
SC24	Ordinal	Q32	The Student Disability Services office was unhelpful.
SC25	Ordinal	Q33	The Student Disability Services office was unapproachable.
SC26	Ordinal	Q34	The Student Disability Services office did NOT assist me.
SC27	Ordinal	Q35	I don't trust Student Disability Services to keep my information confidential.
SC28	Ordinal	Q36	I don't trust professors to keep my information confidential.
SC29	Ordinal	Q37	I didn't know anything about disability accommodations when I started college.
SC30	Ordinal	Q38	Going to Student Disability Services is awkward.
SC31	Ordinal	Q39	Requesting accommodations from professors can be awkward.
SC32	Ordinal	Q40	Student Disability Services were NOT discussed at my new student or transfer orientation.
GEND	Nominal	Q41	How do you currently describe your gender?
SAGE	Nominal	Q43	What is your age group?
INTR	Binary	Q44	Would you be willing to participate in a face-to-face interview to discuss your experience as a student with hearing loss?