DISSERTATION

COMPLICATING UNDERSTANDINGS OF DIS/ABILITY APPARENTNESS: DEVELOPING A SCALE OF DIS/ABLED APPARENTNESS IN EDUCATIONAL SETTINGS

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ABSTRACT

COMPLICATING UNDERSTANDINGS OF DIS/ABILITY APPARENTNESS: DEVELOPING A SCALE OF DIS/ABLED APPARENTNESS IN EDUCATIONAL SETTINGS

This research study presents the Scale of Dis/ability Apparentness in Education Settings (SDAES) to explore the complex and dynamic nature of dis/abled apparentness among college students. The study combines qualitative and quantitative data to examine five key domains: Environment, Ableism, Identity, Taking Action, and Embodied Dis/ability, shedding light on the intricate interplay between these domains and the influence of demographics and dis/ability contexts. The findings challenge the binary concept of visible and invisible dis/ability, emphasizing the nuanced and ever-changing nature of apparentness. Key implications for practitioners include addressing experiences of ableism, prioritizing dis/ability identity, and recognizing the importance of self-reported visibility. Researchers are urged to diversify samples, disaggregate data, and further investigate the role of socio-economic status and other identities in dis/abled apparentness. Overall, the SDAES offers a comprehensive framework to understand the multifaceted experiences of dis/abled college students in educational settings and highlights the active agency of dis/abled individuals in shaping their apparentness.

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CHAPTER 1 – INTRODUCTION: DIS/ABLED APPARENTNESS AND EDUCATIONAL ACCESS

What is dis/ability[1], and how do you know when you encounter it? It is likely most individuals working in higher education have rarely pondered this question. Able-normativity (Kafer, 2013) and compulsory able-bodiedness (McRuer, 2010), or the assumption that everyone is non-dis/abled, renders dis/ability an often overlooked experiential and identity reality on college campuses. For those who have considered the day-to-day existence of dis/ability on college campuses, it is likely that the question of "What is dis/ability?" has been answered in the context of visible impairment, official disclosure, or accommodations. Kershbaum (2022) asserted that to "materialize signs of disability is a never-ending inquiry into who and what is (un)recognized and in what configurations" (p. 7). For the past decade, I have worked in offices supporting dis/abled students seeking accommodations to navigate the many environments encompassed within a college campus. In these roles, I have observed the resistance that dis/abled students encounter from faculty, staff, and peers as they exert and re-exert the existence of their day-to-day dis/ability. Resistance is often rooted in skepticism that the student is dis/abled, which is often undergirded by a misconception of what constitutes dis/ability or what dis/ability looks like vis-a-vis the presumed visibility of debility (Puar, 2017). Misconceptions about dis/ability often translate to disbelief in the experiences described by dis/abled students,

[1] I use dis/ability (spelled with the slash) to counter deficit framing of dis/ability that suggests that dis/abled individuals are defined or represented by what they cannot do rather than by focusing on identity and assets of human diversity. This is in line with the work of DisCrit (Annamma et al., 2013) which uses the / to disrupt "misleading understandings of disability, as it simultaneously conveys the mixture of ability and disability" (p. 24) present within dis/abled bodyminds (Price, 2015; Schalk, 2018).

resulting in hyper-surveillance of dis/abled students (Annamma, 2017; Nachman & Brown, 2022; Wilke et al., 2023).

Kershbaum published her book *Signs of Disability* at the end of 2022, and it made its way to my bookshelf as I was completing data analysis for this dissertation. As I read *Signs of Disability,* I saw numerous parallels between her advancing of *perceptibility* as a more complex way to recognize and discuss dis/ability and my own work focused on expanding the concept of *apparentness* to a fluid, multiple, and ever-shifting way of experiencing and observing dis/ability. Throughout my introduction, literature review, and discussion, I put my findings into conversation alongside Kershbaum's *Signs of Disability* to expand, deepen, and corroborate our parallel academic advocacy for understandings of dis/ability that transcend current static and limited conceptions.

I believe many able-bodyminded faculty, staff, and students in higher education know that dis/ability exists, in the abstract nebulous way marginalized identities exist to those in power outside the specific targeted identity. For many able-bodyminded individuals, dis/ability is something to be notified of and to be provided a script for how to react to in response to disclosure. Dis/ability becomes relevant when a dis/abled individual makes their access needs known. Able-normativity presumes the absence of dis/ability in spaces, both real and imagined, until dis/ability is asserted (Dolmage, 2017), often in response to inaccessibility or experiences of ableism. Kershbaum (2023) refers to the day-to-day movements of dis/ability in the world as "*dis*-attention" in recognition of the "simultaneous hyperperceptability and erasure" (pp. 23-24) of dis/ability as a phenomenon. This *dis*-attention by able-bodyminded individuals leads to an erasure of everyday experiences and markers of dis/ability and narrows the view of dis/ability to the most egregious and hyper-embodied depictions of dis/ability.

The experiences of others I have observed in my work are also reflected in my own experiences with dis/ability. My own relationship with dis/ability has evolved greatly over my lifetime and has shifted substantially in the five years I have been pursuing my doctoral degree. I entered Colorado State University in 2017, identified as dis/abled, and had a desire to focus on dis/abled identity development. My identity has not changed; however, a number of things I consider to be artifacts of my dis/ability have shifted (e.g., medication routines, hearing aids, diagnoses, etc.). It is my relationship with these artifacts that has fueled many of the questions I have explored thus far in my academic journey and that are represented in this dissertation. I note that my identity as dis/abled has not changed and that my connection to dis/abled communities has remained steady because my experience of how others view, respond to, and ultimately assign credibility to my dis/ability identity has shifted. It is this external shift that I attribute to the concept of *apparentness*.

At the time of my entrance to the Higher Education Leadership program, I had official diagnoses of social anxiety, major depressive disorder, chronic migraines, and obsessive-compulsive disorder (OCD). I took multiple daily and rescue medications and would periodically be noticeably absent from work commitments when a migraine or panic attack arose during the workday. These artifacts of my dis/ability were sometimes visible to my colleagues and coworkers, and a change in my demeanor due to one of my dis/abilities was nearly always visible to my partner. As I compile final edits for my committee in preparation for my upcoming defense, I hold diagnoses of generalized anxiety disorder, major depressive disorder, chronic migraines, autism spectrum disorder, attention and concentration deficits[2], auditory-processing

[2] Note deficit is the language used in my medical record for diagnostic purposes—these are not the words I use to describe my own experience.

deficits, and moderate hearing loss. I now wear hearing aids in many settings and noise-canceling headphones in others, in addition to the same supports I have previously used for anxiety, depression, and migraines.

The greatest shift in my experience has come with the addition of hearing aids. Hearing loss is a known and meaningful form of dis/ability for most people. Nearly everyone knows someone with hearing loss. My hearing aids assist not only in mitigating my moderate hearing loss but also in filtering sound in a way that improves my hearing comprehension impacted by auditory processing (i.e., how my brain interprets and separates sounds). For years, I have frequently asked people to repeat themselves or for captions to be turned on for virtual meetings, particularly in noisy environments, and the responses I received ranged on a continuum from immediate support, frustrated or reluctant compliance, statements that I needed to pay better attention, to outright refusal. Over time, I learned to mask the impacts of my hearing and have become an expert at responding as though I had heard what was said in order to shelter myself from negative responses to my requests for access. In the months I have had my hearing aids, I have tracked a noticeable difference in response to my requests. Though hearing aids are a subtle indicator, they provide an outward sign and a form of legitimacy to others who may have previously attributed my request to not paying attention rather than the impact of a dis/ability. As with this example, perceived (in)visibility of dis/ability fails to fully capture the daily and ongoing experiences dis/abled people have with dis/ability across a variety of settings and interactions. For this reason, I propose greater consideration of the importance of dis/ability (in)visibility as a fluid and dynamic experience of *apparentness*.

Through DisCrit and scale development, this dissertation seeks to unpack the complexities of dis/ability apparentness and to identify significant domains of apparentness. My

research is guided by the theoretical underpinning of DisCrit (Annamma et al., 2013). In this introductory chapter, I discuss the primary issue of the study (apparentness) and situate the conversation in the context of education. First, I explore how I understand and conceptualize dis/ability, as this grounds my epistemology. Next, I discuss how dis/ability is understood and shaped within higher education before I move on to explaining the problem, research questions, and significance.

Conceptualizing Dis/ability

I use and understand dis/ability in two intersecting yet distinct ways. The first is consistent with the social model of dis/ability and definitions adopted within the field of dis/ability studies. This understanding of dis/ability separates the impairment (e.g., diagnosis defined and assigned by medical professionals) from the dis/ability. It defines dis/ability as the negative reactions of society to differences presented by impairment, as well as the experience of barriers created by interaction with inaccessible physical, social, and attitudinal environments (Shakespeare, 2006; Sherry, 2007). The second way I use dis/ability centers the agency of people with dis/ability to define and claim dis/ability as a category of identity. As noted by Sherry (2007), who adopted a similar definition:

> In this context, disability (like 'race', gender or religion) is not necessarily regarded as a bad thing – it is an identity, with both social and personal dimensions, which may be associated with feelings of community, solidarity and pride, or conversely, with feelings of difference, exclusion and shame. (p. 10)

Recognition of dis/ability as an identity allows for a more complex examination of experiences related to dis/ability. It provides an opportunity to understand dis/ability through a lens of inclusion rather than access.

In my own writing, I intentionally use the identity-first language of dis/abled rather than person-first language (e.g., person with dis/abilities) in recognition of the systemic forces of

ableism on the experiences of dis/abled people. When referring directly to prior research, I use the language originally used by the author(s) if changing the format (identity-first versus person-first language or disability versus dis/ability) would substantially alter the meaning and emphasis of the original author. Throughout my writing and approach to this research, I strive to complicate dominant paradigms for understanding dis/ability, which are often rooted in deficit notions of dis/ability and a desire to reject the active state of debility.

Positionality

I self-identify as a person with multiple dis/abilities and a member of dis/abled communit(ies). I am also a highly educated, white, cisgender, queer woman with significantly more access to support, healthcare, and education than many of my dis/abled peers. Dis/ability is often shaped and understood through systems of ableism. Enforcement of 'normal' in how we expect ourselves and others to think, be, look, act, and do positions those who fall most closely to these norms as abled and those at the margins as dis/abled. Rarely is the interaction with and construction of the environment included in our understandings of normalcy. As with other marginalized groups, research has served as a form of enforcement of dominant conceptions of normal.

As someone who works in dis/ability resources at an institution of higher education, I frequently navigate tension when my own personal definitions of and beliefs about dis/ability run counter to the aspect of my role in ensuring compliance and mitigating legal risk for the institution. While I engage in this work to advance access and to support dis/abled autonomy and interdependence, the realities of federal and state legal codes, as well as institutional policy and practice, often serve to undermine the agency of individuals.

As a white dis/abled person working in postsecondary dis/ability resources, I both benefit from and operate within systems of dis/ability access that privilege whiteness. Over the past seven years working in a postsecondary setting with students with dis/abilities, I have observed numerous differential anecdotal barriers in access to health care (both financial and being seen as credible by medical providers), flexibility from faculty, and communication through professional organizations by dis/ability resource providers. While I am incredibly passionate about access for dis/abled students, my positionality means that I must continue my own work to understand barriers that students with multiply marginalized identities may experience beyond the routine complexity of the accommodation process. In doing so, I hope to disrupt and illuminate discriminatory practices systematized by our legal and educational practices.

Dis/ability & Higher Education Access

Understandings of dis/ability in higher education are influenced and constructed by societal systems and structures. Dis/ability is simultaneously an expansive category spanning a wide range of experiences and identities and narrowly defined against conceptions of normalcy. Conceptions of dis/ability and normalcy are influenced by biological, social, and legal conceptions of dis/ability (Bauman & Murray, 2009). Just as dis/ability is constructed by defining what is outside standards of normal, what is validated and legitimated as dis/ability (e.g., thus warranting protection, accommodation, recognition, etc.) is also socially constructed (Wilke, 2023). Proponents of the medical and moral models of understanding dis/ability do not consider these deficit-based paradigms but schemas for categorizing and understanding dis/ability and the dis/abled experience (Gibson et al., 2021). However, scholars (Bricher, 2010; Evans et al., 2017; Nielsen, 2012; Scambler & Scambler, 2010; Siebers, 2008) and dis/ability activists have named, critiqued, and often rejected these models as inherently deficit-minded.

However, higher education and legal code continue to privilege and perpetuate medical and moral model understandings of dis/ability.

Deficit models of dis/ability are rooted in colonized notions of normal function, appearance, and behavior of both physical bodies and cognitive practices (Grech, 2015; Sherry, 2007), which privilege people with dis/abilities who most closely align with these notions (e.g., those who are white, cisgender, and can afford/want expensive medical interventions to eliminate or rehabilitate the impairment). As noted by Bauman and Murray (2009), "society interprets disabled people as outliers, as statistical anomalies that need to be elevated to normalcy" (p. 1), and medical intervention is seen as the mode for the elevation to normalcy. In addition to the societal desire to transform people with dis/abilities towards normalcy, there is an inherent assumption that dis/abled people uniformly desire this intervention.

Often, a dis/ability is referred to as either visible or invisible, sometimes apparent or non-apparent, based on the relative visibility of the impairment to others. Fitzgerald and Paterson (1995) defined non-apparent or invisible dis/ability as an illness or dis/abling condition that is not readily obvious to an outside observer. Hernandez (2011) expanded on Fitzgerald's and Paterson's definition to say that individuals with non-apparent dis/ability appear "well or normal to others, at least without close inspection or sustained contact" (p. 9). Davis (2005) described the experiences of "individuals with conditions, illnesses, and structural or biomechanical anomalies that are life limiting but not readily discernible to others" (p. 153) as invisible dis/abilities. She listed depression, chronic pain, seizure disorders, and PTSD as a non-exhaustive list of potential invisible dis/abilities. While these definitions of non-apparent or invisible dis/abilities recognize the role of perceptions of others (e.g., discernible to others), they

do little to implicate the interactive nature of apparentness and instead render visibility solely as a function of the individuals' embodied dis/ability characteristics.

Dolmage (2017) implicated the role of legal and medical constructions of dis/ability in higher education conceptions, stating, "To a certain degree, all disabilities on college campuses are invisible—until an accommodation is granted, they have no legal reality" (p. 9). Dis/ability is a constructed category, and dis/abled students often experience resistance when advocating for their access needs. Accommodation paperwork is an important tool in providing access and, simultaneously, a barrier to conceptualizing a range of dis/abled experiences on college campuses. As noted by Dolmage, in the classroom, until an accommodation letter is issued, dis/abled students have little institutional credibility. Scholars (Baker et al., 2012; Bruder & Mogro-Wilson, 2010; Hindes & Mather, 2007; Murray et al., 2009) have expressed concerns that faculty hold preconceived stereotypes or expectations of dis/abled students, which can undermine students' experiences of support and inclusion in the classroom. Research has shown that in addition to preconceived notions regarding dis/ability in the classroom, faculty often feel underprepared to support dis/abled students and are unaware of strategies to increase inclusion (Lombardi & Murray, 2011; Lombardi et al., 2013).

Exploration of apparentness and dis/abled experiences is particularly relevant as the number of dis/abled students accessing higher education is increasing (NCES, 2009; NCES, 2021). Additionally, the past five years have seen increasing federal legislative interest in addressing access for dis/abled students. Education has also seen an increase in intersectional critiques about dis/abled access for multiply marginalized students in primary and secondary education through the work of critical scholars (e.g., Annamma et al., 2013) and calls for greater critical and social justice approaches to dis/abled access to higher education (e.g., Evans et al.,

2017). Several factors are relevant in understanding dis/abled experiences in higher education. I discuss the role of accommodations, documentation, legal guidance, and power imbalances.

Accommodations

Accommodations at institutions of higher education are coordinated by a designated responsible office at the institution, most often an office of dis/ability services (Evans et al., 2017). Students with documented dis/abilities who identify themselves to their institution are eligible for reasonable academic, residential, and dining accommodations that mitigate the impact of the interplay between the environment and their dis/ability. Accommodations should be determined on an individualized basis through an interactive process (Rothstein, 2018); however, minimal structured guidance exists to detail what an interactive process entails. At many institutions, little meaningful interaction is provided in the "interactive process" between the student and dis/ability resources. Additionally, combined interaction between the student, dis/ability resources, and the faculty is non-existent in most standard processes. Rather, the interactive process most often refers to the dis/ability resource provider's review and interpretation of documentation from medical professionals (Evans et al., 2017).

Documentation

The role of documentation in dis/ability services is often described as a tool to ensure fairness and consistency (National Joint Committee on Learning Disabilities, 2007). However, this practice is rarely critiqued as reliant on and perpetuating the medical model or as privileging those for whom the medical field and diagnostic testing are normed (Annamma et al., 2013). Guidance from the Association of Higher Education and Disability (AHEAD) recommends using individual narratives as a primary form of documentation. Yet rarely is the role of an individual's own understanding of their dis/ability and expertise in navigating the world centered in the

accommodation process. Contrary to popular thought, “no legislation or regulations require that documentation be requested or obtained in order to demonstrate entitlement to legal protections because of dis/ability or seek reasonable accommodations” (AHEAD, 2021, para. 3). However, they do include provisions that allow institutions of higher education to request a reasonable level of documentation.

Many dis/ability resource offices rely heavily on documentation from a medical provider in keeping with medical model understandings of dis/ability. Sometimes, this reliance is to the degree that if a student requests an accommodation not specifically listed by their provider, it will not be honored by the institution (Ratermann, 2017). This reliance on medical evidence “perpetuates a deviance model of disability, [and] undervalues the individual’s history and experience with disability” (AHEAD, 2021, para. 3), often leaving the student without the supports they have identified as useful.

Legal Guidance

Legal frameworks for dis/ability accommodations, namely the Americans With Disabilities Act Amendments Act (ADAAA) of 2008 and Section 504 of the Vocational Rehabilitation Act of 1973, are civil rights legislation that provide foundations for rights and protections for dis/abled students. Under the Americans With Disabilities Act (ADA), dis/ability is defined as “a physical or mental impairment that substantially limits one or more major life activities of such individual” (ADA, 1990, Sec. 12102). However, these laws do not provide substantial guidance on the day-to-day practices of supporting students with dis/abilities at institutions of higher education or the provision of accommodations (Evans et al., 2017). Rather, dis/ability resource providers must closely follow case law and guidance from professional organizations to keep abreast of rapidly changing practices rooted in compliance (Cory, 2011).

At institutions of higher education, dis/ability resources are often classified as a compliance office protecting the institution from litigation in addition to supporting access for disabled students. For example, institutions such as Hampton University and the University of Nebraska-Lincoln have offices titled “Compliance and Disability Services” and “Disability Services—Institutional Equity and Compliance,” respectively. Very few institutions provide opportunities, either through dis/ability resources or through a separate office, to engage with dis/ability identity or culture. Notable exceptions include the small but growing number of dis/ability cultural centers at institutions (e.g., Grinnell College, Syracuse University, University of Arizona, University of Illinois-Chicago). Current dis/ability accommodation processes, like those described above, require students to self-identify as dis/abled but do little to provide structured support for identity development (Ashmore et al., 2018).

Power Imbalances

In addition to the lack of support for dis/abled identity development, the dis/ability accommodation process creates a stark imbalance of power that favors institutional actors such as the dis/ability resource providers and faculty. Existing power imbalances are heavily influenced by the medical model of dis/ability (Guevara, 2021) and systems of ableism that are integrated into the accommodations process at institutions of higher education (Dolmage, 2017; Evans et al., 2017). Contrary to the definitions of dis/ability posed by dis/abled scholars and activists (Sherry, 2007), which encompass identity, higher education often conceptualizes students with dis/abilities as only those registered with the office of dis/ability services and currently receiving accommodations. Emphasis is placed on those who are perceived as requiring assistance from the institution in the form of accommodations. Often, those with a dis/abled identity who chose not to engage with dis/ability services or who are able to independently

navigate the multitude of environments at an institution are either vilified as sabotaging their own success (e.g., not taking advantage of available resources; Lightner et al., 2012) or are ignored completely by dis/ability services as outside the scope of their role. Additionally, those who have not had access to medical care (including those without access to insurance) or the culturally competent support from medical institutions necessary for diagnosis are also often left out of the conversation.

The power imbalance is maintained and influenced not just as a result of institutional position and, often, age but also by the systemic impacts of ableism. Messages regarding dis/ability influenced by the medical model, privilege a focus on independence for people with dis/abilities and stigmatize support systems. A social justice approach to dis/ability (Evans et al., 2017) argues everyone requires interdependence, but ableism contributes to stigmatizing support necessary for access. Additionally, the institutional and legal lack of trust in dis/abled peoples' expertise and lack of recognition of the student as an expert on their lived experience further widen the power gap.

Problem

Dis/ability and its apparentness are defined and conceptualized in many different ways in the United States. One study conducted by Friedman and Owen (2017) highlights this complexity. Friedman and Owen asked family members of people with dis/abilities to define dis/ability, and five themes emerged in the definition of dis/ability: *preventing or slowing action*, *atypical function*, *lack of independence*, *socially constructed*, and *general difference*. As with the study conducted by Friedman and Owen, often dis/ability is defined by individuals without dis/abilities and is then imposed upon dis/abled communities in order to identify who belongs and who does not. Dis/ability, when understood by individuals outside of dis/abled communities,

often is centered in deficit understandings of dis/ability and thus focuses on areas of difference or perceived deficits in interacting with surrounding environments.

Another complex dynamic in understanding dis/ability is the role of (in)visibility or what I refer to as *apparentness*. Apparentness is a complex phenomenon that requires additional exploration in order to understand and unpack the resulting impacts on dis/abled students in higher education. Apparentness results in differential experiences of legal protections in education (e.g., Disability Resources provider discretion; AHEAD, 2021), as well as experiences of credibility and stigma. However, prior literature on dis/ability and (in)visibility does little to explore what influences apparentness, rather treating it as a static embodied experience. The presumption of a static experience of dis/ability is then translated into higher education policy. As a result, practice is built around the idea of dis/ability as a stable concept and experience, which creates a transactional understanding of dis/ability rather than one that recognizes the fluid role of identity and health.

Purpose and Research Questions

In this dissertation, I am concerned with complicating static and binary notions of dis/ability as (in)visible and exploring ways to measure and predict experiences of apparentness for different students. I began by collecting narrative information from dis/abled students regarding their experiences with (in)visibility in educational settings. I then used the qualitative data from the students' narratives to construct a scale for measuring apparentness and understanding what factors influence the overall experiences of apparentness of dis/ability.

The purpose of this study is to complicate understandings of apparentness of dis/ability beyond a binary conceptualization of visible/invisible or apparent/non-apparent and to explore how apparentness of dis/ability is constructed and expressed within higher educational settings.

The following research question and sub-questions guided this study:

1. What are the characteristics, factors, and interactions that contribute to and influence the apparentness of dis/ability in education?
    a. What are the underlying domains that contribute to apparentness of dis/ability?
    b. Are there differences in apparentness that emerge across various social groups?

Significance

Apparentness of dis/ability is a complex phenomenon often incorrectly described as a binary (visible or invisible) experience or is described based on the discernment of others (Kershbaum, 2022; Wilke et al., 2023b). As a theoretical construct and an experiential reality, more work needs to be done to understand what influences apparentness. Dis/abled students experience scrutiny related to the (in)visibility of their impairments; however, there has also been a lack of research exploring how apparentness impacts the behavior of educators in response to and treatment of dis/abled students. I seek to address these important gaps of dis/ability research and add nuance to the understanding of dis/ability apparentness to allow for a deeper investigation of how apparentness influences individual experiences. Additionally, it is my hope that this research will allow for the examination of how apparentness is influenced by other social factors (e.g., race, socio-economic status, gender, etc.). Researching apparentness without explicitly exploring how other social identities (particularly race) and systems of power influence student experiences would be irresponsible, given the intertwined histories of racism and ableism in the United States (Wilke, 2023).

Summary

In this chapter, I explored the foundations for this research project in order to provide the reader with the internal and external influences that shape my approach to understanding

dis/ability and its apparentness. The next chapter will explore the extant literature relevant to conceptualizing apparentness and serve to situate the experiences of dis/abled students in higher education.

CHAPTER 2- CONCEPTUALIZING APPARENTNESS AND SITUATING DIS/ABLED STUDENTS IN HIGHER EDUCATION

Higher education is not separated from the larger societal systems and structures that surround it. As a result, understandings of dis/ability in higher education are heavily influenced by broader paradigms. While dis/ability is not a homogenous experience and dis/abled students represent a wide range of identities and life experiences, the needs of dis/abled students are often treated as monolithic and narrowly defined against conceptions of normalcy. Just as dis/ability is constructed by defining what is outside of standards of normal, what is validated and legitimated as dis/ability (e.g., thus warranting protection, accommodation, recognition, etc.) is also socially constructed (Davis, 2006; Titchkosky, 2011). Often, a dis/ability is referred to as either visible or invisible based on the relative ability of others to perceive the impairment (Hernandez, 2011). Kershbaum (2022) critiqued this reliance on "visual perception" in the recognition of dis/ability, instead considering the range of ways that "disability makes itself and is made perceptible with all kinds of cues" (p. 12). Her book, *Signs of Disability,* is one of the first I have encountered that attempts to identify the range of cues that make disability perceptible through the role of dis/abled stories.

Higher education has relied on legal definitions of dis/ability (e.g., Americans with Disabilities Act; ADA). However, little scrutiny has been applied to examine if these definitions of dis/ability are applied equally across various dis/ability types and identity groups or if equitable outcomes exist. Over the past decade, there has been a push by critical scholars to examine the intersection of racism and ableism (Annamma et al., 2013; Connor & Ferri, 2005; Peña et al., 2016; Stapleton, 2016). Educational research has often focused on understanding barriers to achievement experienced by dis/abled students by placing the onus on deficits within

the individual (Evans et al., 2017) rather than on the constraints of the environment. In this chapter, I provide an overview of the guiding theoretical framework, how dis/ability is categorized in the extant literature, the role of ableism in shaping dis/abled experiences, existing research on dis/abled students in higher education, and how I conceptualize apparentness.

Theoretical Framework

Annamma et al. (2013) introduced higher education and dis/ability studies to DisCrit, also known as Dis/ability Critical Race Theory, which they defined as a theoretical framework for understanding the co- and interdependent ways race and ability are constructed and understood in the United States. DisCrit operates on the foundational understanding that "notions of ability and race are assembled in tandem and animated through an ideology of normal" (Annamma & Morrison, 2018, p. 2). The ideology of normal positions certain bodies and minds (e.g., those that are white, affluent, and read as without impairments) as the standard against which all others are compared. DisCrit also asserts that "racism and ableism are normalizing processes that are interconnected and collusive" (Annamma et al., 2013, p. 6). As a result, it is impossible to examine dis/ability and ableism without also examining the embedded relationship of systems of oppression.

Before Annamma et al. (2013) introduced DisCrit, scholars in disability studies proposed Critical Disability Theory (CDT), which is also sometimes referred to as critical disability studies (Meekosha & Shuttleworth, 2009; Vehmas & Watson, 2014). CDT is an interdisciplinary framework that examines dis/ability as a social, political, and cultural construct rather than a medical or individual condition. It challenges traditional societal perspectives that view dis/ability as a personal deficit (Williams, 2001) and instead focuses on the ways in which society and oppressive systems contribute to the systematic marginalization of dis/abled people. Though CDT includes an emphasis on systems of power and oppression, DisCrit as an

epistemology was created to address systematic failings within dis/ability studies to implicate race through the use of CDT.

DisCrit serves as a framework to challenge dichotomous notions of normal/abnormal and "seeks to question the ways in which race contributes to being positioned on either side of the line" (Annamma et al., 2013, p. 10). Like critical race perspectives on education, applying a DisCrit lens to dis/ability in higher education allows for analysis that includes historically grounded and contextualized perspectives that reveal hidden oppressive systems. Expanding upon CDT's focus on the deconstruction of normalcy in educational perspectives, DisCrit asserts that systems of medicalization, science, and culture influence how the body and mind is conceptualized (Davis, 2006) and centers systemic forms of power related to race in this analysis.

While this framework has existed for a decade, higher education researchers and administrators have done minimal work to evaluate or radicalize existing policies, practices, and structures that place minoritized students at the margins. DisCrit allows for an analysis that views policy and predominant practices "as acting to preserve the status quo and defining as normal a state of white supremacy" (Gillborn, 2015, p. 28). DisCrit rejects deficit-centered models of dis/ability that emphasize individual impairment. It also examines the social construction of barriers in environments while centering the voices of dis/abled people. Annamma et al. (2013) identified seven tenets of DisCrit: (1) race and ableism circulate interdependently to uphold normalcy; (2) multi-dimensional identities/troubles singular notions of identity; (3) emphasis on social construction of race and ability; (4) privilege voices of marginalized populations; (5) considers legal and historical aspects of dis/ability and race; (6) recognizes whiteness and ability as property; and (7) requires activism and supports resistance. I

apply the tenets of DisCrit by explicitly examining how race and other marginalized identities shape experiences of dis/ability, incorporating analysis of whiteness and ability as property in how dis/ability is socially constructed, and by centering dis/abled voices as experts on dis/ability by emphasizing dis/abled narratives in the identification of domains of apparentness.

As noted by Peña et al. (2016), critical dis/ability theory expands upon previous dis/ability studies in order to address previous critiques that it did not adequately "problematize intersectionality of other social identities" (p. 88). Critical dis/ability theory rejects deficit-centered models of dis/ability that emphasize individual impairment. It also examines the social construction of barriers in environments while centering the voices of people with dis/abilities. Peña et al. (2016) use their work on critical perspectives to expand existing literature and work in critical dis/ability theory to include greater emphasis on intersectionality and "other layers of identity and sociopolitical oppression" (p. 89). Examining the extant literature through the lens of DisCrit provides a current context and grounding for conceptualizing dis/ability and apparentness in this dissertation study. The literature is broken into three sections: categorizing dis/ability, dis/abled students in higher education, and conceptualizing apparentness.

Categorizing Dis/ability

Dis/ability in the United States can be defined in a number of ways, including definitions stemming from formal medical diagnosis or legal code. These formal definitions include those written by the World Health Organization, the Americans With Disabilities Act, and individual institutional policy. The World Health Organization (2019) defines dis/ability as an umbrella term that could include "impairments, activity limitations and participation restrictions" (para. 1) as well as "a complex phenomenon, reflecting the interaction between features of a person's body and...society" (para 2). The Americans With Disabilities Act (1990) and ADA Amendments Act (2008) define a dis/ability as a "physical or mental impairment that

substantially limits one or more major life activities" (para. 2). Damiani and Harbour (2015) noted that traditionally institutions of higher education have used "legal and biomedical [definitions] of disability" (p. 400) in the construction of their own definitions for the purposes of institutional policy, resulting in higher education policy that replicates and reinforces medicalized language and legal code in defining and recognizing dis/ability.

However, Tal-Alon and Shapira-Lishchinsky (2019) cautioned that even though there are formal definitions of dis/ability, these "definitions are insufficient for the study of disability as phenomenon, as disability is complex, multidimensional, and dynamic" (p. 2). As Evans et al. (2017) noted, "dominant group members have retained the right to decide who is and is not disabled, and in some cases force identities on people [that] they might not claim" (p. 127), along with the stigma that may accompany these identities. Dis/ability, when understood by individuals outside of dis/abled communities, often is centered in deficit understandings of dis/ability, which ultimately focuses on areas of difference or perceived deficits in interacting with surrounding environments. Educational research has often focused on understanding barriers to achievement experienced by dis/abled students by placing the onus on deficits within the individual (Evans et al., 2017) rather than in constraints of the environment. The misplaced focus on barriers to achievement is one form of the *dis*-attention to dis/ability described by Kershbaum in *Signs of Disability.*

Formal Models of Dis/ability

Dis/ability is often understood as "a broad term that is defined in both legal and scientific ways" (APA, 2020, p. 136). When conceptualized as a medical experience, dis/ability is constructed as problematic differences that reside within the individual's bodymind. Hallmarks of the medical model include reliance on medical authority and a focus on fixing the individual

rather than changing the environment (Evans et al., 2017). The medical model also positions presumed able-bodied/minded "others" in the medical field as the expert on dis/ability and dis/abled experiences rather than centering the expertise within the individual with the lived experience of dis/ability. From a legal perspective, dis/ability is "a physical or mental impairment which substantially limits one or more…major life activities" (ADAAA, 2008, Sec. 12102), and courts have established a precedent of deference to medical professionals (see *Guckenberger v. Boston University, 1997*) rather than the reported experiences of the individual.

The medical model is one of the most prevalent paradigms used by professionals in higher education and provides the framework through which the Americans With Disabilities Act is interpreted and applied (Evans et al., 2017). As noted by Bauman and Murray (2009), "society interprets disabled people as outliers, as statistical anomalies that need to be elevated to normalcy" (p. 1), and medical intervention is seen as the mode for the elevation to normalcy (Hahn & Belt, 2004). Proponents of the medical model assume that medicine, and thus medical diagnoses, is infallible and objective because of its roots in science. The reliance on medical diagnoses does little to account for how research and medical advancements have subjugated dis/abled individuals and communities of color (Schalk, 2017).

The moral model of dis/ability and understandings of the moral status of personhood (Taylor, 2018) places people with dis/abilities at the margins and presumes incapability and need for assistance. Under this model, others—those deemed able-bodied and minded—have a moral obligation to assist people with dis/abilities (Evans et al., 2017). While the moral model is rarely used as an explicit form of categorizing dis/ability, it continues to influence how dis/abled individuals are conceptualized and reinforces the concept of other (e.g., doctor) as expert, which

further contributes to imagining dis/ability as a deficit. Additionally, the moral model of disability adds to conceptions of dis/abled individuals as requiring support and intervention and diminishes the recognition of strengths rooted in dis/ability.

Under individual deficit-based models of dis/ability (e.g., medical, legal) used by institutions of higher education, the dis/abled individual is expected to disclose their dis/ability status and communicate the types of support or accommodations that they need (Lister et al., 2020). Individual models do little to anticipate the existence of dis/ability and serve as regulatory mechanisms by placing the onus on dis/abled individuals to disclose and assert their existence within education rather than necessitating systematic changes to the physical, informational, or attitudinal environments (Price et al., 2017). These systems of understanding dis/ability serve to support the creation of compulsory able-bodiedness and to limit expectations of what constitutes dis/ability. Additionally, they position dis/ability as extraordinary or tragic experiences not expected or encountered as a form of normal human variance and diversity, often resulting in experiences of stigma (Goffman, 1963).

Stigma can be external or internalized and can impact an individual's choice to disclose, express, or cover identity aspects by engaging in impression management (Goffman, 1969) to reduce stigma experiences. Medical and legal paradigms define particular actors (e.g., doctors, lawyers, etc.) as experts in constructing dis/ability and also distance dis/abled individuals from serving as experts on their own experience. Legal and medical paradigms also situate medical documentation, accommodation letters, and other formal paperwork as a form of legitimacy.

Alternatives to medical and legal definitions of dis/ability include the social model, which places the cause of dis/ability in the environment, and frameworks that center the experiences of dis/abled individuals (e.g., social justice or dis/ability justice models). The social

model separates impairment from dis/ability by distinguishing dis/ability as a structural and public result of environments impeding access of individuals with impairments (Shakespeare, 2006). Rooting the experience of dis/ability in the barriers imposed by the environment places the onus on those in control of the environment to remove barriers rather than on dis/abled people to modify how they interact (or do not) with a particular environment.

Under a social justice model of dis/ability (Dolmage, 2017; Evans et al., 2017; Moeller, 2019), dis/ability is conceptualized broadly in order to recognize the wide range of experiences and identities within dis/abled communities. Moeller (2019) advocated for a broad approach that includes those who meet legal definitions of dis/ability, those who claim dis/ability as a part of their personal identity, and "those who may not necessarily identify as disabled, yet whose bodies and minds deserve to be part of this discussion" (p. 456). A dis/ability justice model takes a similarly broad view of dis/ability but uses an intersectional framework to work for systemic change for all people with dis/abilities (Heller et al., 2018). Mingus (2011) argued that dis/ability justice involves a conscious shift in how we understand access. Access is often conceptualized as the mechanism through which dis/abled people experience liberation. However, Mingus challenges the underlying rhetoric of achieving access as pushing for a "model of sameness" (p. 2) or striving for assimilation rather than understanding dis/ability in a way that "embraces difference, confronts privilege, and challenges [normalcy]" (p. 2). Dis/abled liberation instead requires a conscious rejection of normalcy and compulsory able-bodiedness.

Visibility

Dis/ability is often referred to as either visible or invisible based on the relative ability of others to observe the impairment. The categorization of dis/ability as in(visible) limits the reality that experiences of visibility are often shifting and contextual. Individuals can take actions to

change how their dis/ability is perceived. For example, I can remove my hearing aids, which are a visible signal of my hard-of-hearing status. Or I can wear clothing that draws attention to my dis/abled identity (e.g., any of my collection of t-shirts that proclaim I am "out of spoons," "tired of your ableism," or an "Autistic Academic").

Fitzgerald and Paterson (1995) defined non-apparent or invisible dis/ability as an illness or dis/abling condition that is not readily obvious to an outside observer. Hernandez (2011) expanded on Fitzgerald and Paterson's (1995) definition to say that individuals with invisible dis/ability appear "well or normal to others, at least without close inspection or sustained contact" (p. 9). Davis (2005) described the experiences of "individuals with conditions, illnesses, and structural or biomechanical anomalies that are life limiting but not readily discernible to others" (p. 153) as invisible dis/abilities. She listed depression, chronic pain, seizure disorders, and PTSD as a non-exhaustive list of potential invisible dis/abilities.

Dis/ability Types

Dis/ability is an expansive category that encompasses a range of diagnoses and impacts. In order to examine data trends or to describe similarities in experience, categories of diagnosis are sometimes collapsed together into an umbrella category to describe dis/ability. How these umbrella categories are defined and what specific diagnoses are encapsulated under them have varied greatly in the literature. Some examples of how researchers have delineated dis/ability categories include the following. Malecki et al. (2020) defined the following categories in their study on risk factors associated with bullying in educational settings: *specific learning disability, speech/language impairment, emotional dis/ability, other health impairment, Autism,* and *low-incidence disabilities.* By comparison, Pitman et al. (2023) reviewed how dis/ability has been categorized over the past several decades and found that most recently, in Australian higher

education, dis/ability was sorted into the following categories: *hearing, learning, mobility, vision, medical,* and *other*.

A similar system of categorization is often used by institutions of higher education in the United States to report broad categories of data related to students who utilize the dis/ability resource office in order to disaggregate dis/ability into smaller categories without potentially revealing information about specific individuals. Common umbrella categories include mental health or psychiatric dis/abilities, physical dis/abilities, chronic health conditions, sensory dis/abilities, learning dis/abilities, and neurodivergence (Florian & McLaughlin, 2008).

Mental health or psychiatric dis/abilities encompass a wide range of experiences and conditions, which can include anxiety, mood disorders (e.g., major depression, bipolar), post-traumatic stress disorder, personality disorders, and obsessive-compulsive disorder. The aforementioned diagnoses do not represent an exhaustive list of conditions that could be dis/abling or result in someone identifying as dis/abled, but rather provide an overview of the range of individuals who may be included under the category of mental health (Newman et al., 2020). Mental health dis/abilities are often referred to as invisible. Studies on students with dis/abilities in higher education have indicated that students with mental health dis/abilities are less likely to receive dis/ability supports or accommodations than their peers with physical or sensory impairments (Los Santos et al., 2019; Newman & Madaus, 2015; Newman et al., 2020).

Physical dis/abilities are a broad category that almost always includes those with mobility impairments and can often be further divided to include or exclude those with chronic health conditions that do not impact mobility and sensory dis/abilities. Chronic health conditions can include things such as diabetes, connective tissue disorders (e.g., Ehlers-Danlos Syndrome), heart conditions, and seizure disorders (Nearchou et al., 2022). Individuals with sensory

dis/abilities include those who are hard of hearing, blind/low-vision, or deaf-blind. Sensory dis/abilities can also be separated into its own umbrella category as individuals who are blind/low vision or deaf/hard of hearing may share common access challenges more frequently with each other than with others included in the physical dis/ability category. The category of physical dis/abilities is often referred to as a visible dis/ability category. However, many chronic health conditions and sensory dis/abilities may not be visible to the casual observer.

Learning dis/ability is almost always used to refer to conditions such as dyslexia, dyscalculia, and dysgraphia but can also sometimes include other conditions such as auditory processing disorders, attention deficit disorders (e.g., ADHD), or other non-specified learning disorders. There are also times when neurodivergence (e.g., Autism, ADHD) or developmental disorders may also be included under the umbrella of learning dis/abilities. Like mental health dis/abilities, learning dis/abilities are widely referred to as invisible dis/abilities (Grimes et al., 2019).

Role of Ableism

Ableism is the pervasive system that discriminates against and excludes people with dis/abilities (Evans et al., 2017; Griffin et al., 2007). It also serves to simultaneously privilege those without dis/abilities as the result of ingrained "institutional structures, cultural norms, and individual behaviors that together function to maintain the status quo and exclude people with disabilities in many areas of society" (Ostiguy et al., 2016, p. 304). Ableism is maintained and constructed through the assumption that "certain abilities are essential to 'normal' existence" (Hutcheon & Wolbring, 2012, p. 40), with particular forms of independence being essentialized as normal. Evans et al. (2017) noted that the "ability to dress oneself, focus on one topic at a time, spell correctly, [and] be alert in all settings" (p. 1) are all seen as acts essentialized as

normalcy. Dis/ability is often shaped and understood through systems of ableism. Enforcement of normal positions those who fall most closely to expected norms for how to think, be, look, act, or do as abled and those at the margins as dis/abled (Bauman & Murray, 2009). Rarely is the interaction with and construction of the environment included in our understanding of normalcy. As with other marginalized groups, research has served as a form of enforcement of dominant conceptions of normal.

Higher education in the United States has strong roots in ableism and individual understandings of dis/ability. Ableism is the systemic oppression of people with dis/abilities (Evans et al., 2017; Kattari, 2015; Rauscher & McClintock, 1996). These roots are represented in many higher education perspectives, policies, and practices (Moeller, 2019) and have led to a deficit understanding of dis/abled students and professionals in higher education and academia. Waterfield et al. (2018) articulated this deficit model as "perpetuating notions that disabled academics are less productive and less able to perform and function well in the academy" (p. 337). As noted in Mingus (2011), the myth of independence undermines dis/ability justice and is prevalent in understandings of dis/ability in society and reflected in higher education (Berne, 2015; Hamrie, 2013; White et al., 2010). Many ways dis/abled students are conceptualized in higher education rely on the myth of independence as the ultimate goal and root student difficulties in embodied experiences rather than a failing of the campus environment. Under the myth of independence, people are understood to do and accomplish things independently of the actions of others. People are interdependent in many complex ways; however, certain types of interdependence are normalized in such a way that the impact is made invisible. For example, taking a test prep course for the ACT or SAT is considered to be a successful strategy (thus individual action) to improve performance and identify gaps in knowledge. However,

supplemental notes as an accommodation are seen as reliance on another person and as diminishing independence (Ahern, 2016).

Microaggressions

Microaggressions have often been discussed in the context of race and were first discussed by Pierce (1974), who saw racial microaggressions as a way to address the everyday occurrences of racism. Sue et al. (2007) defined racist microaggressions as "brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color" (p. 270). When applied in the context of ableism, microaggressions mirror this definition of being brief and commonplace occurrences that communicate slights and insults toward dis/abled people. Kattari (2017) further identified ableist microaggressions as the combination of systemic ableism with brief acts of discrimination that target dis/abled individuals.

Lett et al. (2020) found that dis/abled college students experienced a range of ableist microaggressions that ranged from "blatant to subtle forms of discrimination on campus" (p. 1441) and that those microaggressions had negative consequences for dis/abled students. Keller and Galgay (2010) identified multiple types of ableist microaggressions, including denial of identity, denial of privacy, and patronization. Olkin et al. (2019) extended the work of Keller and Galgay and added additional types of ableist microaggressions that included disbelief by medical professionals and discounting of disability based on appearance as young and healthy. Osborne (2019) also identified specific forms of microaggressions experienced by university students with disabilities. She noted in her study a "running theme [of] disbelief in the students'

disability, or an ignorance of the reality of that disability," which often led to students experiencing others accusing them of faking their condition or of being lazy.

Compulsory Able-bodiedness and Ablenormativity

McRuer first proposed the theory of compulsory able-bodiedness in 2002, building on the prior work of Adrienne Rich and her critique of compulsory heterosexuality (Rich, 1983). McRuer (2010) argues that it is "the system of compulsory able-bodiedness that produces disability" (p. 369). Compulsory able-bodiedness is the presumption of able bodyminds which results in the erasure of dis/abled bodyminds as a possible reality and "repeatedly demands that people with disabilities embody for others an affirmative answer to the unspoken question, Yes, but in the end, wouldn't you rather be more like me?" (McRuer, 2010, p. 372).

Compulsory able-bodiedness is a pervasive form of systemic ableism in our physical and social environments (McRuer, 2010). As a society, we build physical environments that cater to the normative way of completing routine physical tasks (e.g., stairs to move from one floor to another or enter nearly any residential home). Our built environment reveals our assumptions about where dis/abled people are and are not expected, anticipated, or welcomed (Hamraie, 2017). The presumption of ablebodiedness is connected to able normativity and our social expectations of what a "normal" body or mind looks like, how it functions or completes tasks, and how it develops connections to people and objects. Able normativity reinforces deficit views of dis/ability as an extraordinary experience to be rehabilitated or cured in order to return dis/abled bodyminds to a normative existence.

Crip Resistance

Advancements that have complicated understandings of dis/ability beyond a medicalized experience requiring rehabilitation or a legal obligation requiring accommodation have largely

resulted from dis/abled resistance, scholarship, and activism. Dis/abled scholars (e.g., Dolmage; Evans, Moeller) and activists (e.g., Berne, Mingus, Sins Invalid) have pushed for more holistic conceptualizations of dis/ability that recognize the role of impairment, environment, community, and identity. Additionally, a growing body of literature centers crip knowledge and wisdom—directly challenging conceptualizations of dis/ability as deficit (Abes & Wallace, 2020; Cartwright, 2020; Patsavas & Danylevich, 2022).

The reclamation of the word *crip* and the development of crip culture has given rise to literature on crip storytelling, time, and wisdom. Many dis/abled activists feel strongly that use of the word crip allows agency in detailing one's own identity (Hitselberger, 2013) or recognizes dis/ability culture as one that is distinct (Williams, 2018). Similarly, understandings of dis/ability gain and dis/ability justice reject deficit ways of understanding dis/ability and reallocate power to define dis/abled experiences to people with dis/abilities.

One way that dis/abled people reject and subvert normative and deficit model portrayals of dis/ability is through storytelling (Corker, 1999; Milbrodt, 2018). Individuals use their own narrative to center dis/abled experiences and offer alternative ways of being in order to reject the pervasive view by non-disabled people—including those who work with people with dis/abilities—of dis/ability as tragedy. As noted by Shakespeare (1999), "disabled people have discovered and proved that impairment is not the end of the world; that it does not undermine subjectivity or possibility, and they have demonstrated this by developing an alternative comic language around the body" (p. 51). As a result, positioning dis/abled people at the center of their own narratives provides an alternative to medical and moral models of dis/ability, which privilege the voices of medical providers and non-dis/abled others.

As understood under the paradigm of a social model of dis/ability, ableism and experiences of dis/ability occur as the result of impairment or dis/abled bodies and minds interacting with societal environments that were not created for or in consideration of their existence. Crip time is a way of knowing and being within the world where dominant notions of time are adjusted or rejected in order to fit the needs of dis/abled bodyminds (Samuels, 2017). Dis/abled scholars and writers use crip time to describe the interaction of dis/abled ways of being with societal expectations or structures. Even though Kershbaum (2022) does not discuss crip time in *Signs of Disability,* I see crip time and its manifestations as representing another form of how the bodymind functions as a "sign" that makes "disability available for others perception" (p. 73). Alison Kafer eloquently describes crip time as “rather than bend[ing] disabled bodies and minds to meet the clock, crip time bends the clock to meet disabled bodies and minds” (2013, p. 27). Although the concept of crip time does involve concrete examples such as being late due to inaccessible transportation or taking longer to complete a writing assignment due to impacts on the bodymind (Samuels, 2017), crip time is more complex (Cepeda, 2021; Samuels, 2017; Smilges, 2021) and challenges linear concepts of time. Crip time does not necessarily refer to slowly doing the same amount of work as abled people; rather, crip time requires intentional changes to ideals of productivity and expectations of singular ways of completing tasks (Smilges, 2021).

Sins Invalid is a radical art collective that “incubates and celebrates artists with disabilities, centralizing artists of color and queer and gender-variant artists as communities who have been historically marginalized” (Sins Invalid, 2018, para. 1). A current art project of Sins Invalid focuses on the notion of crip wisdom, which is the knowledge dis/abled people hold of the world through navigation and perseverance in environments not created for or by them.

Additionally, in their *open letter to White disability studies and ableist institutions of higher education*, Miles et al. (2017) call for recognition and development of crip wisdom that recognizes "how disabled people--particularly those who are marginalized within disability communities and studies--experience and envision disability and practice creative ways to navigate and thrive in an unjust society" (para. 4). Crip wisdom in many ways is similar to the concept of dis/abled gain, or the idea that people with dis/abilities have strengths and talents as a result of their diverse bodies and minds that individuals deemed as normal may not possess.

Credit for the concept of dis/abled gain must be given to individuals in the Deaf community who first proposed Deaf gain, which rejects the deficit view that deafness is the lack of hearing and rather proposes that deafness is a form of diversity that positively contributes to society (Bauman & Murray, 2009; Bauman & Murray, 2014). Bauman and Murray (2014) included three aspects to describe the gain experienced by D/deaf people: *deaf benefit, deaf contribute,* and *deaf ahead.* Under the concept of deaf *benefit* is recognition of the fact that individuals experience benefits as a result of their neuro- or body-diversity. For example, Schneps et al. (2007) found that dyslexic people have heightened peripheral visual fields and that physicists with high-periphery-to-center ratios are more adept at detecting the presence of black holes. Additionally, D/deaf individuals often have stronger visual processing (Bauman & Murray, 2014). The *contribute* theme proposed by Bauman and Murray acknowledges the gains experienced by humanity as the result of neuro- and body-diversity. Deaf Gain *ahead*, which would likely translate to taking the lead or being at the forefront in English, is in direct challenge or opposition to the concept that D/deafness is a deficit and instead places D/deaf people in the role of innovators. These same concepts for identifying and celebrating gain from neuro- and

body diversity have begun to have wider application among dis/abled activist communities and can best be seen through #disabledgain efforts on social media.

Disabled Students in Higher Education

Dis/abled students represent a growing population on college campuses. In the past decade, the estimate of the percentage of dis/abled students among all college attendees has increased from 11% (Newman et al., 2011) to 19% (NCES, 2021). However, many institutions have not seen a resulting increase in resources (e.g., staffing, training, etc.) designated for supporting dis/abled students (Scott, 2019), and research on dis/abled college students continues to be scarce (Evans et al., 2017). Extant literature in higher education often relies on deficit understandings of dis/ability and conceptualizes the dis/abled experience as homogenous.

Project Shift-Refocus (Shaping Inclusion through Foundational Transformation), a research project funded by the Department of Education focused on reframing how institutional dis/ability offices approach accommodations, identified five implicit messages perpetuated by standard accommodation and support processes in higher education, all of which are rooted in deficit, ableist, and limited understandings of dis/ability. The five messages outlined by Project Shift Refocus are:

> [a] Disabled students are unreliable and not trustworthy. Even when students are able to clearly articulate their experiences and identify accommodations that will be effective, their requests must be legitimized through paper work and an expert's interpretation. [b] Disabled students are not valued. Despite the efforts of disability staff to ensure students that they are welcome, the expensive, burdensome criteria that must be met sends a clearer and disparate message. [c] The disability services office is an essential gatekeeper that ensures unqualified students will not get away with anything. [d] Course instructors should not be flexible with disabled students. It is only by involving the disability service office that the integrity of the academic experience is protected and fair for other students. [e] Access is an individual problem caused by disability. The design of the course, activity or system is beyond reproach. ("Documentation", 2022, para. 3)

Implicit messages like those identified by Project Shift-Refocus result from deficit models of dis/ability (e.g., the medical model and moral model) as the pervasive paradigms for

understanding dis/ability in the United States. Existing deficit models have influenced legal, social, and cultural understandings of dis/ability and have shaped accommodation processes in education and employment.

Discourse and Conceptualizing Dis/abled Students on Campus

The Individuals with Disabilities Education Act (IDEA) was passed 15 years before the Americans with Disabilities Act of 1990. Though it did not apply to institutions of postsecondary education, the legacy of IDEA and its early motivations and implementation has had a lasting impact on policy, practice, and expectations for higher education dis/ability supports. The precursor to the IDEA, the Education for All Handicapped Children Act, was implemented after *Brown v. Board of Education*, which began the process of integrating schools that had previously been segregated on the basis of race. During this time, identification practices for special education became a new tool for maintaining de facto racial segregation in elementary and secondary education (Blanchett, 2010; Conner & Ferri, 2005). As Ball (2008) describes,

> ...we need to remain aware that policies are made and remade in many sites...policy that is "announced" through legislation is also reproduced and reworked over time through reports, speeches, "moves," "agendas" and so on...Policies are contested, interpreted and enacted in a variety of arenas of practice and the rhetorics, texts and meanings of policy makers do not always translate directly and obviously into institutional practices. (p. 7)

Critical primary and secondary education scholars (Blanchett, 2010; Connor & Ferri, 2005; Gillborn, 2005, 2015, 2016; Sleeter, 1987, 2010) have explored the impact and lasting legacy of this history on special education, but little work has applied this same critical historical and legal framework to postsecondary education dis/ability policy.

Conceptualizing Access

Access, like dis/ability, is often conceptualized as an individual issue that is addressed (or not) on a case-by-case basis (e.g., accommodation; Titchkosky, 2011). The individual approach

to access is codified through the Americans With Disabilities Act, which designates the need to implement reasonable accommodations for individuals with impairments. Titchkosky (2011) critiqued this practice at institutions of higher education, noting:

> The myriad ways that everyday practices of exclusion and inclusion are not noticed and thus made to disappear....the lack of access for disabled people (and thus our absence) is naturalized to such an extent that even when barriers and processes of exclusion are noticed they are still conceived as somehow natural, reasonable, sensible, and even seemingly justifiable. (loc. 87)

Practitioners in higher education dis/ability services offices often describe the difference in protections for people with dis/abilities between higher education and K-12 as a shift to focusing on access, not success. In other words, accommodations should be designed to ensure access, but there is no guarantee of success. While this is a practical sentiment in that it aligns with the legal switch from IDEA to the ADA, it also leads practitioners to distance themselves from implicating their own practices and policies as creating inequitable barriers for students with dis/abilities based on race, socioeconomic status, and past educational and diagnostic experiences. Kranich (2005) indicated that emphasizing equal access is a palatable framework in the United States because it is "derived from the concept of fairness as uniform distribution, where everyone is entitled to the same level of access and can avail themselves of it if they so choose" (para 1). The equal access framework allows for failures to be ascribed to individuals not taking advantage of the access provided rather than ascribing them to a lack of equity in the environment and existing structures. A shift from equal access to equitable collective access and dis/ability justice would require the dismantling of the systemic and institutional structures and injustices that created varying levels of access (Kranich, 2005; Kumbier & Starkey, 2016).

Disability Resource Offices

Many campuses have a designated dis/ability resource office tasked with providing accommodations and individualized access to dis/abled students. Disability resource offices range in staffing, with the most common staffing model including one full-time employee (Brown et al., 2020) and most practitioners supporting a caseload of approximately 160 students (Brown et al., 2020). The dis/ability resource office often serves as a compliance office that protects the institution from litigation by regulating accommodations and supporting access for dis/abled students.

Little attention is given to supporting students with dis/abilities in the creation of social networks or addressing attitudinal or structural barriers to socialization on college campuses. Due to privacy laws surrounding dis/ability as a protected class, universities cannot share lists of students with dis/abilities or disclose dis/ability status of one student to another. At the same time, dis/ability services offices are rarely tasked with providing programmatic opportunities that may connect students with dis/abilities organically and provide opportunities for connection. As opposed to challenging internalized ableism, supporting identity development and exploration, and offering opportunities for community, practitioners in dis/ability services are often focused only on producing accommodations and maintaining legal compliance. In this way, the office often serves as a place for transaction (i.e., the student provides documentation, the office provides accommodation) rather than a catalyst for supporting student development and growth.

Accommodations in Higher Education

Legally, accommodations should be determined on an individualized basis through an interactive process (Rothstein, 2018); however, little structured guidance exists to detail what an interactive process entails. One college dis/ability resource office website described the

interactive process including five steps for students: 1) request accommodations; 2) submit verification of documentation; 3) discuss impacts of condition and college expectations with dis/ability service professional; 4) determination of reasonable accommodations by the office of disability services; and 5) notification of faculty (Central Michigan University, 2018). Another college site described the interactive process in six steps: 1) self-identify; 2) provide verification (evidence) of dis/ability; 3) complete authorization forms; 4) meet with case manager to discuss verified documentation, arrange authorized accommodations, and review policies; 5) approve voluntary notification to faculty; 6) self-advocate (Springfield College, 2018). As described in the two examples, little meaningful interaction is provided in the interactive process between the student and dis/ability resources. Additionally, combined interaction between the student, dis/ability resources, and the faculty is non-existent in most standard processes. Rather, the interactive process most often refers to the dis/ability resource provider's review of documentation from medical professionals.

Dolmage (2017) noted, "So-called invisible disabilities are particularly fraught in an educational setting in which students with disabilities are already routinely and systematically constructed as faking it, jumping a queue, or asking for an advantage" (p. 10). The phenomenon of disbelief noted by Dolmage is often a direct function of whether dis/abled students are read as dis/abled by dis/ability resources, their faculty, and their peers and thus rendered credible in their need for recognition, accommodation, or support. Annamma et al. (2013) also argued that while many may "conceptualize dis/abilities that are 'clinically determined' (i.e., based on professional judgment) as subjective, all dis/ability categories, whether physical, cognitive, or sensory, are also subjective" (pp. 2-3). Additionally, because of the subjective nature of dis/ability identification, this process is often rife with bias across the stages of identification (Artiles,

2013). The subjective construction of dis/ability in educational settings is influenced by narrow constructions of dis/ability and the intertwined legacies of racism and ableism.

The dis/ability accommodation process at postsecondary institutions creates a stark imbalance of power that favors institutional actors and serves as a form of *dis*-attention, as without documentation or formal accommodations, the experiences of many dis/abled students are overlooked. The power imbalance in the accommodation process is heavily influenced by the medical model of dis/ability and systems of ableism that are integrated into the accommodation processes at institutions of higher education. Messages regarding dis/ability influenced by the medical model privilege a focus on independence for people with dis/abilities and stigmatize support systems. Additionally, the institutional and legal lack of trust in dis/abled peoples' expertise and lack of recognition of the student as an expert on their lived experience further widens the power gap.

Price et al. (2017) also challenged the idea that disclosure of a dis/ability by an individual is a one-time act resulting in access. Instead, they suggested that disability disclosure is "an ongoing rhetorical process" where dis/abled individuals in higher education "repeatedly need to address their disability for various audiences, across many different contexts" (para. 11). Moeller (2019) found that for many dis/abled individuals, compulsory disclosure posed many social and emotional risks. As a result, many dis/abled individuals engaged in selective disclosure based on a personal cost-benefit analysis in order to navigate what Price et al. (2017) described as the *affective* problem of accessibility. For Price et al. (2017), denial of access or experience of stigma could be emotionally devastating and isolating for dis/abled individuals.

Documentation

The role of documentation in dis/ability services is often described as a tool to ensure fairness and consistency (National Joint Committee on Learning Disabilities, 2007); however, rarely is this practice critiqued either as reliant on and perpetuating the medical model or as privileging those for whom the medical field and diagnostic testing is normed (Annamma et al., 2013). Guidance from the Association of Higher Education and Disability recommends the use of individual narrative as a primary form of documentation; however, rarely is the role of an individual's own understanding of their dis/ability and expertise in navigating the world centered in the accommodation process. Contrary to popular thought, "no legislation or regulations require that documentation be requested or obtained in order to demonstrate entitlement to legal protections because of disability or seek reasonable accommodations" (AHEAD, 2021, para. 3). However, they do include provisions that allow institutions of higher education to request a reasonable level of documentation.

Many dis/ability resource offices rely heavily on documentation from a medical provider, keeping with medical model understandings of dis/ability. Reliance on medical evidence "perpetuates a deviance model of disability, [and] undervalues the individual's history and experience with disability" (AHEAD, 2021, para. 3). Rice and Carter (2015) found that "educators often have a weak understanding of how to incorporate students' actual needs as they create IEPs and plans under Section 504 (Mellard, Deshler, & Barth, 2004; Crawford & Ketterlin-Geller, 2013; Fuchs & Fuchs, 2001; Ketterlin-Geller, Alonzo, Braun-Monegan, & Tindall, 2007)" (p. 19). While this study was based on K-12 education, this same phenomenon is present at institutions of higher education.

Dis/ability Identity

McAdams (2001) saw identity as a process coauthored by individuals and their social environment. These coauthored identity narratives work to reaffirm self through a continuous process of "(re)creat[ing] and perform[ing] stories" (Harter et al., 2006, p. 5). Rice et al. (2015) highlighted the role of self-representative narratives in the dis/ability rights and culture movement. Individual narratives can create a collective sense of dis/ability defined by dis/abled people. Counter-narratives can serve as a tool for both self-making and community building. A self-making counter-narrative is "a conviction of autonomy...a degree of possibility...[and] must also relate the self to a world of others" (Bruner, 2004, p. 10).

Through individual counter-narratives of dis/ability, dis/abled people are able to articulate their own embodied dis/ability experience and create meaningful connections with others. Individual stories of dis/abled experience help to create what Hahn and Belt (2004) called *communal attachments,* which in turn often contribute to a stronger sense of dis/abled identity. Stories or narratives that encompass communal attachment often "transgress disabled/non-disabled binaries…[and] complicate and expand ideas of disabled community" (Rice et al., 2015, p. 514).

Individuals with dis/abilities navigate ableist societal structures in a variety of ways, which are guided by and inform individual dis/ability identity. Darling (2003) viewed dis/ability identity as a continuum with internalized stigma- or deficit-based and dis/ability-pride identities on opposite ends of the continuum. Under the internalized stigma- or deficit-based dis/ability identity, individuals often work hard to hide their impairments and to differentiate themselves from others with dis/abilities. Individuals experiencing internalized stigma may view dis/ability through a medical or rehabilitative lens and desire a cure for themselves and others with

dis/abilities. Conversely, under a dis/ability pride identity, individuals celebrate their bodies and minds, viewing their dis/ability as something essential to their being. Dis/ability pride also involves the rejection of assimilation into "normal" ways of being or doing (Darling, 2003). However, Forber-Pratt et al. (2017) critiqued the idea that the development of a dis/ability identity is a purely individual phenomenon, instead positing that engagement with a dis/ability community is critical.

Campbell (2008) detailed two impacts of internalized ableism. The first serves to separate people with dis/abilities from each other, causing further invisibility and isolation. And the second causes people with dis/abilities to strive for ablistically defined norms. Programmatic and language choices by dis/ability service offices can serve to disrupt internalized ableism and assist students in creating a positive self-identity as dis/abled. Many students, particularly those with non-apparent dis/abilities, may believe themselves to be the only…in their residence hall, their classes, or on campus. As noted by Evans et al. (2017), "Students develop an understanding of their identity through their experiences with society" (p. 156), and dis/ability resource offices should leverage the opportunity for students with dis/abilities to connect with other students with dis/abilities as they navigate the collegiate experience.

Faculty & Dis/abled students

Faculty in the classroom read the embodied dis/ability of students in a variety of ways and view this embodied telegraphing of dis/abled experience and identity through a series of cultural schemas that influence apparentness in a particular classroom. Faucett et al. (2017) noted that "how disabilities are perceived, performed, and acted on are all distinctly and indelibly linked to their surrounding historical and social contexts" (p. 1). Faculty recognition of dis/ability and perceptions of individual student credibility are influenced by prior experience

with dis/ability and dis/abled individuals (Gething, 1991; Parette & Scherer, 2004), experience with awareness and education opportunities related to dis/ability (Parette & Scherer, 2004; Lombardi et al., 2013), and expectations related to smartness.

Lombardi and Murray (2011) developed the Inclusive Teaching Strategies Inventory, which identified attitudes related to accommodations, accessible course materials, course modifications, inclusive lecture strategies, inclusive classrooms, inclusive assessment, and dis/ability laws and concepts as seven areas where faculty knowledge influences their attitudes towards dis/abled students. In a 2013 study, Lombardi et al. found that faculty value training that focuses on inclusive education and universal design principles and that faculty who had received training on these topics "were more willing to provide accommodations to students than faculty who reported they received no prior training" (p. 227). Scholars (Baker et al., 2012; Bruder & Mogro-Wilson, 2010; Hindes & Mather, 2007; Murray et al., 2009) have expressed concerns that faculty hold preconceived stereotypes or expectations of dis/abled students, which can undermine students' experiences of support and inclusion in the classroom. Research has shown that in addition to preconceived notions regarding dis/ability in the classroom, faculty often feel underprepared to support dis/abled students in the classroom and are unaware of strategies to increase inclusion (Lombardi et al., 2013). As with greater prior experience with dis/ability, increased awareness and education can lead to resistance of deficit definitions of dis/ability. It can also reduce stigma towards dis/abled students and allow for greater inclusion of dis/ability as an anticipated possibility within the classroom.

Reading of dis/ability in the classroom is influenced by prior experiences with dis/ability and dis/abled individuals. Livneh (2012) identified a variety of experiences that influence attitudes towards and recognition of dis/ability. In prior studies, many of the factors that

influenced attitudes towards dis/ability centered on prior experience (or lack thereof) with dis/abled individuals, integration of influences from sociocultural conditioning--including internalization of deficit models of dis/ability, and individual fears or internalized stigma towards their own current or imagined dis/abled future. Prior experiences with dis/ability can influence faculty members' acceptance or resistance of compulsory ablebodiedness and ability to see dis/abled students as a possibility in the classroom (Boda, 2019). Greater prior experience with dis/ability can also lead to a greater understanding of the breadth of dis/abled experiences, resulting in less surveillance of dis/abled students or policing of unexpected ways of exhibiting dis/ability in the classroom.

Conceptualizing Apparentness

Perceptions and opportunities for recognition of dis/ability by the faculty are the result of the interplay of legal/medical paradigms, systems of power, and expectations of normalcy. The ways these dimensions are applied and enforced within the classroom environment lead to individual and collective figuring of dis/abled apparentness. Dis/ability and apparentness are given meaning based on contextual understandings of these words. Hatt and Urrieta (2020) noted that people "assume their words and behavior will be interpreted according to the context of meaning" (p. 52). The context of meaning for dis/ability in education is a complex tapestry of societal understandings of dis/ability, systems of racism and ableism, and the ability of individuals within the classroom (e.g., faculty, students) to figure the existence of dis/ability within educational settings.

Activities relevant to smartness and demonstration of ability (e.g., test-taking, "behaving," assimilating to cultural norms; Carroll et al., 2019) take on meaning within the environment where they are formed and enforced. Concepts of smartness and recognition of

dis/ability are heavily tied to medical and legal constructions of dis/ability, racist notions of ability, and systems of ableism. As a result, norms and expectations within the classroom not only reveal understandings of dis/ability but also serve to uphold and solidify these concepts. Leonardo and Broderick (2011) argued that smartness as property serves to create a system that separates *deserving disabled* and *expectedly unintelligent*. As a result, the artifacts of smartness and ability are interwoven in the construction and recognition of apparentness.

Dunn (2006) noted that the construction of smartness, ability, and good students requires "that the school environment practice cultural standards that define a student as smart: high grades on tests, insightful questions/answers mentioned in class, mature behavior, and proficient English skills" (p. 127). Dunn also implicated the role of various authorities in adjudicating smartness. This role of authorities is also present in adjudicating the apparentness and validity of dis/ability in the classroom. Specifically, this authority falls on faculty, dis/ability resource providers, creators of standardized assessments, and medical/psychiatric providers who create or evaluate medical documentation establishing a legal dis/ability status.

Implicating "Enoughness"

When combining medical and legal influences with identity management, apparentness illuminates a tension between simultaneously appearing sick enough to qualify for support and capable enough to be recognized as deserving of that support within a particular context. Davis (2006), in describing the act of constructing normalcy, stated, "There is probably no area of contemporary life in which some idea of a norm, mean, or average has not been calculated" (p. 3). For dis/abled individuals, norms within human diversity and societal expectations of what constitutes dis/ability can create simultaneous experiences of being not non-dis/abled and not recognized as dis/abled. Dis/ability studies scholars (Davis, 2006; Inckle, 2015; McRuer, 2006)

have argued that in order to understand and recognize the construction of dis/abled bodyminds, it is necessary to consider what has been understood as the norm against which dis/abled bodies are compared. White, able-bodied, heterosexual, cis-men are positioned as that against which deviation is measured (Dyer, 1997), and systemic forms of property have been constructed and enforced for those in the normatively positioned identities (e.g., Whiteness/Harris, 1993; Smartness/Leonardo & Broderick, 2011).

The hegemonic nature of the normative identity and the resulting power to construct the environment has rendered subordinated or marginalized identities as unexpected or invisible. McRuer (2006) described the function of compulsory able-bodiedness as "covering over, with the appearance of choice, a system in which there is actually no choice" (p. 303). Covering over results in a system that simultaneously enforces compulsory able-bodiedness and structures ability as a binary where people are either able-bodied or dis/abled (Inckle, 2015). Inahara (2009) argued that this dichotomy upholds the oppression of dis/abled people and limits the possibilities of what constitutes the range of embodied experiences. Compulsory able-bodiedness influences apparentness (or the degree to which someone is recognized as dis/abled). As a result, dis/ability is often rendered invisible for many dis/abled people in a wide range of contexts.

Hutcheon and Wolbring (2012) argued for the use of ableism as an analytic tool for examining systems and environments to understand and resist the hegemony and compulsory able-bodiedness produced within those systems and environments. These systems of compulsory able-bodiedness are present within education. Ostiguy et al. (2016) specifically implicated the role of educational practices that are oriented towards particular learning styles or ways of showing knowledge in reproducing ableism. In their research study, Ostiguy et al. (2016) found

for students with dis/abilities whose learning styles directly conflicted with a particular way of approaching pedagogy and assessment it resulted in the students being "seen as less intelligent, gain[ing] less from their school experience than their peers, and [sic] required to get special documentation and oftentimes a stigmatizing diagnosis in order to prove their need to be taught" (Ostiguy et al., 2016, p. 304) in a particular way. Evans et al. (2017) critiqued the emphasis on independence within the classroom and educational systems, arguing, "certain forms of assistance are stigmatized (e.g., assistance with accessing printed material, using a tablet to communicate, or using a personal assistant…), while others are seen as unremarkable (e.g., assistance choosing one's major)" (p.1). The stigmatization of forms of interdependence directly impacts not only student experiences around dis/ability but also conceptions of capability and smartness in the classroom.

Embodied Dis/ability

Dis/ability and its relative apparentness have been heavily defined by medical and legal structures, which focus on the ways that dis/ability is (or is perceived to be) present in the bodyminds of individuals. While embodiment of dis/ability is one aspect of apparentness, viewing dis/ability as an identity that can be mapped upon the bodies and minds of individuals limits possible understandings of dis/ability. It serves to enforce expectations that dis/ability can be identified and quantified through the study of individual bodyminds. Akhtar (2016) drew a distinction between embedded (present in an individual) and non-embedded (abstract category) dis/ability, indicating that there are three facets or underlying claims regarding dis/ability. The three claims indicated by Akhtar are "(1) one's attitude toward their disability is partly constructive of their disability; (2) one's disability interacts with the many other traits they simultaneously have; and (3) disabilities are embodied in individuals" (p.

368). The various paradigms for constructing dis/ability can apply to both non-embedded concepts and expectations of dis/ability as well as be placed upon individuals embodying the experience of dis/ability.

Drawing on Ahktar's (2016) conceptualization of embedded dis/ability as being embodied within individuals, an examination into how individuals conceptualize dis/ability and recognize (or not) embodied characteristics is needed. Faucett et al. (2017) noted that assistive devices could reveal the existence of dis/ability and "makes visible an invisible disability…for this reason, assistive technologies have an important role to play not only in augmenting human abilities but also in hiding and showing disabilities" (p. 2). Parette and Scherer (2004) found stigmatization of dis/ability and assistive technology may inform dis/abled individuals' choices regarding what technology to use in a particular context as a form of impression management.

Faucett et al. (2017) created a technology dis/ability visibility chart that mapped what they believed to be the relative apparentness of a variety of assistive devices and associated dis/ability experiences. In creating this chart, they looked at not only the visibility but also the resulting interactions of stigma, credibility, and awareness experienced by the dis/abled individual. Regarding apparentness of dis/ability in the classroom, two factors discussed by Faucett et al. are particularly relevant: tech visibility and credibility. Those devices that are more widely recognized and visible (e.g., white cane) are more likely to contribute to apparentness of dis/ability in educational settings. Additionally, devices that are seen as credible (e.g., wheelchair) and tied to dis/abilities understood by society are likely to enhance apparentness.

Dis/abled students have some agency over the degree to which they reveal or uncover aspects of their dis/ability. However, within a classroom where the power resides with the faculty member and the broader educational system, there are areas related to disclosure and

assistive technology that, when tied to access and accommodation, can limit aspects of this agency. For example, students with an accommodation to use a computer for notetaking in a course that prohibits the use of a computer will be rendered suspiciously visible (Beauchamp, 2019) to their peers when they are the only student using a computer. Foucault (1991) noted the role of surveillance in creating systems of disciplinary power that simultaneously enforce and create compulsory normative identities. Critical legal scholars (Colker, 2005; Kanter, 2011; Kanter & Ferri, 2013; Spade, 2011) have critiqued medical and legal surveillance as tools for enforcing narrow definitions of dis/ability and other identity categories (e.g., gender-Spade) in ways that reinscribe systems of power and oppression. Beauchamp (2019) discussed the role of surveillance in creating and solidifying power relations through the creation of "suspicious visibility" of those who challenge compulsory norms. The role of suspicious visibility in the classroom often results in dis/abled students being viewed as disruptive or as adding additional complexity for faculty.

The act of strategically covering or revealing identity in a particular context is called impression management. Goffman (1969) described impression management as a conscious decision on the part of the individual regarding how to present themselves to others. Thus, impression management describes the actions that dis/abled individuals take to reveal or cover their dis/abled identity and the nuances of their dis/abled experience. In higher education, disclosure is often discussed as a singular act of formal disclosure--including medical documentation--to the institution, usually via the dis/ability resource office. This disclosure is required of dis/abled students who are seeking accommodations for equal access (Cole & Cawthorn, 2015). As a result, accommodation letters from the dis/ability resource office to faculty serve as a form of institutionally sanctioned disclosure of dis/ability status.

Critical dis/ability studies scholars (Mauldin & Brown, 2018; Titchkosky, 2011) have described disclosure of dis/ability as a process similar to that of coming out for queer individuals. Under this paradigm, dis/ability disclosure is a complex, ongoing process that individuals navigate regardless of how apparent their dis/ability is to others. Disclosure in the classroom can take multiple forms, including formal accommodation letters, verbal disclosure to the faculty member, or verbal disclosure to the entire class. Dis/abled students experience disclosure decisions throughout their academic career (Cole & Cawthorn, 2015), as disclosure is a repeated process.

The act of disclosing—either through the existing institutional structure or independent of that process—is a form of making dis/ability visible in education. Often, this disclosure is tied to a desire for greater understanding and support from faculty and peers regarding either issues of access or identity related to dis/ability. Miller et al. (2019) noted that it is important to separate "sense of social identity" and "one's decision to externally share that identity and claim group membership" (p. 307). Navigation of disclosure of dis/ability serves as a form of identity management (Miller et al., 2019; Miller, 2018) that mirrors Orne's (2011) findings of strategic outness, "the contextual and continual management of identity" (p. 681) for LGBTQ individuals. For example, individuals in Miller's (2018) study disclosed contextually, strategically, or chose to avoid disclosure. Further, Miller et al. (2019) concluded that students' identity management and disclosure decisions were not an indicator of the level of identity development. Rather, students were actively evaluating environmental contexts to assess safety and acceptance prior to disclosing (Miller, 2015).

Systems of Power Impacting Apparentness in Higher Education

Legal frameworks rely heavily on traditional medical or socio-political concepts of disability (Evans et al., 2017). From a critical legal perspective, the law maintains and supports the well-being and security of the social class that established it (Kanter, 2011). There is a paradox in using law as a platform to understand dis/ability in that the law, via its function as a regulatory social mechanism, works to inscribe and enforce normality from a predominantly medical perspective (Connor & Gabel, 2013). Thus, legal rights do not always bring meaningful social change or ameliorate inequality because the legal system "was formed by and exists to perpetuate capitalism, white supremacy, settler colonialism, and heteropatriarchy" (Spade, 2011, pp. 15-16). Critical legal theories allow us to interrogate how the "legal definition of disability regulate, exclude, and/or protect marginalized populations based on their physical and mental differences, gender, economic status, race, ethnicity and sexual orientation" (Kanter, 2011, p. 444). In particular, ableism and systems of whiteness work in tandem to influence understandings of dis/ability and apparentness.

Whiteness & Smartness

Ahmed (2004) noted, "whiteness is only invisible to those who inhabit it. For those who don't, it is not hard to see whiteness; it even seems everywhere" (para. 4). As a result, the role of whiteness in constructions of education and ability has largely gone unexamined by white researchers and remain largely invisible in contemporary critiques of dis/ability processes (Annamma et al., 2013; Bell, 2006; Connor & Ferri, 2005). Bell (2006) proposed that the field of dis/ability studies should be labeled white dis/ability studies due to its ongoing erasure of race and the "entrenched nature of whiteness as its constant underpinning" (p. 406). The intertwined legacy of racism and ableism within education necessitates that examination of apparentness of

dis/ability pay close attention to the ways in which whiteness is tied to conceptions of normalcy. Gillborn (2016) noted that IQ tests and other standardized tests of intelligence or academic ability have served "as a camouflage for institutional racism on a grand scale" (p. 368). Through the racialized educational system in the United States, some students are "taught their intellectual supremacy and concomitant entitlement to cultural capital, whereas others are taught their intellectual inferiority and concomitant lack of entitlement to both an identity as a 'smart' person, and the cultural and material spoils" (Leonardo & Broderick, 2011, p. 2214) afforded by this identity.

In 1993, Harris proposed whiteness as a form of property that conveys social benefits and legal rights. Harris noted that whiteness and its property benefits have become "so embedded that it is rarely apparent…[and] the set of assumptions, privileges, and benefits that accompany the status of being white have become a valuable asset" (p. 1713). From a critical legal perspective, the law maintains and supports the well-being and security of the social class that established it (Kanter, 2011). Over time, this has led to the benefits affiliated with whiteness being codified in ways that have allowed the law to solidify and uphold the property interests of whiteness.

Leonardo and Broderick (2011) conceptualized whiteness as "an ideology untied to certain bodies…an articulation of disparate elements—some racial, some not—in order to build a racial cosmology that benefits whites in absolute ways and minority groups relative only to one another" (p. 2209). Smartness operates as a parallel ideology, and, in concert, whiteness and smartness work in service to each other. Hayman (1998) illuminated this finding, stating

> in America…the cultural construction of 'intelligence'…has been inextricably intertwined with the construction of 'race.' 'Intelligence' was defined by one race and defined in racial terms; 'race,' in turn, was defined in substantial part through 'intelligence,' through intellectual inferiority and superiority. (p. 294)

As a system that rewards material benefits, smart supremacy exists in opposition to an accepted trope of the intellectually dis/abled. As such, individuals viewed as outside the norm of smartness "perform hierarchies whereby they denigrate certain exceptionalities as having a lower status and in the process valorize others" (Leonardo & Broderick, 2011, p. 2223). These hierarchies can be seen replicated in the cultural and systemic preference given to individuals with specific learning dis/abilities (e.g., dysgraphia, dyscalculia) over those categorized as intellectually, developmentally, or behaviorally dis/abled.

Teacher education and academic societies serve as communities of practice where teachers and faculty learn and reconstitute understandings of smartness, learning, good versus bad students, and dis/ability. Parette and Scherer (2004) critiqued the role of the teaching environment and its attitudinal, cultural, and physical attributes controlled by the faculty in determining the "composition of the student body…students they will teach as well as the manifest and 'hidden curricula'" (p. 221). Students within the classroom "figure" their own possible selves based on social constructions of what constitutes recognizable students and learners.

Hatt and Urieta (2020) viewed the process of figuring oneself and identity as heavily influenced by "process and traditions of apprehension" (p. 204). These traditions of apprehension they saw as fueled by actions and contentious practices within the realm of education. The classroom itself serves as a figured world with rules and norms that shape individual understandings of self and others. Expectations of learning, smartness, ability, and behavior within classrooms originate from the systems and structures outside of individual students. They are "culturally produced so that it moves through students as spoken discourse and embodied practice" (Hatt, 2007, p. 149). Embodied practice of smartness then serves to map dichotomous

labels of smart versus unintelligent, capable versus dis/abled, good versus bad, etc., onto the bodies and minds of students.

Leonardo and Zembylas (2013) discussed the role of whiteness as a set of technologies of affect in education. They described the role of affective technologies as "the mechanisms through which affects and emotions come to be instrumentalized, containing certain social norms and dynamics of inclusion/exclusion with respect to one's self and an Other" (p. 151). Within education, whiteness serves to undergird and produce inequalities both through systems and through "white intellectual alibis" (Leonardo & Zembylas, 2013, p. 152) and educators' efforts to assert a non-racist foundation for their work.

Leonardo and Broderick (2011) critiqued the tendency to consider labels of competence, smartness, or intelligence as "social constructions rather than systems of ideology that operate and constitute and sustain unequal relations of power" (p. 2219), asserting that it leads to an incomplete understanding of how systemic power and privilege operate. Leonardo and Broderick (2011) proposed smartness as a form of property, providing rights and advantages to those assigned membership in the group. Smartness becomes property through which the labels of *deserving dis/abled* and *expectedly unintelligent* become differentiated. Interrogations of smartness as a form of property that shores up property rights conveyed by whiteness allow for consideration and situating of the problem as something other than over or under-representation.

Critical K-12 scholars (Annamma & Morrison, 2018; Connor & Ferri, 2005; Gillborn, 2016; Leonardo & Broderick, 2011) have critiqued the construction of smartness as a stratifying tool in education based heavily on racist and ableist notions of academic ability. Connor and Ferri (2005) have documented the legacy of standardized testing, which rose in prevalence in the 1950s, in creating "a set of rigid norms regarding academic ability based on White middle-class

American experiences, values, and expectations" (p. 457). These same standardized tests continue to permeate both the construction of smartness through reliance on intelligence quotients (IQ) and eligibility for academic accommodations.

Summary

This chapter illustrated how apparentness of dis/ability is loosely defined within the literature and is often operationalized as a dichotomy (visible vs. invisible/apparent vs. non-apparent). Current literature views apparentness as a function of embodied impairment based on assumptions of the ability of others to perceive that impairment. These existing definitions of apparentness do little to interrogate how systems of power influence who is and who is not recognized as dis/abled within a particular context. In order to evaluate how systems of power operate through designations of apparentness and to explore the potential resulting disparate treatment, higher education needs a more fluid measurement of apparentness that accounts for a complex set of influences and phenomena. The next chapter will explain my methodological underpinnings and how I implemented a sequential exploratory mixed methods design to examine more complex ways of understanding and measuring apparentness.

CHAPTER 3- METHODOLOGY

Dis/ability apparentness and the experience of dis/ability are complex phenomena often discussed in ways that reduce recognition of the heterogeneous and fluid nature of dis/abled identity and experience. This study aims to complicate understandings of apparentness of dis/ability beyond a binary conceptualization of visible or invisible and to explore how apparentness of dis/ability is constructed and expressed within higher educational settings. To explore dis/abled apparentness, I employ a mixed methods design (Creswell & Clark, 2018; Greene, 2007), which requires collecting, analyzing, and merging or mixing both qualitative and quantitative data within a single study in order to understand the research question more completely. Neither qualitative nor quantitative methods are sufficient on their own to capture the complexly fluid nature of dis/abled apparentness. Greene (2007) noted that to engage in mixed methods research requires an aspiration "to better understand complex social phenomena by intentionally including multiple ways of knowing and valuing and by respectfully engaging with differences, both those presented by other inquirers' mental models and those located in the social world" (p. 17). Dis/ability and the resultant apparentness experiences are complex phenomena that are poorly understood and can best be examined through a mixed methods approach.

My critical constructivist paradigm is well suited to mixed methods research because it orients me towards recognition of multiplistic realities and allows for a generative and open process for seeking data. Approaching this study from a critical constructivist lens is especially important as I consider ways to crip my use of methodologies and my role as a dis/abled researcher. Recognition of the complexity of constructed realities in my approach to both the

quantitative and qualitative strands is crucial in order to recognize the expertise of dis/abled lived experiences and to critically center the contextual influences. I use the following sections to explain my methodological framework and the specific methods I used in each phase of the study. I will begin with a crip methodological framework and then discuss the conceptualization, development, and testing phases of the study.

A Crip Methodological Framework

My scholarly work is framed by my own experiences with dis/ability, guided by the theoretical underpinnings of DisCrit, and focused on recognizing crip expertise. As a result, I leveraged a crip methodological framework for this study that built upon cripistemology (dis/abled ways of knowing) and intentionally implicated the ways my own dis/abilities enter into the research. Here I will explain cripistemology and crip as method.

Cripistemology

Institutional policy and neoliberal ways of knowing dis/ability are "caught up in economies that actively closet…crip forms of intellectual, political, and affective creativity" (Johnson & McRuer, 2014, p. 128). Cripistemology, in contrast, serves as a way of resisting neoliberal dis/ability epistemologies by centering dis/abled ways of knowing and of knowing dis/abled bodyminds beyond the borders of normative and deficit models of dis/ability. A current art project of Sins Invalid, a radical art collective that "incubates and celebrates artists with disabilities, centralizing artists of color and queer and gender-variant artists as communities who have been historically marginalized" (Sins Invalid, 2021, para. 1), focuses on the notion of crip wisdom, which is the knowledge dis/abled people hold of the world through navigation and perseverance in environments not created for or by them. Additionally, in their *open letter to White disability studies and ableist institutions of higher education*, Miles et al. (2017) call for recognition and development of crip wisdom that recognizes "how disabled people--particularly

those who are marginalized within disability communities and studies--experience and envision disability and practice creative ways to navigate and thrive in an unjust society" (para. 4). Crip wisdom in many ways is similar to the concept of dis/abled gain, or the idea that people with dis/abilities have strengths and talents as a result of their diverse bodies and minds that individuals deemed as normal may not possess (Wilke et al., 2023a). Credit for the concept of dis/abled gain must be given to individuals in the Deaf community who first proposed Deaf gain, which rejects the deficit view that deafness is the lack of hearing and rather proposes that deafness is a form of diversity that positively contributes to society (Bauman & Murray, 2009; Bauman & Murray, 2014).

One way that dis/abled people reject and subvert normative and deficit portrayals of disability is through storytelling and centering dis/abled expertise (Corker, 1999; Milbrodt, 2018; Wilke et al., 2023b). Dis/abled experiences offer alternative ways of being in order to reject the pervasive view held by non-disabled people of dis/ability as tragedy. As noted by Shakespeare (1999), "disabled people have discovered and proved that impairment is not the end of the world; that it does not undermine subjectivity or possibility, and they have demonstrated this by developing an alternative comic language around the body" (p. 51). As a result, positioning dis/abled people at the center of their own narratives provides an alternative to medical and moral models of dis/ability, which privilege the voices of medical providers and presumed non-dis/abled others.

Crip as Method

Price and Kershbaum (2016) described a crip methodology as one that assumes dis/ability as a critical part of the data collection and analysis process, "rather than something external that 'enters' the situation and then must be accommodated or compensated for" (p. 20). Wilke et al.

(2023b) expanded on the crip methodology work of Price and Kershbaum and intentionally invited their participants "to allow their disabled ways of being to enter the interviews; space was constructed for the shifting of bodies, collecting of thoughts, and the use of assistive technology" (p. 12). Cripping research and methodology is not a simple matter of inviting dis/abled participants but rather requires consideration of the myriad of ways that dis/abled bodyminds will interact with each stage of the research. It presumes that questions can be interpreted in a multitude of ways, participants will engage at a variety of paces, and participant capacity will fluctuate and be influenced by the researcher's choices.

The work in this dissertation is both intentionally and organically cripped. First, as the result of the ways that my own dis/abilities shape the construction of the study, interpretation of the data, and shifting capacity as I moved through the stages of dissertating. Secondly, through the positioning of the dis/abled students involved in the study as experts on their own experiences. Dis/ability is centered not just as an identity participants held but as a source of knowledge. And thirdly, by dedicating time and energy to anticipating barriers to access, presuming the need for multiple modes of communication, and scheduling space for crip time to enter into and influence each step of the process. Participants were invited to communicate in their preferred mode (e.g., phone, video, instant messaging) in order for them to communicate comfortably and fully to not only ensure access but also to disrupt ableist notions that interviews must take place in a primarily linguistic form privileged by many qualitative methodologies.

Methods

In this study, I use scale development (DeVellis, 2017) to create an instrument for the measurement and prediction of experiences of apparentness in educational spaces. I draw upon scale development as a sequential exploratory design (Creswell & Clark, 2018) in order to more completely understand apparentness. While the design is exploratory in nature, I use features of

mixed methods designs that focus on complementarity (Greene, 2007) as the entire study explores various facets of the complex phenomenon of apparentness. The following research questions guide my study:

1. What are the characteristics, factors, and interactions that contribute to and influence the apparentness of dis/ability in the classroom?
    a. What are the underlying domains that contribute to apparentness of disability?
    b. Are there differences in apparentness that emerge across various social groups?

The three phases of this study include the conceptualization phase, development phase, and testing phase. As my epistemology is rooted in crip ways of knowing, the study starts with

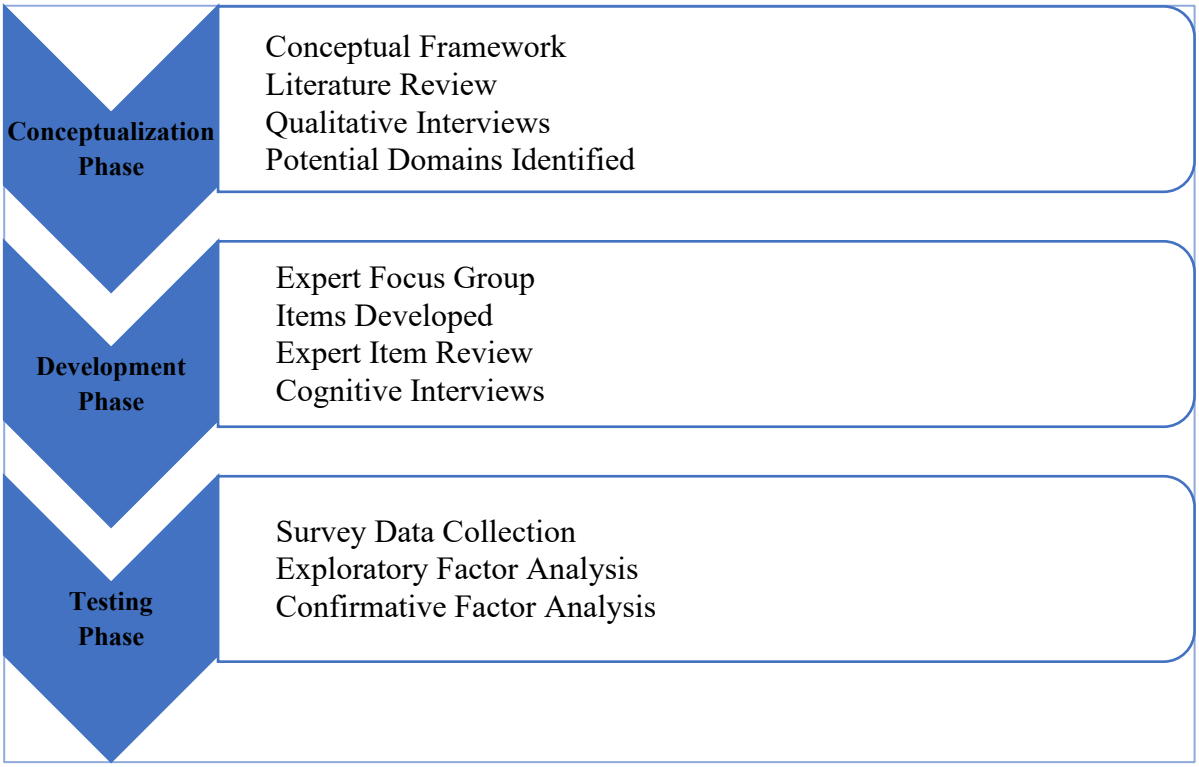

Figure 3.1

Phases of Study

the collection of qualitative narratives from dis/abled students in higher education regarding their understanding, construction, and experiences of apparentness within a higher education setting. The data collected during the conceptualization phase of the study is then used to expand and clarify components of and influences on apparentness described in the literature and used to construct a survey instrument. The survey is described in the development phase of the study and used to identify factors that influence apparentness and can be used to predict the relative degree of dis/ability apparentness experienced by an individual. The testing phase is used to test the validity and reliability of the scale using factor analysis. Figure 1 illustrates the three phases in the study design. The sections below explain each phase of the study design and execution in more detail.

Advantages and Limitations of Design

Exploratory sequential design, and more specifically, scale development (DeVellis, 2017), often has the intent that "the results of the first, qualitative method can help develop or inform the second quantitative method" (Creswell & Clark, 2018, p. 84). An advantage of this design, and why I was drawn to it, is that it grounds the quantitative data using the lived experiences of participants with the specific phenomenon being measured. As dis/abled individuals are often the subject of research but rarely positioned as experts by researchers, creating an instrument grounded in more than the literature and theory is an important aspect of my approach. Though an exploratory sequential design can take longer to develop and implement than other designs, it allows for a constructivist framing that aligns with my own ontological approach.

Participants

All participants in all phases of the study met one or more of the following criteria: a) self-identify as dis/abled or having a significant chronic health condition; b) are registered with their institutional dis/ability resource office; c) meet federal or state dis/ability criteria; or d) have been diagnosed with one or more conditions listed (see Appendix A). Participants must also have experienced at least one significant impact on an aspect of their interaction(s) with an institution of higher education as a result of the aforementioned criteria. At the time of the study, all participants were current students either currently enrolled at or on temporary leave from an institution where they were previously enrolled on at least a part-time basis.

Conceptualization Phase

The purpose of the conceptualization phase of the study was to explore how dis/abled students understand and experience apparentness of their dis/abilit(ies) in educational settings. Participants are positioned as the expert[3] on their own lived experiences with dis/ability apparentness, and their narratives were used to enhance or confirm aspects of apparentness described in the literature. The participants' experiences of apparentness were then adapted into survey items in the construction of the instrument to be used in the quantitative phase of the study. For this phase of the study, I used a general critical qualitative inquiry approach in order to interrogate the structural power relations that inform and surround understandings of dis/abled apparentness (Denzin, 2016; Merriam & Tisdell, 2016).

Sampling Procedure

I used a purposeful sampling procedure (Creswell & Clark, 2018) to recruit participant

[3] Throughout this study the dis/abled students recruited as participants in the conceptualization and development phase will be referred to as participant experts.

experts who met the eligibility criteria for the study (see participants above). Participant experts were recruited by advertising in the following locations: a) on the DREAM: Disability Rights, Education, Activism, and Mentoring listserv; b) asking practitioners in the Facebook groups "disability services in higher education" and "student affairs professionals with a disability" and on the Association on Higher Education and Disability listserv to disseminate a call for participants; and c) in the Facebook group "college success: physical disabilities, chronic health, and mental health." Because I am interested in looking at factors that influence apparentness, I worked to ensure a range of perspectives and identities were present within the sample of the participant experts. In order to achieve a heterogenous group, paying particular attention to race, socio-economic status, and dis/ability type, I asked potential participants to complete a short demographic survey (see Appendix B), and participant experts were selected from the overall pool of respondents. The use of an initial demographic survey also helped to ascertain whether respondents met the overall eligibility requirements for the study. All respondents who met eligibility requirements and completed the demographic survey were entered into a drawing for a $25 Amazon.com gift card to incentivize participation. A total of 43 survey responses were completed, and ultimately, I selected 11 respondents as participant experts.

Sample

I interviewed 11 students as participant experts during the conceptualization phase of the study in order to define the latent variable of apparentness and its sub-domains. The 11 participant experts were selected from the 43 individuals who responded to the brief demographic screening survey (see Appendix B). Of the 43 respondents, I selected a sub-sample that ensured a wide range of lived experiences. Selected participant experts ranged in age from

Table 3.1

Interview Participant Demographics

Name	Age	Academic Level	Race	Gender	Sexual Orientation
Amelia +	22-30	Doctoral	White	Woman	Straight
Avatar +	18-22	Undergraduate	Black	Female	Bi
Bernadette +	31-40	Doctoral	White	Cis-Woman	Lesbian
Daniel	22-30	Masters	White	Demiman/ Agender	Gay/Queer
David +	22-30	Undergraduate	Black	Male	Gay
Halk +	22-30	Undergraduate	Black-American	Male	Hetero
Irene +	41-50	Doctoral	White	Female	Bi
Jesse +	18-22	Undergraduate	Caribbean	Female	Bisexual
Quinn +	41-50	Masters	Indigenous	Female	Straight
Sunny +	22-30	Undergraduate	African-American	Male	Bi
Suzanne+	18-22	Undergraduate	Black-African	Female	Heterosexual

Note. Race, gender, and sexual orientation are all listed in the language the participant used to respond to free-response questions on a demographic survey.
+Indicates participants who participated in both the interview and focus group.

19 to 48 and included individuals who identified with multiple genders, sexual orientations, and races. Additionally, the participant expert group included individuals with sensory, mobility, learning, chronic health, and mental health-related dis/abilities.

The original 11 participant experts interviewed in the conceptualization phase were also invited to participate in a follow-up focus group for participant experts during the development phase of the study. Of the original 11 involved in the interviews, 10 were able to continue with the study and also participated in the focus group. The ten participants who contributed during the focus group were all given a $25 Amazon.com gift card as a token of appreciation for their

continued involvement and sharing of their expertise. Table 3.1 displays relevant participant demographics under the pseudonym chosen by the participant, using the identity labels used by the participants.

Data Collection

Data was collected through one semi-structured interview (see Appendix C) with each participant expert. I conducted interviews in the participant expert's preferred mode of communication (video call, phone call, text-based chat), and the interviews lasted between 38 and 67 minutes. All interviews were conducted in June and July 2022. Participant experts were provided a copy of the questions in advance. All verbal interviews were audio-recorded, and the recordings were used to create accurate transcripts for data analysis. I also used the audio recordings to familiarize myself with the data in multiple formats. All participant experts interviewed during the conceptualization phase of the study were given a $25 Amazon.com gift card as a thank-you for their time and participation.

Data Analysis

I followed the iterative procedures of thematic analysis (Braun & Clarke, 2006; Peel, 2020) to develop my coding and analyze the narrative data I collected in the development phase of the study. Thematic narratives center "the idea that individuals live storied lives" that can be "analyzed through an inductive process to identify themes of a storyline" (Bhattacharya, 2017, p. 94). I followed the six steps of a thematic analysis described by Peel (2020): familiarization with the data, initial coding, generating themes, reviewing themes, defining and naming themes, and conducting analysis.

To familiarize myself with the data in multiple modalities, I uploaded all audio recordings into Otter.ai and manually corrected errors in the auto-generated transcript. As

someone with difficulty accurately processing verbal information when there is lots of background noise or poor audio quality, I also enlisted the help of my partner to spot-check all transcripts as well as to review transcripts for interviews with reduced audio quality (Suzanne, Jesse, & Amelia). All participants were sent their corrected transcript in August 2022 and were invited to provide any corrections or additions. I listened to each audio recording multiple times during my daily commute during the months of July and August in order to develop a deep familiarity with each participant expert and to ruminate on potential key experiences or phrases represented in the audio data.

After uploading all corrected transcripts into Dedoose, I conducted an initial round of open coding in mid-August 2022. The initial analysis involved in vivo coding to capture concepts introduced by the participant expert narratives. I specifically took note of any areas of data that referenced or related to apparentness, (in)visibility, others noticing impairment or disability, and references to hiding, masking, or concealing. Next, I refined my coding book by sorting codes into umbrella categories. Initially, seven categories were identified and included "Ableism," "Actions by Dis/abled Person," "Adaptive Tech," "Embodied Dis/ability," "Characteristics," "Dis/ability Type," and "Actions Towards Dis/abled Person." The seven initial categories were then reviewed, and overlapping themes (e.g., "Ableism" and "Actions towards Disabled Person") were combined and recoded, and one category was removed (Dis/ability Type). The final set of umbrella categories were then further divided into sub-sections. See Table 3.2 for the final coding scheme. Final themes and examples from the data were sent to all participants as a PowerPoint for review (see Appendix D) prior to focus group discussions to allow all participant experts ample time to review relevant data and synthesize their own understanding of proposed domains and sub-domains related to apparentness of dis/ability.

Table 3.2

Coding Scheme

Umbrella Category	Sub-Section	Sample Data
Ableism	Assumptions/Misattribution	And so there was these like assumptions that I was lazy or that I was doing this on purpose. I get that quite a bit like there's like, oh, there's spelling mistakes in your stuff. Like you didn't look this over. Well, actually, I had two people look this over like these are the mistakes after someone's looked it over. So I think there's those kinds of issues of the laziness or the…that this is a sign of not doneness. –Bernadette
	Behavior Towards (indicator)	At times, it can like feel overwhelming, especially if people are like, who don't know, like new people. They don't know how to act around you. They don't know what you need, and they are just sort of all over your face about everything. They're just trying to help, but it kind of feels like, I don't know, it's too much. –Avatar
	Disbelief	Other days, if I happen to be using my disabled parking permit, I've been stopped and yelled at by people for faking a disability or for illegally using someone else's parking permit. No, not the case. I just happen to be having a day where I don't need to use the mobility aid. –Quinn

Umbrella Category	Sub-Section	Sample Data
	Recognizability/Legitimacy	I think I'm starting with ADD because it's also more relatable. I think in the sense of 'you know it' relatable. I think there's more I don't know, just like an educational sense, like how it can impact you. Maybe I don't want to say that people have more awareness about it because maybe that's not fair to say, but I just think probably, for me, it's just more the acceptance piece and just easier to talk about. –Irene
Actions on the Part of the Dis/abled Person	Disclosing	I always do an intro meeting. It usually helps them like, you know, I get to frame my disability. I get to frame how this looks like. I really like having a sit-down meeting with them and say, Okay, here's the thing, this is what it looks like. This is what I'm going to need. –Bernadette
	Masking	I genuinely think that most people would have no idea. Most people would have absolutely no idea that I am the way that I am, and I struggle with the things that I struggle with because I'm really good at masking, pretending, playing along. You know, acting normal. –Daniel
	Revealing	I would sit in the front row, and I am not the kind of person who likes to draw attention to myself, but I knew that I had to step outside that box that comfort and be very apparent. –Quinn
Adaptive Tech	Aides/Medication	I've been on prednisone for 12 years. And that causes, like, appearance changes, and like can cause huge weight changes, which I've experienced. --Amelia

Umbrella Category	Sub-Section	Sample Data
	Assistive Technology	I think using the cane, especially around people, it sort of amplifies the magnitude to which they tend to notice you. Because if you're using a cane, then everyone can see that you, you are blind. –Avatar
Characteristics	Notable Bodies	I am taller than normal people. So I stand out. –Avatar
	Race	I'm also black. And I think that also plays a major role on how noticeable I am because I do like to walk. My friends are, most of them are black. So noticing us, it's very much easy. Many people will try to look at us, and once you look at maybe the crew that I'm walking with, you will definitely notice that there is only a guy walking with a weird kind of gait and that maybe he has a weird kind of big shoe. –Sunny
	Other Identity	And so I think sometimes, like, what someone's stereotypes of [something]. Then they're like, that's off. And I think there's also, like, sometimes I think queerness plays into that, like, they're like, is she queer, or is she disabled? – Bernadette
Embodied Dis/ability	Absence	There is a lot of stigma from the student perspective, especially if you take a test outside the classroom. I think it's natural, and I remember this from my undergrad. What's everybody else gonna think when I don't show up to class? Are they gonna ask me questions about this? Do I have to explain myself, and that that feels really awkward. -- Quinn

Umbrella Category	Sub-Section	Sample Data
	Movement	When there are days at school when we have events, we have clubs and societies where we have to be moving around that day, those days, it becomes so apparent that my disability becomes so apparent. The days where I have to stand to give a speech or presentation. It becomes so apparent. –Halk
	Fatigue/Pain/Crip Time	I was in the lab. In the lab was, I was kind of very, very tired after the session. So, I told the professors that I was having a bad day there because of my situation. And I needed some, some certain type of accommodation in order for me to be like comfortable and also to be productive. –Sunny
	Communication	And at different points in my life, something happens that it's so obvious people can't ignore it. But for me, it's always more of like, if you see my writing, especially without someone else seeing my writing first. There is no question. I am dyslexic. You might not know what you're seeing is dyslexia, but you are going to see it. --Bernadette

Establishing Credibility

To ensure accuracy and to maintain engagement with participant experts, written transcripts along with the raw audio file were shared with the individual participant expert to ensure accuracy. Participant experts were also sent periodic updates via e-mail to keep them abreast of the research progress and provide an updated timeline for re-engagement. The focus group discussion of identified themes and participant expert quotes representative of the theme also allowed for significant member checking. The focus group allowed participant experts to comment on whether or not I had categorized their represented quotes in a way that felt accurate

to their experiences, as well as to add information when they resonated with an identified theme but were not represented with a quote from their interview. Additionally, it allowed participant experts to have a collaborative and generative discussion regarding the proposed domains of apparentness.

Development Phase

The purpose of the development phase of the study was to develop a pool of items for use in the testing phase of the study. Individual items were designed to identify the underlying domains that contribute to apparentness of disability. For this purpose, I drew upon scale development methods (DeVellis, 2017) to guide the creation of a pool of items. To begin the development of the Scale of Dis/abled Apparentness in Educational Settings (SDAES), I drew upon the data collected in the conceptualization phase of the study. The analyzed narratives, in combination with a systematic review of the literature related to dis/ability apparentness or visibility, were used to clearly define apparentness and sub-domains within apparentness.

Expert Focus Group

In early October 2022, after identifying and defining several potential sub-domains of the latent variable of apparentness, I invited the original 11 participant experts to participate in a focus group discussion. Ten of the 11 original participant experts were able to continue with the study. To prepare for the focus group discussion, I shared identified domains, their definitions (see Table 3.3), and example data points with participant experts in advance in order to allow participant experts to engage with the identified sub-domains at their own pace in advance of the discussion. Using the focus group to provide feedback on the identified domains helped to provide content validity prior to the development of specific items.

To protect the identity of participant experts (see Appendix E), focus group participants were asked to join the focus group using their chosen pseudonyms. The focus group was recorded and transcribed in order to accurately capture feedback provided by the participant experts during the discussion. The feedback from focus group discussions provided additional data on the identified domains that were used to further refine the domains in the development of specific statements for the pool of items. Participant experts were asked to use the following questions to guide our discussion: a) Does this theme resonate with you? b) For those of you whose experiences I have added under this theme, does the way I have categorized it fit with how you meant the example? c) For those of you not represented, can you think of experiences you have had that fall under this category? d) What examples would you add?

Re-engaging the participant experts in the focus group was designed to push my own thinking related to apparentness and to ensure that the themes I identified during the

Table 3.3

Definitions of Identified Domains Shared with Focus Group

Domain	Definition
Ableism	Acts of discrimination or social prejudice experienced by dis/abled participants. Range from subtle and covert forms of ableism to explicit.
Actions by Disabled Person	Conscious or unconscious steps taken by participants to reveal or conceal dis/ability in certain environments or for certain audiences.
Adaptive Tech/Aids	Tools used by dis/abled participants to mitigate impacts of dis/ability. This includes assistive technology, human aids, service animals, medication, and other forms of aids.
Other Identity Characteristics	Intersection or interaction of dis/ability with another social identity (age, race, sexual orientation, gender).
Embodied Dis/ability	Manifestations of dis/abled bodyminds interacting with a world not structured for them. Includes experiences of crip time, limb difference, etc.

conceptualization phase of the study were clear and reflective of the narratives and experiences of the participant experts. The focus group also helped to ensure that my own experiences with dis/ability were not overwriting participant narratives. Additionally, using a focus group format to re-engage participant experts allowed for the participant experts to take ownership of the conversation and provide intensive feedback, including expansion and critique of the identified domains. Two focus group sessions took place in late October/early November 2022, as all participants were not able to attend a single session. Kamberelis and Dimitriadis (2014) saw focus groups as a way to mitigate the authority and expertise of the researcher in order to "democratiz[e] interactional spaces, allowing participants a sense of safety and ownership of the activity and thus generating deep, rich, complex understandings of the issues under study" (p. 325). As a result, my intention was to use the focus group to elevate and apply the lived experiences of the students to the identified domains of apparentness.

Participant experts in the focus group provided several valuable points of feedback that were incorporated into my conceptualization of identified domains and sub-domains prior to the development of potential scale items. For example, Bernadette asked if there was potentially an action taken by dis/abled people that was not encompassed within disclosing, masking, and revealing. She and other participants pointed to examples within masking that they saw not as an act of masking but rather as a deliberate act of concealing. Similarly, Halk and David both questioned whether adaptive tech and aids were separate from the category of embodied dis/ability. Both Halk and David saw their adaptive tools as an extension of themselves and as parallel to their experiences with limb difference. Finally, Quinn and Amelia inquired why I was not naming the behavior towards individuals with dis/abilities as microaggressions. Other

participants shared their agreement that naming this phenomenon of ableism was important. Results from the interviews and focus group discussions are presented in detail in Chapter 4.

Development of Items

After refining identified domains and sub-domains based on the feedback of the participant experts, I began to develop potential items for the item pool. Items were designed to clearly tie to the latent variable of apparentness and to fit into one of the identified domains. At the development stage, I sought to write similar statements in a variety of ways. DeVellis (2017) encouraged a redundancy of items at the initial stage because redundancy can serve to "reveal the phenomenon in different ways" (p. 110) and increase reliability because "the content that is common to the items will summate across items while irrelevant idiosyncrasies will cancel out" (p. 110). I created an initial pool of potential items that included 117 statements, which were refined during the item review stage to narrow items for clarity, consider the degree of redundancy, and balance negatively and positively worded items (e.g., my dis/ability is never visible to others vs. my dis/ability is always visible to others).

Response Format. For the majority of items, I used a 4-point Likert scale format to measure the level of agreement or disagreement with the particular item or the frequency at which an experience occurred. I chose a Likert scale with fixed-value options to increase the accessibility of the survey instrument. Not only is a Likert scale one of the more common approaches to measuring attitudes and experiences, but it is also a question format within Qualtrics that is screen readable and keyboard navigable. Question types involving a slider were avoided as they are not accessible. All questions and response formats on the final survey instrument were optimized for accessibility.

Item Pool Review

After I developed my pool of items under each domain of apparentness, I reviewed the items in order to ensure the content validity of the scale (e.g., the extent to which items reflected the identified domains; DeVellis, 2017) and to consider the overall length of instrument and time to complete. The review of items was designed to review for clarity, examine redundancy for effectiveness, and to balance negatively and positively worded items. In considering the overall length of the instrument and time to complete, I paid particular attention to considerations of crip time as I anticipate that participants will engage with the survey in a variety of formats (e.g., auditorily), using a number of assistive technologies (e.g., JAWS, NVDA), and with a variety of embodied impairments (e.g., dyslexia) that may impact speed of completion. To begin the item pool review, I engaged the participant experts to provide feedback on the items regarding clarity and content. Next, I conducted a review of proposed items with individuals in the target audience for the final instrument after they completed the drafted survey.

Expert Item Review. I began the review process by providing each of the participant experts with a copy of the complete list of items in the drafted survey (see Appendix F) and the Likert scale format intended to be used for responses on the survey. Experts were engaged via e-mail and were invited to either respond to the items via e-mail or in a conversation with me in their preferred communication format. Of the original 11 participants, nine provided feedback on the wording of items. All 9 participants provided this feedback via e-mail, and their feedback was used to validate the proposed content for the final pool of items. Along with the list of items, experts were provided with the clarified definitions for each domain and with the following prompts to guide their responses. The prompts experts were asked to consider were: (a) Are there any additional items that should be included in this list? (b) Are there any questions that are

unclear or ambiguous and should be reworded for clarity? (c) Are there any items that do not seem applicable to apparentness? (d) Do the items under each domain fit with the provided definition of that domain of apparentness?

Participants flagged several items that were written ambiguously or in a confusing manner (e.g., People who I do not know well do not know how to act around me). Multiple participants felt that the questions asking about how others would perceive the apparentness of the individual were redundant to the set of questions about how the individual perceived their apparentness. It was suggested that these items be dropped or combined. Two participants noted that there were additional items throughout the item pool that appeared to be about perceptions of apparentness rather than the latent variable defined under the assigned domain. Examples included the following: 1) My close friends are unaware of my dis/ability; 2) Actions taken by my faculty have impacted the visibility of my dis/ability; 3) The design or structure of my classes has an impact on the visibility of my dis/ability; 4) My dis/ability is apparent to all of my faculty in all of my classes; 5) My classmates are never aware of my dis/ability; 6) My dis/ability is visible to others regardless of what activity I am participating in; and 7) All academic settings impact my dis/ability in the same way. Feedback from the participant experts helped to streamline the draft of the instrument, which was then shared with additional experts for cognitive review.

Cognitive Review. I engaged in cognitive interviews in order to further clarify and refine the survey items. The individuals engaged in cognitive interviews included six individuals, all but one of whom met the inclusion criteria for identified survey respondents (dis/abled college students). Three were recruited from initial respondents to the demographic screening survey for interview participants, an additional two were fellow dis/abled graduate students actively

dissertating on a topic related to dis/abled college student experiences, and the sixth was a dis/abled researcher who has published extensively on the experiences of dis/abled college students.

Before the cognitive interviews, I provided each participant with the list of items in a Word document (see Appendix G) as well as invited them to take a draft version of the survey instrument in Qualtrics. Participants were asked to take notes while reviewing the items and taking the survey draft. I then had a conversation about the survey items and survey flow with participants in their preferred format for providing detailed feedback. One participant met with me and provided verbal feedback on their experience with the survey, four participants sent me detailed annotations via e-mail regarding feedback on specific items, and one participant used screen capture to record herself taking the survey in Qualtrics and provided verbal feedback as she completed the survey.

Final item review. I conducted a final review of all of the items in order to incorporate feedback collected during the review process. I also used this final review as an opportunity to ensure a balance of positively and negatively worded items, accounting for the items that were removed or revised due to participant feedback.

Testing Phase

The testing phase was designed to test the developed survey instrument through the collection of data and data analysis to review and describe the relationship of individual items with the latent variable of apparentness and its sub-domains. As the instrument developed for this dissertation was exploratory, the testing phase allowed me to evaluate the strengths and limitations of the developed instrument, which will be crucial in future research iterations and revisions of the developed instrument.

Instrument Development and Distribution

I used Qualtrics to build and distribute my final survey to collect data. The survey design included items for the instrument, demographic questions, and additional survey questions designed to enhance the validity of the study. In the design of the Qualtrics survey instrument, I used only question types identified as being screen reader accessible and keyboard navigable to ensure independent completion of the survey by the largest possible group of my intended respondents. Participants who experienced difficulty in completing the survey were encouraged to contact me for assistance.

Additional survey questions. In addition to the items developed for the SDAES, the survey included demographic questions about the participants that were used to ensure adequate distribution of respondents. I also included a disability typology, an adaptive technology typology, and open-ended questions regarding personal description of dis/ability experience/impacts and personal definition or description of apparentness.

Key independent variables. Independent variables in this study fell into three categories: (a) demographics, (b) disability context variables (number of disabling conditions, category of dis/abilit(ies), adaptive devices/aids), and c) self-reported visibility to various audiences (e.g., never visible to strangers).

Sampling Procedure

In order to validate and test the reliability of the SDAES, I administered the survey to a development sample of participants. Because I planned to use factor analysis to confirm the latent variables "that account for variation among [the] larger set of items" (DeVellis, 2019, p. 155), I developed a sampling procedure designed to ensure adequate participation. Factor analysis requires a sufficiently large sample, and because my third research question specifically

interrogates if differences emerge across different social groups, I wanted to ensure that the sample was large enough to be able to compare differences across dis/ability type, race, sexual orientation, and gender.

I recruited participants by contacting dis/ability resource offices and asking them to share the call for participants with students connected to their office. I generated a random list of 1200 institutional dis/ability offices to contact. All of the institutions selected reported at least 2% of their student body included students with dis/abilities to The Integrated Postsecondary Education Data System (IPEDS). I oversampled from Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), Tribal Colleges, Native American-Serving Nontribal Institutions (NASNTIs), and Asian American and Native American Pacific Islander Serving Institutions (AANAPISIs) in order to ensure sufficient saturation of a racially diverse pool of respondents so that I could conduct statistical comparisons to reveal potential racialized differences in experiences of apparentness. Because not all students with dis/abilities are registered with their institutional dis/ability office, I also relied on snowball sampling. I included a link and QR code at the end of the survey for participants to share with others.

Sample

A total of 611 responses were submitted via Qualtrics. Of these 611 responses, Qualtrics flagged 45 as having been completed by a bot. All of these flagged responses were submitted between April 20th and April 22nd. A careful review of other responses from this time period revealed an additional 41 responses that were not flagged but were identified during a manual review as fraudulent submissions. I also removed 22 responses that did not include a response to the open-ended questions asking for the respondent to describe their disability and its apparentness in their own words and did not respond to the majority of the Likert questions. An

additional ten responses were removed because the individuals did not complete at least half of the Likert questions. Finally, a final response was removed because it had more than ten instances where a single item was missing a response. Responses with fewer than ten missed responses that appeared to be random were included in the final data set to allow tolerance for error given the population being surveyed. Finally, seven responses were removed because the respondents indicated they were under 18, which meant they did not meet the stated criteria for this project. These removals left a total of 483 observations that were included in the final analysis.

Gie Yong and Pearce (2013) argued that to perform factor analysis, there should be a ratio of respondents to variables that is "at least 10:1 and that the factors are considered stable and to cross-validate with a ratio of 30:1" (p. 80). I conducted sampling adequacy analyses in Stata to ensure my sample size was adequate for factor analysis and, after confirmation, closed the collection of responses on May 15th, 2023.

Statistical Analyses

I used descriptive analysis, exploratory factor analysis, and associational analysis to understand the data collected via Qualtrics. I used Stata for all data manipulation and tests.

Descriptive analysis. I began my analysis of the responses with descriptive analyses of the data. These analyses included calculations of the mean, standard deviation, measures of skewness and kurtosis, and bivariate correlations. These descriptive statistics are presented in Chapter 5.

Factor analysis. Under the general factor model, more than one latent variable may underlie variation in a set of items (DeVellis, 2019). Said another way, the general factor model does not assume that a single latent variable is the source of all covariation among items but

rather that multiple latent variables account for the variation in an overall set of items. Factor analysis can help to "determine *empirically* how many constructs, or latent variables, or *factors* underlie a set of items" (emphasis in original, DeVellis, 2019, p. 155). The three main functions of factor analysis are to determine the number of latent variables, condense information, and identify items that are performing better or worse within the scale. There are two main types of factor analysis used, both of which I used in my own analysis. These two types are exploratory factor analysis and confirmatory factor analysis (Gie Yong & Pearce, 2013).

I began with exploratory factor analysis (EFA) in order to attempt to "uncover complex patterns by exploring the dataset and testing predictions" (Gie Yong & Pearce, 2013, p. 79). By performing exploratory factor analysis, I determined how the proposed items within each domain correlated with the factors and served as a measure of the factor. I was then able to determine which items should be removed from the scale to improve its reliability. I then used confirmatory factor analysis (CFA) in order to determine if the results of the scale can be reproduced. I relied on structural equation modeling to conduct the CFA. The results of both the EFA and CFA are detailed in Chapter 5.

Associational analysis. Following the confirmatory factor analysis, I conducted regression analysis to examine the relationships between the scale variables, demographic variables, dis/ability context variables, and self-reported visibility. First, I conducted bivariate correlations for apparentness domains based on demographic, dis/ability context, and self-reported visibility variables. Then, I conducted a hierarchical linear regression to evaluate the predictive effects of demographic characteristics, dis/ability context variables, and self-reported visibility on each of the domains of apparentness. The results of regression analysis are detailed in Chapter 6.

Summary

In this chapter, I provided an overview of the methods used in this dissertation and a summary of the theoretical underpinnings that guided my methodological choices. The subsequent chapters will detail the findings of the study, beginning with the results of the qualitative data gathered in the conceptualization phase.

CHAPTER 4-DIS/ABLED PERSPECTIVES ON CONCEPTUALIZING APPARENTNESS

Bernadette said, “I think of it as being caught,” in response to the question I posed to all participants about what they understood as dis/ability apparentness. She went on to describe that many of her diagnoses are considered to be invisible. Yet in particular environments, performing certain tasks, or in specific interactions, she knows when her dis/ability becomes apparent to someone by the way they respond to or interact with her. As noted earlier in this dissertation, the purpose of this study is to determine the characteristics, factors, and interactions that contribute to and influence the apparentness of dis/ability in educational environments. Narratives of dis/abled students can provide deep insight into the day-to-day experiences with apparentness. In this chapter, I describe the qualitative findings from the participant experts’ interviews and the confirmatory focus group, which represent the expertise of dis/abled students in describing the lived experiences of apparentness in educational settings.

Eleven students who identify as dis/abled participated in semi-structured interviews focused on eliciting their narratives of apparentness of dis/ability in collegiate settings. Table 3.1 provides the participant demographics, and I use Table 4.1 to provide greater context for the disability profile of each participant. In this chapter, I first discuss how participants as experts were engaged with the study and how I internalized the data articulated in their narratives. I then move on to exploring how the domains of apparentness appeared in the data, beginning with Environment, then continuing to detail findings for Ableism, Identity, Taking Action, and Embodied Dis/ability.

Engaging Dis/abled Participants as Experts

Participant experts had a variety of reasons for engaging in the study. Several participants

wanted to improve educational experiences for other dis/abled students, a few were intrigued by the topic, and two explicitly wanted to contribute to better understandings of dis/ability. For each participant, their reasons for participation led to deep engagement with me during the interview, follow-up communication, and with each other during the focus groups. The deep levels of engagement can be seen not only in the initial call for participants but also through the steady engagement of the participants throughout the eight months (June-January) that constituted the conceptualization and development phases of the study. During the final stages of participant expert feedback, several participants included notes along with feedback on the domains of apparentness that highlighted their commitment to the study. One example, shared by Quinn, read:

> Thank you for the opportunity to look through your work and share feedback with you. It is very apparent you are passionate about this project. It has been a joy to share in a few pieces of the journey with you. I am excited to one day see the results of your research in publication.

The one participant who was unable to continue their involvement between the conceptualization and development phases of the study made it clear when stepping away from the study that their health and personal circumstances no longer allowed for outside time commitments but that they wished to be kept informed on the study progress in the hopes that they could re-engage if future feedback was needed.

Interview Participants

Participant experts' experiences with dis/ability were varied. Most of the participants experienced multiple dis/abling conditions, and in total, ten different categories of dis/abling conditions were reported. Participants also described their relationship with dis/ability identity, assistive technology, accommodations, and dis/abled communities in multiple ways. Participant experts' dis/ability profiles are detailed in Table 4.1 and in the following narrative profiles.

Amelia is a doctoral student attending a large private research university. She identifies as a white straight woman in her late 20s. Her diagnoses include anxiety, depression, and a chronic auto-immune disorder that has manifested in a variety of ways for her, including kidney failure, tinnitus, subglottic stenosis, bone issues, severe anemia, and chronic breathing issues. She describes herself as chronically ill rather than identifying with the language of dis/ability. However, she acknowledges that this perspective is shifting as she connects with dis/abled communities. She is also pursuing ADHD and PTSD diagnoses. Her experiences with apparentness have led her to describe her dis/abilities as mostly invisible and to note that even when they are visible, people assume it is the result of something else (e.g., a cold).

Avatar is a traditionally aged first-year student at a private land-grant institution. She identifies as a bisexual Black American who is a first-generation college student. She is blind and uses a white cane to navigate. Prior to college, she attended a high school for blind students. She uses verbal descriptions of visual aids, supplemental notes, and audio recordings as academic accommodations. She described her dis/ability as being very apparent in the classroom because of the assistance she receives to access course materials. To Avatar, identifying as a person with a dis/ability means being a member of a community that is fighting to be seen and heard in the world.

Bernadette identifies as a cisgender lesbian white woman of Italian and Irish heritage. She is a doctoral student in her mid-30s with multiple conditions, including depression, anxiety, ADHD, dyslexia, autism, and other chronic mental and physical health impacts. Bernadette views her dis/abilities as contextually visible, stating, “If they [others] understand disabilities, they see me as disabled. If they don’t, then probably not.” She currently uses extended time, editing, and Zoom captions as accommodations at the public research university she attends.

Table 4.1

Interview Participant Dis/ability Profile

Name	Categories	Description of Impact
Amelia	Anxiety, Depression, Chronic Medical Condition	I have an autoimmune disorder which can manifest in very impactful physical ways (kidney failure, tinnitus, subglottic stenosis, bone issues, severe anemia, chronic breathing problems, etc.), but not all of the above is chronic. Anxiety, depression, and possibly PTSD are also present and are contributed to by the chronic health issues.
Avatar	Blind/Low Vision	My disability is that I have low vision. I am partially blind, and I've had it my whole life. And yeah, I don't know any other way to live.
Bernadette	Anxiety, Depression, Other Mental Health Condition, ADHD, Autism, Chronic Medical Condition, Learning Disability	I was diagnosed with dyslexia when I was six, and I always think of that as my main disability. I'm pretty dyslexic, so that's pretty much affected all my educational career. Like reading, writing, listening. Everything.
Daniel	Anxiety, Depression, ADHD, CPTSD	I was diagnosed when I was a kid, I don't really know when, probably around the ages of eight or nine, with ADHD and depression, anxiety, probably a couple other things because I was acting out in anger. It definitely

Name	Categories	Description of Impact
		impacted my ability to like, retain information, and stay focused in class, even throughout college. I wasn't sure if I really had ADHD as an adult. So I went and I got retested about three years ago, and when I got retested, I was diagnosed again with ADHD as well as chronic PTSD. I see now the ways that it impacts definitely has to do with motivation, task initiation, but also emotional regulation. There are times where I can become really dysregulated, and I'm just not able to do school that day.
David	Physical/Mobility Condition that affects walking	I was involved in an accident [nine years ago]. And I lost my leg, and it is something which really affects my movement. So I have to use a wheelchair.
Halk	Physical/Mobility Condition that affects walking	If I am not using any aides, you tell immediately that this is a disabled person. One of my limbs is shorter, and when I land on the ground, it's actually painful. It's the pain has been reduced through the numerous surgeries I've had, but it is still painful.
Irene	Anxiety, Depression, Chronic Health Condition, ADHD, PTSD	My experience, I think, has been a little bit different, and that might also be generational. I was diagnosed at the age of 15 or 16 with

Name	Categories	Description of Impact
		depression and ADD. Although other people tried to help me it just it really didn't work, and I really struggled in school. Most recently, I was diagnosed with long COVID. I lost my memory. I had brain fog. I have had a lot of health issues.
Jesse	ADHD, LD, Autism	It really affected my communication, my ability to connect with other people, my social skills, and being able to understand other people's emotion is very challenging.
Quinn	Anxiety, Depression, Chronic Health, Physical/Mobility Condition that affects walking	Part of my disability is genetic. So it's been with me from the start, but it really started to cause or result in barriers in my early teens. At that time, I was experiencing a lot of physical health challenges, especially with mobility. And as I've gotten older in life, I've also picked up on some mental health challenges as well.
Sunny	Physical/Mobility Condition that affects walking	Some call it the short leg syndrome; others call it the length, the leg length discrepancy. I don't have a wheelchair. I walk with my....this kind of shoe. A shoe that is kind of heavy, and walking around the campus is very tedious for

Name	Categories	Description of Impact
		me. Very, very tedious moving around.
Suzanne	Blind/Low Vision, Anxiety	My disability is something to do with my eyes. I have very sensitive eyes. It makes me feel dizzy, disoriented. It gets me to feel out of place. I am not able to see things far off.

Daniel is pursuing a master's degree at a public research university. Daniel identifies as a white, queer, and agender first-generation college student with multiple mental health dis/abilities (anxiety, depression, and complex PTSD) and ADHD. Daniel is currently using academic accommodations that include additional time for assignments and an assistive reading device. To Daniel, identifying as a person with a dis/ability is a recognition of "the physical and human limitations we all have or will eventually have one day and understanding that these limitations do not reflect a person's inherent worth and value."

David is a second-year student at a private research university in an urban location. David identifies as a Black gay man in his mid-20s who is a manual chair user with a mobility condition that affects walking. David has accommodations for extended time, flexible deadlines, and gets assistance with pushing his wheelchair between classes. David identifies his dis/ability as one that is highly visible to others.

Halk is in his second year at a public community college in an urban setting, where he is a first-generation college student. He is in his mid-20s and identifies as a heterosexual Black American male with a physical dis/ability that impacts walking. He described his dis/ability as being a mixture of visible and invisible and stated, "It's part of my identity, but it isn't the only thing that defines me." He currently uses audio recordings and the services of a scribe at his institution.

Irene is a doctoral student at a private Christian university. She is a bisexual white woman in her 40s who works in special education. She is diagnosed with anxiety, depression, ADHD, PTSD, and long-COVID. She noted that she has struggled to receive formal accommodations in academic settings. She considers her dis/abilities to be largely invisible to those around her.

Jesse is a traditionally aged first-year college student attending a private for-profit institution. She was diagnosed with ADHD as a young child, and she describes its impact as affecting her communication, her ability to connect with other people, and her ability to understand others' emotions. She is approved for academic accommodations at her institution and uses extended time for assessments and has access to audiobooks. Jesse described herself as a bisexual, Caribbean first-generation college student whose dis/ability is somewhat apparent to others.

Quinn is a master's level student at a large rural public institution where she also works. Quinn is in her 40s and identifies as a straight bi-racial (Caucasian and Indigenous-American) woman. She has multiple dis/abling conditions, including anxiety, depression, a chronic health condition, and a mobility condition that sometimes affects walking. She currently receives academic accommodations in the form of extended time on exams and virtual attendance. She used additional academic support as an undergraduate student. She does not consider any of her dis/abilities to be particularly visible to others in educational settings.

Sunny is a second-year, first-generation college student attending a mid-sized public university. He identifies as a bisexual African-American man with a mobility impairment that impacts walking. He receives support from his institution in the form of the removal of architectural barriers.

Suzanne is a traditionally-aged second-year international student at a regional public institution. She identifies as a heterosexual Black-African woman. She also attended a high school internationally (in the UK) and has family who live near her college. Suzanne is diagnosed with anxiety and also has multiple conditions that impact her vision.

As illustrated in Table 4.1 and the profiles included above, the 11 participant experts had a range of experiences with dis/ability as well as a variety of additional social identities. The range of experiences presented in participant expert narratives provided a wide breadth of information related to experiences of apparentness.

Internalizing the Data

I immersed myself in the individual narratives of participant experts, spending significant time familiarizing myself with each participant expert through the recorded audio and subsequent transcript. As someone with impacts on auditory processing, integrating verbal information is a time and labor-intensive process, but it is necessary to ensure that I accurately interpret the meaning and intention of participants' words. For me, this included recording interviews on two different devices so that if the audio quality was influenced by signal, external sound, etc., I was able to potentially reconcile my understanding with the other recording. I listened to each interview multiple times prior to beginning the transcription process. After conducting an initial transcription of an interview, I then relistened to the audio using Otter.ai so that the transcript was highlighted in conjunction with the audio. This process allowed me to catch areas where my initial transcription deviated from the verbatim audio. Next, I asked another person to spot-check my transcripts to ensure accuracy. In the case of three transcripts where the audio quality of the recording was difficult for me to process, I had another person review the entire transcript for

accuracy before I uploaded them into Dedoose for coding. In addition to these external checks, I also sent all participants their individual transcripts and audio recordings.

The purpose of this intense familiarization was multifaceted. The first goal was to develop a deeper sense of connection as the researcher with each participant so that they were clearly defined as individuals before I began to look for themes across experiences. I utilized memoing to note areas of each participant expert's narrative where I experienced resonance or dissonance based on my own experiences with dis/ability in order to achieve my second goal of illuminating the personal filters and preconceptions through which I was viewing the data. The following sections describe the qualitative findings of this study that I identified in the data through this familiarization and coding process.

Domains of Apparentness

Participants described varied ways of thinking about apparentness, both in terms of their own experiences and how they believe others consider dis/ability apparentness. The participant experts' narratives on how they define or conceptualize apparentness in their own experiences were important for ensuring that my interpretation of the data and identification of domains of apparentness was reflective of a range of ways that dis/abled students may experience or come to understand the apparentness of their dis/ability.

Bernadette described the experience of knowing when her dis/ability is apparent to others. She said, "I often think of it as being caught. Like someone notices something, and then that prompts a question." She has encountered this experience more frequently with the practice of wearing masks during the pandemic because of her struggles with social cues, allowing people to see what she described as "weird signs like there's something off." Daniel noted that dis/ability "is often portrayed as visible and invisible." Avatar and Irene also acknowledge this

dynamic of their dis/abilities being both visible and invisible, as they described what they consider to be apparent. Avatar described apparentness as "having a disability that is obvious to people...you don't need to tell anyone that you have a disability. They can just see just by looking at you." Irene expanded on this idea, separating the apparentness of the impairment itself and the apparentness of the experience of dis/ability. She stated, "A person might have a disability that is considered invisible, but that person's experience might be visible...whereas how I experience my disability is pretty internal." Quinn noted that dis/ability is often thought of through stereotypes of what constitutes an apparent dis/ability, stating, "I guess when I think of an apparent disability, oftentimes it's that old image of someone who happens to be a wheelchair user or uses a mobility aid of some kind." She went on to clarify that while this "is an indicator of disability, it is certainly not the only indicator."

Daniel further critiqued the simplistic portrayal of dis/ability as visible or invisible, noting "the reductionist thinking that humans can have around anything puts things into a binary when things are not naturally binaries, things are naturally in spectrums." Quinn also acknowledged this reductionist thinking by acknowledging how ableism has shaped her experiences of dis/ability. She shared that her experiences have been split in polarized ways based on whether her dis/ability was read as apparent or not and, for her, "that dichotomy is perplexing and interesting." For example, when her dis/ability is read as apparent, she noted, "a lot of people in the general public tend to automatically assume the worst. 'Oh, she's walking with a cane, and she's very feeble. She's probably dying of something….' Which I'm not." Conversely, when her dis/ability was not read as apparent, she experienced the opposite and has had people assume she was faking her dis/ability or fraudulently using her accessible parking pass.

The following sections provide greater detail of the participant experts' experiences. Four major themes emerged from the interviews: ableism, surveillance and identity, taking action, and embodied dis/ability. These themes are further divided into sub-themes to better capture the nuance encompassed in the expert participants' narratives.

Ableism

Ableism is a form of discrimination or prejudice against individuals with disabilities. It refers to the belief that people with disabilities are inferior or less valuable than those without disabilities. Ableism manifests in various ways, including negative stereotypes, exclusion, marginalization, and unequal treatment. The behavior associated with ableism can range from obvious and overt to subtle or covert (Evans et al., 2017). All participants experienced a range of ableist behaviors from others, including assumptions about or misattribution of impacts of dis/ability, microaggressions, disbelief, and limited knowledge about the legitimacy of dis/abled experiences.

Assumptions/Misattribution

One of the most common ableist experiences reported by participant experts was others making assumptions about dis/ability or misattributing impacts of dis/ability. For some participants, this included encountering others whose presumptions about dis/ability meant the participant was assumed to have an able bodymind. For others, they encountered individuals who accused them of exaggerating or faking the impacts of their dis/ability.

The presumption of able-bodymindedness can be seen in the earlier example by Quinn, where others perceived her as being "fine" and, thus, could not be dis/abled or warrant the use of accessible parking spaces. Suzanne described similar experiences where individuals perceived her in a particular way (e.g., "they might see me fine") and responded to her in a way that

indicated, “Oh, she is kind of pretending. How come she says she can’t see me.” Daniel also experienced presumed able-bodymindedness. For Daniel, emotional regulation is one of the biggest areas of impact and visibility of their dis/ability. Daniel described that related to emotional regulation, “I think that people probably just interpret me as sensitive. I mean, I am sensitive, but I'm very sensitive about the things that people say and the way things are said and whatnot. So I think that's probably how I'm interpreted is more so that I'm sensitive.” Daniel attributed these experiences to a lack of understanding about the range of impacts of complex mental health disabilities.

Several participants also described the experience of having an impact or aspect of their dis/ability attributed to a character trait (often negative; e.g., sensitivity, laziness, etc.). Bernadette’s experiences most exemplified this phenomenon, stating,

> There was these assumptions that I was lazy, or that I was doing this [misspelling] on purpose. I get that quite a bit. “There are spelling mistakes in your stuff. You didn’t look this over.” Well, actually, I had two people look this over. These are the mistakes after someone has looked it over. So I think there are those kinds of issues of assuming laziness or that this is a sign of not doneness.

Similarly, Amelia described how individuals attributed her cautiousness about double-masking in public places because of COVID as an overreaction or unreasonable response rather than a necessary protection due to her compromised immune system.

Microaggressions

All of the participants described experiencing ableism in the form of microaggressions. As noted in Chapter 2, microaggressions combine systemic ableism with brief acts of discrimination that target dis/abled individuals (Kattari, 2017). Often, these experiences revealed information about the apparentness of dis/ability by highlighting the observer's awareness that dis/ability or difference was present or through the obvious erasure of dis/ability.

Several participants described experiences where the behavior of others revealed discomfort with dis/ability. Participants noted experiences with others that ranged from confusion about how to interact when presented with dis/ability to outright mocking or differential treatment. Avatar described several situations that exemplified experiences of others' discomfort. She shared

> whenever people meet me for the first time, they don't know when to offer assistance. So, they're just like all over the place trying... Yes, they are trying to be helpful, but they don't know what I need. So, they're just like in your face.

Similarly, Quinn shared, "It was only the older than average students that would work with me in undergrad in groups. My peers are afraid. I think they were fearful of not saying or doing the right things so they stepped back from it." In both cases, the change in others' behavior when interacting with Avatar and Quinn revealed their peers' awareness of their dis/ability.

David described the most explicit example of microaggressions experienced from peers. He talked about experiencing teasing and ridicule from other students. He stated, "The other students really claim they are trying to make some jokes, but it's something which your intuition says not to joke about because it kinda in a way really adds and hurts." Sunny also described experiencing students mimicking the way that he walks or joking about the gait caused by his dis/ability. He shared that these experiences have led him to seek counseling in order to process negative feelings.

Several participants also discussed situations where individuals did not say anything explicit but where actions made it clear that others were aware of the participants' dis/abilities. Bernadette described how others would frequently comment on her spelling and that she experienced individuals who then acted in ways that made it clear to her, "You are a Ph.D. student. You should not be doing this [misspelling]." Halk explicitly noted situations where

“they don't say it, but it is subtle that they recognize that you're somebody who needs special treatment.” Avatar experienced similar repeat situations with faculty or instructors. She noted that most of her faculty notice her dis/ability but rarely talk about it explicitly. However, she has observed that faculty frequently “call out my name and are like ‘are you following’ or ‘is everything good’” and to her, “if it is consistently just me, then you feel like you are being separated and treated different from everybody else.” Avatar also noted this same trend of treatment or excessive checking in from peers—especially during group projects and assignments.

Both Avatar and Sunny shared that interactions marked with subtle or ongoing changes in treatment were incredibly frustrating and often made them believe that their peers did not see them as capable. Avatar noted that often, class group members will give her less work or offer to take on items she volunteers to work on. She shared

> at some point, I feel like they don't understand that I want to do the work, even though it's looking to them like it's a lot for me, but you know, I want to do the work so they should just let me do the work.

Sunny described similar interactions with peers as being treated like a kid and that people assume he cannot or will not ask for assistance when it is warranted.

Experiencing Disbelief

One specific form of microaggression that several participants described was experiencing disbelief from others when describing the impacts or existence of their dis/ability. For example, Amelia described an experience while working at a local bookstore where, after disclosing her diagnosis, a coworker said they thought her diagnosis was a condition that only impacted older men. During her interview, Amelia went on to share that “comments like that makes you feel...number one, it is rude and it makes you feel weird. But number two, it also

makes you feel like people don't believe you." Amelia and Quinn both shared experiences about being confronted by strangers when out in public: Amelia for her continued use of masks throughout the pandemic and Quinn for use of her accessible parking tag. Quinn shared that she has been stopped and yelled at by people who have accused her of "faking a disability or illegally using someone else's parking permit." For her, this experience often occurred on days when she was not using a cane or other mobility aid that explicitly telegraphed her dis/ability status.

While Avatar rarely experienced people who did not believe her dis/ability [blindness] existed, she instead experienced disbelief from people about what she is able to accomplish. One specific example related to her academic performance that she noted was that she works very hard because she wants "to be at the top..." but then "at times I feel like it shocks people. They are like, 'Wow, how is she doing this well when she is disabled.'" These experiences have made her feel the need to educate others that "just because I have a disability doesn't mean that I can't be great." Like Avatar, Bernadette and Quinn also described the need to educate others in order to reduce the amount of repeated stigma they experienced.

Bernadette described the work of getting people to believe her as one of the biggest barriers to access. She shared, "I feel like I always have to do a lot of training or work to get them to realize, no, this is real." Quinn expanded on this sentiment by explicitly noting the difficulty when the dis/ability "looks like everyone else and just kind of blends in." Quinn finds facilitating conversations about her access needs to be very uncomfortable because she is always afraid that she will not be believed.

Perceived Legitimacy

The participants' stories about disbelief included narratives regarding the perceived legitimacy of their dis/ability. Some participants tied this legitimacy to the adaptive aids or visual markers of dis/ability they carried. This was most exemplified in Quinn's narratives. She explained, "It is very interesting how I'm treated out in the wild. If I am using a cane one day, people are much more aware and opening doors and things for me." Quinn would adapt her behavior to intentionally make her dis/ability more visible in order to enhance how others perceived her dis/ability and its impacts. In talking about her behavior in the classroom, Quinn noted, "I learned very quickly that on the first day of class each quarter, I needed to make sure I had my cane with me whether I felt like I needed it or not." She engaged in this behavior to reduce experiences of disbelief or questioning from peers and faculty. Avatar also described how her adaptive tools, specifically the use of a white cane, boosted the experience of people reading her as dis/abled.

Other participants tied legitimacy to how well known or understood their specific dis/ability or diagnosis was. Amelia found she experienced disbelief often and tied it to the collective "low understanding of chronic illness" in the United States. Daniel described that their peers often had a diminished or generic view of their dis/abilities. Daniel specifically noted that peers often viewed ADHD as "just struggles with attention," whereas the reality of ADHD was much more nuanced for them and experienced across a spectrum of impacts. Bernadette also described experiences where people distilled down a specific diagnosis or minimized its impact. She shared that often, "everyone has this *one friend* who is dyslexic and it doesn't seem to affect them much." Bernadette's own experience was so starkly different from how others perceived

dyslexia that it often caused incongruence when she would describe the impacts she faced on a daily basis.

Participant experts in the study who had multiple conditions that contributed to their experience of dis/ability engaged in decision-making regarding which diagnoses to share when disclosing dis/ability. The decision-making process was often centered around how the participant believed different conditions would be recognized and how that would impact the overall perceived legitimacy of their dis/ability experience. For Quinn, she was more comfortable sharing the physical aspects of her dis/ability because "I don't have a choice, it is just the way it is." However, she also shared that until recently,

> [I] tried to hide the mental health aspects, the anxiety and the depression because I didn't want anyone to see that I was quote-unquote, crazy. And I felt very ashamed of that which is interesting because I have to be okay with the physical aspect, but I was very ashamed of the mental health aspect.

Her experience highlights how participants not only navigated disbelief and external legitimacy critiques but also internalized these forms of ableism within themselves.

Irene echoed many of the sentiments shared by Quinn and explained that she believed most people were more aware of health impairments than learning dis/abilities or mental health. She stated,

> Everyone's had some kind of a health experience, even if it's you're getting the flu, that's more relatable, that's more understandable. That's more accepted. Acceptable? Understandable. I'm not saying everyone is understanding of it, but you know, I think it's just easier to relate to a health piece... yes, there's stigma. But I just feel like it's a different kind of... A different kind of stigma attached to mental health. And it's never been a good one.

For this reason, Irene was most willing to disclose her experiences with long-COVID as opposed to her experiences with mental health and learning dis/abilities. Daniel also shared that they

> start with ADD because it is more relatable. In the sense of you know it's relatable. I think there is more I don't know, just like an educational sense...how it can impact you. I don't want to say that people have more awareness about it because maybe that is not fair to say, but I just think probably for me it is just the acceptance piece and is easier to talk about.

Participants who disclosed particular dis/ability experiences or diagnoses but not others described these strategic disclosures as a way to protect themselves from stigma or expending unnecessary effort to make the other person understand their experience.

Bernadette also addressed the role of her own internalized ableism and its impact on both her early views of her own smartness and also times when she wondered "[am] I disabled enough" because she was unsure if "dyslexia counted enough." Bernadette said others often got the collective impacts of her dis/abilities when she would share limitations that others could relate to. She noted that often people began to understand that "this is real" when she would share that she is not able to drive. The concrete connection to an impact that was perceived as disruptive to daily life increased others understanding.

All of the participant experts shared at least one instance of encountering ableism, and many of the participants shared multiple and repeating experiences with ableism. The narratives of the participant experts guided me to further divide ableism into the sections presented above: assumptions or misattribution, microaggressions, experiencing disbelief, and perceived legitimacy. As detailed in the next section, many participants also connected their experiences with ableism with experiences of surveillance and the intersection of dis/ability with other aspects of their identity.

Surveillance and Identity

In addition to ableism, the second domain of apparentness that I identified in participant narratives was surveillance, the role of identity, and experiences of "standing out on campus."

All of the participants described experiences with feeling surveilled by others. Several of these experiences for participants were tied to the intersection of their dis/ability with another aspect of social identity or physical characteristics. Participants with multiple marginalized identities often found their other marginalized identities served to enhance their experiences of apparentness either in the form of hypervisibility or further masking recognition of dis/ability. Three sub-themes make up surveillance and identity: notable bodies, racial identity, and other identities.

Notable Bodies

Participants described several reasons that their physical characteristics or status as an "only" on campus increased the surveillance they felt on campus. For participants with physical or sensory dis/abilities, this often led to experiences of hypervisibility. Multiple participants made note of being the only person at their institution with a similar type of dis/ability or impairment and that this made them not only stand out but also be memorable. Sunny explicitly noted, "For me in campus, I'm the only one with such a kind of disability in school and anytime I do try to find my way through the campus every eye is on me and that's something that is very uncomfortable." Halk, who has one leg that is shorter than the other, also noted being one of only a few students with physical dis/abilities on campus. Avatar described feeling as though people notice her and her dis/ability "just because I am different." She also noted, "I am taller than normal people. So, I stand out and then you notice my disability." Like Avatar, Halk and Suzanne also noted that they are tall and tied that to the visibility of their respective dis/abilities. One participant explicitly described instances where she felt her appearance masked her dis/ability. Amelia shared that she had doctors and others "ignore symptoms attributing them to weight." This led her to conclude, "Physical appearance…in my experience…has affected the way I have been believed if I have been ill or not."

Race

Black participant experts with physical or sensory dis/abilities found that hypervisibility on campus due to race served to enhance the visibility of dis/ability—and vice versa. Of the six participant experts who are Black, five of them explicitly noted that they believed their race impacted the way their dis/ability was viewed. Avatar, who attended a predominantly white institution, noted, "Just being Black itself makes you stand out. So being Black and having a disability, just like makes you stand out even more." Halk also shared that because his schools were mostly attended by white students, he experienced repeated instances of what he described as hyper-apparentness. He noted that in his experience, "the fact that you are Black stood out and so after standing out that you're Black, it's also stands out that you also have a mobility disability." In describing his collegiate experiences, Halk described that because of his relatively darker skin color, he believed he stood out even when in the presence of other Black dis/abled students. When talking explicitly about another Black dis/abled student he knows on his campus, Halk shared,

> His [another student] skin tone is not quite as Black as I am. He probably looks Mexican or Hispanic, as compared to looking completely Black-American or African-American. And so I still, at that point, even when we are put together, still stand out, and so I think there is that hyper-apparentness in my case.

Sunny also described the impact of attending a predominantly white institution. He described how many of his friends are also Black, and when they walk around campus, their group stands out. However, Sunny noted, "You will definitely notice that there is only one guy walking with a weird kind of gait and that maybe he has a weird kind of big shoe." Like other Black participants, his narratives regarding others noticing his dis/ability centered on others first surveilling him because of his race.

Avatar also attended a historically white institution; however, it was more racially diverse than those attended by Sunny and Halk. Her narrative contained an additional layer of analysis as she compared her experiences in locations she described as "a white people place" versus being with other Black people. To her, she felt that when she was surrounded by Black people, "it is like I am just like them. It is just that I have a disability on top of that." However, she felt like she was othered because of her dis/ability to a greater extent when surrounded by white people.

Other Identities

Dis/abled participants also described instances where they believed other aspects of their identity (beyond race) impacted the relative apparentness of their dis/ability. Other identity categories that at least one participant described as influencing the apparentness of their dis/ability were gender, sexual orientation, age, and socio-economic status.

Amelia shared experiences, specifically with medical professionals, where her chronic fatigue was dismissed as being "normal for women." Daniel and Bernadette both drew connections between their queerness and dis/ability, with Daniel noting their "queerness and [sic] disability are more prominent together." Bernadette, however, noted that, at times, people were unable to determine if what they were observing was an aspect of her queerness or her dis/ability. She shared, "I think sometimes someone has stereotypes of [behavior], and then they are like, that's off. Sometimes, I think queerness plays into that. They are like, 'Is she queer or is she disabled?'" Amelia encountered a lot of resistance from people who did not believe that younger people could have significant chronic health conditions. Additionally, Halk noted that socioeconomic status impacts visibility of dis/ability because of the cost of adaptive equipment and clothing.

Many of the narratives shared under the theme of surveillance and identity were connected to the next theme of taking action. Multiple participant experts shared how they actively sought to control how others viewed them through perception management in order to mitigate the impacts of ableism and surveillance. Participant expert narratives were divided actions into four categories or sub-themes under taking action, which are detailed in the next section: masking, concealing, disclosing, and revealing.

Taking Action

In addition to ableism and surveillance, participant experts also described engaging in a number of actions designed to minimize or enhance the apparentness of their dis/ability in certain contexts or circumstances. Actions described by participant experts included instances of masking or concealing dis/abilit(ies), actively disclosing, or engaging in activities that intentionally revealed their dis/abled identity.

Masking

Daniel, Irene, and Bernadette all explicitly discussed the act of masking their dis/ability in order to appear neurotypical or avoid additional scrutiny. For these three, masking included sustained and sometimes intuitive or unconscious behaviors that allowed them to blend into their surroundings. Daniel believed that most of their peers and faculty would have little to no idea about their dis/abilities or the impacts they experience. They noted this was "because I am really good at masking, pretending, playing along. You know, acting normal." Irene also noted her developed skills as the result of "years of experience covering up, masking, hiding." Daniel, Irene, and Bernadette described masking as being their default setting in many environments because of past experiences with stigma and ableism. Bernadette also shared that her masking

often led to peers not recognizing the impacts of dis/ability and rather misattributing her experiences with crip time in academics as slowness or procrastination.

Concealing

Unlike masking, which participants often used intuitively to blend in with peers, concealing is the intentional act of deciding not to disclose or to actively hide their dis/ability. The decision to conceal, for many participants, was not an indicator of internalized ableism but rather a conscious form of stigma management. Bernadette explained concealing as a tool to avoid potential stigma or expending effort to explain her dis/ability. She shared,

> I look at the syllabus. Okay, there are no in-class assignments. I am...there is nothing graded in class. There is no reason to disclose...I have had some really discriminatory comments in those meetings [with faculty], and I don't want to put myself through that.

Other participants, including Quinn, Irene, Avatar, David, and Amelia, echoed the desire to reduce emotional encounters or the expenditure of mental energy explaining dis/ability when it was unnecessary.

Multiple participant experts discussed sticking to familiar locations or avoiding places with new people in order to reduce the amount of scrutiny they felt. This narrative of wanting to "fly under the radar" (Quinn) was especially prevalent for individuals in the study who described the environment or interactions with others as a factor in the visibility of their dis/ability. For example, Avatar said, "[Attention] is so hard for me, but I tend to go to places that are familiar. So, it's like I have a sort of schedule. I go to class. I sit in this particular spot in the in school, like I have a sort of routine just to make things easier." David also noted,

> I'll say one of the things I try to do is try to minimize movement around. I also try to avoid...Okay, passing by or other nearby, crowded places. And I'll say with that is just easier for me. I will say at other times, I choose, probably to stay maybe in my friend's place to try to avoid moving around so that I could limit that because I don't really enjoy [attention].

Just as participants described manipulating locations they frequented in order to minimize visibility, some participants also described manipulating time in order to conceal the impacts of their dis/ability. David, Avatar, and Sunny all described ensuring they arrive early to classes so that they can enter without scrutiny, in addition to finding a seat that would work well for them.

Avatar, Halk, and Irene described additional actions they took to conceal the impacts or existence of dis/ability. Avatar and Halk would decide to leave their access aids at home or in their car so as not to draw additional attention. Both Avatar and Halk felt this was more possible in environments they were familiar with and, in the case of Avatar, explicitly influenced her decision to frequent the same locations and develop a routine. Unlike Avatar and Halk, Irene had multiple diagnoses and would strategically use disclosure of one in order to conceal the others. She described that after being diagnosed with PTSD, she would leave disclosure of PTSD as a last resort. She shared,

> If I feel like I need to disclose it's usually the ADD first. But you know if I feel like I need to share more than it, I will do the depression, but PTSD, I don't feel like anyone really needs to know about.

Quinn also described instances where she would choose to share some of her diagnoses and strategically conceal others.

Disclosing

Participants, particularly those with chronic health, mental health, or learning-related dis/abilities, engaged in deliberate acts of disclosure. These disclosure processes in educational settings took on multiple forms, ranging from institutional-mediated disclosure in the form of accommodation letters to more personal disclosure discussions with peers, potential mentors, or perceived advocates. Most of the participants in the study who shared narratives of disclosure did

so in response to ableism—either proactively to engage in stigma management or reactively after encountering barriers.

Bernadette described meeting with faculty prior to the start of classes in order to control the disclosure process and to proactively address misconceptions or stereotypes about her dis/abilities. She described how this process was helpful to faculty but also, "I get to frame my disability. I really like having a sit-down meeting with them to say, 'Okay, here is the thing. This is what it looks like. This is what I am going to need.'" Suzanne also used disclosure as an opportunity to not only advocate for specific access supports but also to personalize her experience with dis/ability for the instructor. She described explicitly telling faculty, "This is what I am experiencing," and then tying those experiences directly to course-related needs. Both Bernadette and Suzanne stressed that they believed it was important to have these conversations in person in order to personalize the experience of dis/ability.

Halk and other participants with physical dis/abilities experienced disclosure differently. Halk shared that he rarely had to tell others about the existence of his dis/ability because of how observable it was. However, he still experienced aspects of disclosure and engaged in perception management. He shared that "people, they don't know the issues or how people with disability deal with issues. They are not quite familiar with it and so it is upon you to make them aware of such." His disclosure narratives more often centered on sharing how his dis/ability impacted him than on revealing the presence of dis/ability.

Revealing

Participants viewed disclosure as separate from revealing, as disclosure was often a required act to ensure access. As discussed above, at times, disclosure felt forced or coerced and often involved one-on-one interactions with institutional actors. On the other hand, revealing was

described as an intentional act designed to connect with community, share identity status, or make clear to a wide audience the presence of dis/ability. Daniel described the challenges they experienced with making their dis/abled identity apparent to others. However, they did note that "wearing a sticker or a button or a shirt" were all ways to identify yourself to others with dis/abilities. Bernadette described involvement in a dis/ability activism group on campus as a form of revealing dis/ability—not only to others but also as a way to deepen her own sense of identity as dis/abled.

Several participants, including Sunny, Quinn, Bernadette, and Irene, described taking actions on campus to enhance the visibility of their dis/ability to their peers and faculty. For Sunny and Quinn, this involved using movement or space. Sunny described resisting urges to hide and shared, "I don't feel shy about [my disability]. I could hide. In class, maybe from class to home, home to class. But no, I try to move around campus and be the sort of person who engages a lot." Quinn similarly described that even though she is not an extrovert or someone who likes attention, she felt she "had to step outside of that box, that comfort, be very apparent." For her, this meant sitting prominently in the front row in class while displaying her cane. Bernadette and Irene instead engaged in actions to reveal disability through writing or academic pursuits. Bernadette said she would "purposely write about disability…because if you are writing about your disability, they have to read it." Irene also used writing, particularly as a doctoral student, to begin sharing self-identification as a person with a dis/ability. For her, revealing was an intentional way to relate more with the students with whom she was working.

Embodied Dis/ability

The final theme encountered in the data, and perhaps the most expected, was the role of embodied dis/ability. Embodied Dis/ability encompasses the impairment itself (e.g., limb

difference), the impact(s) of impairment (e.g., crip time), and the adaptive or embodied technology (e.g., wheelchair, speech to text) used to mitigate impacts and maneuver the world. These experiences can be represented through movement, crip time, aides, adaptive tech, medication, and absence. Each of these sub-themes is described below.

Movement

The first aspect of embodied dis/ability encompasses movement, communication, and other perceptible bodily manifestations of impairment (e.g., limb difference, raspy breathing, etc.). Participants described this aspect as being most obvious when their movement or communication deviated from what others considered expected or normal ways of being within a particular space or activity.

Sunny, David, and Halk shared the most concrete examples from their own experiences of the role of movement in revealing their dis/ability. Sunny and Halk described that when they are seated, rarely do casual observers notice their dis/ability and limb difference. However, Halk noted, “When I am walking, it is very noticeable.” Both Sunny and Halk explained that if someone was looking carefully or knew what they were observing, then their impairments would be visible while seated. Sunny explained, “When you look carefully, you will see that I have this kind of seated position where I lean to one side.” He noted that because this seated position was not typical of his peers, it did draw attention but to a lesser extent than when he is walking. Halk, in discussing the academic environment, shared, “When I have to stand to give a speech or presentation, it becomes so apparent.” His narrative revealed that the type of activity he was engaging in drastically impacted the visibility of his dis/ability. Multiple participants also shared a difference in visibility when courses were held on Zoom during the pandemic. Halk, Sunny,

David, Bernadette, Quinn, and Irene all believed their dis/ability was less noticeable via Zoom than when meeting others in person.

Sunny, Halk, and David all had a gait or pattern of movement that they described as highly noticeable to others. Other participants also described instances where they believed their behavior revealed their dis/ability. Bernadette believed her responses to social cues revealed her disability. She guessed that people would often notice "there is something off… a miscommunication. Things that don't quite match up…they know those things are happening but they don't know what it is." Suzanne noted she is unable to tell when people wave at her on the street, which leads folks to think she is ignoring them or question why she did not notice them until they spoke to her. Irene believed that her workstation would reveal aspects of her dis/ability because of her inability to keep it organized in a way that others recognized.

Participants also described written or verbal communication as revealing their dis/ability. Examples of visibility in communication were most apparent in the narratives of Bernadette and Amelia. Bernadette shared,

> I guess the other apparentness is there are certain words I just mispronounce…Or spelling of people's names. Some people get really annoyed by that. You might not know what you are seeing is dyslexia, but you are going to see it.

Amelia, who experiences chronic breathing issues, felt she "sounded like Darth Vadar" and believed her dis/ability was apparent anytime she spoke with someone.

Crip Time

Participants' narratives revealed experiences with fatigue and pain, which often resulted in the participants either experiencing or participating in crip time and prioritizing when/how to expend limited energy. At times, these experiences with fatigue or pain were visible to peers. As an example, Quinn shared that while she did not always think her pain was visible to others,

there were days when others made it clear they were observing a difference in her. Many of her classes took place on Zoom, and she shared she would receive

> chat messages on days when I am not as put together as I want to be or I look exhausted. And it is usually other students and the faculty saying, 'Are you okay?' So even though I may think that I am hiding all of those things, clearly, I am not or I wouldn't be getting those messages in Zoom. And while I know that they are well-meaning, sometimes I think, 'Just stop. I just want to be a normal person today.'

Halk also shared similar experiences that occurred while attending in-person classes.

Halk explained that the visibility of his dis/ability was indirectly influenced by pain. On days when he is not in pain, he wears clothes that are tight-fitting and does not carry any of his adaptive aids, which minimizes visibility when he is sitting. However, on days when he is experiencing high amounts of pain, he shared that he has "to wear loose clothes and it's clear that there is this part of that the cloth that I have to fold up...and so it is really showing." His pain varied but was often influenced by the weather. Hence, he felt that when it was particularly hot or cold, he experienced more scrutiny from peers because of how his pain enhanced the impacts of his dis/ability. Sunny shared similar experiences with the combination of pain and environment influencing how visible he felt his dis/ability was to peers. He shared that activities that required a lot of standing took a toll on him and that in classes like labs, his fatigue and pain would grow throughout the session, causing a noticeable difference in his demeanor from the start of class to the end. Sunny described himself as "kind of dull, kind of worn out" in the afternoons compared to feeling lighter in the mornings as the result of the cumulative effect of effort throughout the day.

Other participants, including Amelia, Quinn, and Avatar, described the impact of mental or physical fatigue on not only the visibility of their dis/ability but also as influencing the speed at which they could complete things that were routine tasks for their peers. Amelia summed it up

best, saying, “I feel like I am working 100 times as hard and producing, like, a 10th of what I would normally be able to do.” Quinn and Bernadette both endorsed this sentiment, specifically when talking about thinking and writing. They believed their peers had little concept of the amount of time academic tasks take them and instead just saw that they are almost always one of the last to complete work. Avatar also felt she had to “go an extra mile just to get what everyone else is getting easily,” referencing her need to listen to class recordings multiple times to take in information.

Aides, Adaptive Tech, Medication

In addition to physical differences or the impacts of pain and fatigue, many participants also described the role that their aides, adaptive technologies, or medication played in the overall visibility of their dis/ability. Adaptive technologies often improved access for participants and, in some cases, reduced the visibility of the impact of their impairments. However, for many of the participants, the perception was that their adaptive technologies increased noticeability and attention. Often, they tied this increased visibility to their adaptive technology, which stood out as something outside of the norm. Avatar believed her glasses, which she wore daily, made it evident she had low vision because the glasses were “really not like the normal kind of glasses. They are really thick with a yellowish color.” Additionally, Avatar also occasionally used a white cane to navigate. She described how the use of the cane “amplifies the magnitude to which [others] tend to notice you” because it is a symbol firmly tied to blindness.

Other participants also noted differences in apparentness based on which adaptive technology they were using at a given time. David alternates between using a wheelchair and crutches and noted that he felt much more visible and received more attention when using his wheelchair as compared to crutches. He stated,

> I will say that the wheelchair is weird in a way because most of the time, we will find people try to observe the person in a wheelchair. Unlike when you are using crutches. I probably think because in a wheelchair, you are moving while sitting, and people try to get your attention. 'Okay, what is happening here? What is going on here?' But when you are using crutches I think it is only people who are keen observers [who notice].

Halk also expressed a similar sentiment regarding the differences he observed when he was using a walking cane versus when he was not. Like Avatar, the additional scrutiny and attention often led Halk to avoid using his cane whenever possible.

Participants also referenced medication and its impacts as something that influences their experiences of apparentness. Several participants took daily medication to manage various symptoms of their dis/abling condition, which some noted may have made their dis/ability less apparent (e.g., managing focus, controlling panic attacks). However, some participants noted that the act of taking medication, especially a rescue medication that you have to carry and may need to take in public, was something that others noticed. In both Amelia's and Irene's experiences, the stigma related to medication and peoples' reactions made them aware that their medication use was noticeable. Amelia also experienced physical changes that were caused by her medication—in her case, substantial fluctuations in weight, which she felt were both very noticeable to others and at times caused people to dismiss her dis/ability as a result of her weight (both when she was significantly underweight and when others perceived her to be overweight).

Absence

The final aspect of embodied dis/ability is that of absence and the way that the act of being physically absent from spaces or activities contributes to apparentness. Absence took multiple forms in the narratives of participant experts but was a theme that was represented in two-thirds of the interviews. Daniel described absence as a form of involuntary disclosure—

especially if the absence was particularly notable to peers by being extended, recurrent, or during a key activity.

Daniel, Irene, and Amelia all described instances where the health impacts of their dis/ability required them to be hospitalized for an extended period of time or have recurring treatments that led to them missing a substantial number of classes. To Irene, her absences were what she believed made her experience of dis/ability most apparent to her peers. Without absences, she didn't think that others would be aware of her dis/ability. Amelia described both instances where she missed "a lot of classes [over time] for treatments because of infusion therapies" and an instance while studying abroad where she was hospitalized and missed a large chunk of the required experiences for the study abroad program.

Other participants described how the structure of their accommodations caused them to be absent during key activities such as exams. Participants with smaller classes felt this was more likely to be noticeable than those with large classes, and all of those with testing accommodations that pulled them from the classes assumed at least some of their peers noticed their absence. The following quote from Quinn exemplified the narratives of multiple participants:

> There is a lot of stigma from the student perspective, especially if you take a test outside the classroom. I think it is natural for people to think...' what is everybody else going to think when I don't show up to class? Are they going to ask me questions about this? Do I have to explain myself?' And all of that feels really awkward.

Similarly, participants who experienced chronic fatigue or pain also believed that others noticed when these impacts kept them from participating in social activities. Halk believed his friends presumed his absence was dis/ability-related when he was not present at athletic events or cheering on friends at competitions.

David, Halk, and Sunny also included lateness as a form of absence. Many of their narratives centered around taking action to avoid lateness to class because of how lateness made them noticeable to peers and faculty. However, they also shared that, at times, lateness was unavoidable due to experiences of crip time. David described how sometimes it was not physically possible to get from one location to another in a way that did not cause him to be late. He noted, “I could be some few minutes late to class because I don't just move faster like the other students...I have to move myself, and my wheelchair is not electric. So that's a bit challenging.” Sunny and Halk also described lateness as an impact of how they were able to move across campus.

Summary

Chapter 4 provided a comprehensive view of themes that arose in the stories shared by participant experts during their interviews. As described in the chapter, interviews revealed both items that served to enhance or mask the visibility of dis/ability in both active and passive ways. Additionally, participant expert narratives included interactions that revealed others’ recognition of dis/ability through behavior that exposed the awareness of and reaction to difference. The next chapter details how participant expert narratives were used to inform the development of a survey instrument and the process of refining and testing the results of the survey instrument.

CHAPTER 5-SCALE DEVELOPMENT AND FACTOR ANALYSIS: DEVELOPMENT AND VALIDATION OF THE SCALE OF DIS/ABLED APPARENTNESS IN EDUCATIONAL SETTINGS

In the prior chapter, I shared the thematic findings I compiled from interviews with participant experts. The findings from Chapter 4 were categorized into four themes or domains underneath apparentness: ableism, surveillance and identity, taking action, and embodied dis/ability. These themes informed the generation of a pool of items. In this chapter, I describe the process of developing the Scale of Dis/ability Apparentness in Educational Settings (SDAES). I begin by describing the process of item development, followed by a discussion of the survey creation and distribution, and close the chapter by describing the process of analyzing the SDAES.

Item Development

Item development encompasses the process of creating a pool of items that relate to the latent variable to be measured by the scale (DeVellis, 2017). Items were developed based on the extant literature relating to apparentness of dis/ability and the participant expert narratives shared in Chapter 4.

Theme Verification and Refinement Through Focus Group

I began the process of item development by re-engaging participants in a focus group discussion to verify and refine identified themes from the interviews. Not all participants were able to participate in the same focus group, so I held two sessions in October and November 2022. All but one of the original 11 participants attended one of the focus group sessions and provided either verbal or written feedback on the identified themes. Prior to the focus group

sessions, I sent a document (see Appendix D) to all participants that articulated the identified themes, the number of participants who shared comments I coded into that theme, and examples of statements that I coded into each theme.

During the focus group sessions, participants were asked to share their thoughts regarding the data and how I had treated their specific narratives. As part of the document I sent in advance, I outlined the following questions to help guide our discussion of each theme and sub-category:

1) Does this theme resonate with you?
2) For those of you whose experiences I have included under this theme, does the way I have categorized your experience fit with how you meant the example?
3) For those of you whose experiences are not represented, can you think of experiences you have had that fall under this category?
4) What examples would you add based on your experience?

Participants largely affirmed the identified themes and sub-categories and, in many cases, were able to expand on their own experiences and add additional context to themes they may not have talked about in their initial interviews.

However, there were a few notable locations where participants challenged how I had categorized specific examples and extended my thinking. In particular, participant experts questioned the lack of analysis of the role environmental context plays in the apparentness of dis/ability, which ultimately resulted in the addition of a new latent variable, Environment. Participant experts also suggested the addition of a sub-theme under Taking Action that considered the act of concealing. Bernadette, in particular, shared examples of where she saw her actions I had characterized as masking as being more deliberate acts of concealing dis/ability

rather than masking to cover the impacts or appear neurotypical. Participants of Color, specifically Halk, Suzanne, and David, also saw their experiences with surveillance as intimately tied to their racial identity on campus and argued for the combination of these into a single domain. Halk and David also considered their adaptive equipment to be tied to their experiences of Embodied Dis/ability and they did not believe that it should be represented as its own domain.

Discussion of Item Development

After clarifying and refining the latent variables I hoped to measure (e.g., Environment, Ableism, Taking Action, Identity, and Embodied Dis/ability) based on the feedback of the participant experts, I generated a list of potential items that related to each of the latent variables and spanned across the sub-categories. For the initial list of survey items, I did not worry about the number of items per latent variable, whether the questions were positively or negatively worded, or whether statements were redundant. The goal of the first round of item generation was to create an expansive list that could later be refined for clarity and consistency (DeVellis, 2017). The initial pool of items generated in this first round included 117 statements.

Following the completion of the open generative list, I reviewed the items to clarify wording where necessary. During this process, I observed that the majority were positively worded items, and as a result, I converted several statements to be negatively worded. For example, I converted the statement “My dis/ability is always visible” to “My dis/ability is not visible in any setting or context” in order to shift to negative wording and to provide the respondent with greater context. My goal was to significantly shorten the number of questions prior to distributing an instrument to improve response rates and provide a clear and concise experience for participants. I attended to the impacts of crip time and considered that for some participants, the act of completing the survey would require substantial time and energy. I cut the

number of items I included from my original list of 117 to 92, with no more than 20 items per domain.

Survey Creation and Distribution

Once I had developed an initial list of items, I moved into the development of the survey instrument in Qualtrics. In addition to the items directly related to the identified domains, I also included two open-ended questions asking participants to describe their dis/ability and how they thought about the apparentness of their dis/ability, as well as several demographic questions. Prior to cognitive interviews, I invited all of the participant experts to provide written feedback on the survey instrument, and I received comments (detailed in Chapter 3) from nine of 11 participant experts who engaged in the initial interview process.

Expert Cognitive Interviews

As described in Chapter 3, I used cognitive interviews to further refine the instrument before submitting it to IRB and collecting survey responses. After considering the feedback I received from the participant experts and making the necessary adjustments, I distributed the drafted instrument to six individuals with relevant personal and professional expertise (see Table 5.1) and engaged these individuals in cognitive interviews regarding the instrument.

Table 5.1

Experts Engaged in Cognitive Interviews

Expert	Disability	Expertise
Expert 1	Anxiety, Connective-tissue Disorder, Depression, Learning Disability	Master's student working in Dis/ability Resources at a public institution and with lived experience with dis/ability
Expert 2	ADHD, Anxiety, Autoimmune Disorder, Depression	Doctoral student teaching classes in dis/ability studies and with lived experience with dis/ability

Expert	Disability	Expertise
Expert 3	Blind	Undergraduate student with lived experience with dis/ability and user of screen-reader to test the accessibility of instrument
Expert 4	ADHD, Anxiety, Autism, Depression, Dyslexia, PTSD	Doctoral candidate in higher education with research on students with dis/abilities and experiences of gender-based violence and with lived experience with dis/ability
Expert 5	Anxiety/Depression	Doctoral candidate in higher education researching inclusion of dis/abled students in housing and with lived experience with dis/ability
Expert 6	Dyslexia	Higher education faculty member with dis/abilities whose area of research is college students with dis/abilities

Six individuals were engaged in cognitive interviews, and all of them had lived experience with dis/ability. One also had work experience in dis/ability resources, and four had an academic area of focus related to dis/ability. These six experts were chosen to participate because they represented my target population (e.g., experts 1 through 5) or had academic/research expertise related to my target population (e.g., experts 2, 4, 5, and 6). The experts largely affirmed the content and wording of the instrument but did provide detailed feedback that resulted in an additional round of changes prior to distribution.

Expert 1

Expert 1 provided multiple and specific points of feedback regarding questions that could be edited in order to clarify their meaning. Her feedback was invaluable in wordsmithing a number of questions. Expert 1 suggested adding the word “present” to the end of the item asking about apparentness in “an environment where I know only a few people” to be consistent with

the wording of similarly structured questions. She also noted that "people I do not know or do not know well, notice something about my dis/ability and comment on it" was long, and the first clause was confusingly written. She suggested mirroring an earlier question and replacing "people I do not know" with "strangers." An additional item she suggested alternative wording for was originally written as "people are aware when my dis/ability causes things to take me more time to complete." Her suggestion was to replace this statement with "people notice when my dis/ability causes me to need extra time to complete tasks."

Expert 1 is also a user of a number of mobility aids and adaptive technologies, so she had recommendations for several of the items that pertained specifically to the use of aids. For the item that read, "Do you use one of the following aids or assistive/adaptive technologies because of your dis/ability?" She recommended removing the word one and replacing it with *any* "in order to be more inclusive of persons who use multiple aids or assistive tech solutions." In reviewing the statement, "People's treatment of me changes depending on if they see me using a mobility aid or access tool," she noted,

> I think this can be condensed for clarification. People's treatment of me changes if they see me using a mobility aid or access tool. Also, I don't know if the term "access tool" is readily defined in many persons vocabularies. Maybe it would be helpful to provide a few examples as you have done in the question the denotes medication as an access tool. I would not have thought of my meds as an access tool.

I ultimately decided to cut the item mentioned above in order to shorten the overall length of the instrument; however, I incorporated her feedback into other items related to mobility aids and assistive tech to make the intent of the questions clear.

Expert 2

Expert 2 had only minor wording edits that they suggested. However, they did wonder how individuals with dynamic dis/abilities (e.g., those who experience flare-ups) would respond

to items that asked participants to rate their apparentness for different audiences and in different environments. While she did not have a specific recommendation, she wanted me to think about whether examples or specific language could help to ensure those with dynamic dis/abilities participated in the study.

Expert 3

Expert 3 not only reviewed the instrument for content but also provided feedback on its accessibility for someone using a screen reader and keyboard navigation. This helped to ensure that the final iteration of the survey was fully accessible to blind and low-vision participants. Expert 3 noted that the length of the survey did make it difficult to complete and shared,

> The questions look great. They are questions I can relate with. The questions are clear and easy to understand. I'm a bit bothered about the length though. It's a lot. Lots of boxes to tick. It's okay, though, but would be great if there can be a pruning/review of the questions.

She specifically indicated that she recommended trying to trim approximately ten questions and noted that she believed items in the environment section could be cut.

Expert 4

Expert 4 indicated that they had to read the item "I have been told by someone that they know someone else with my same dis/ability and it is not that bad" multiple times in order to comprehend what it was asking. To clarify and provide more concise wording, I edited the statement in the final version of the instrument to read, "I have been told my dis/ability is not that bad."

Expert 4 also noted that the wording of the list of dis/abilities and conditions was confusing at a few points because it was not in alpha order, which made it more difficult for them to find the options they were looking for. She specifically suggested editing the statement about "another mental health condition" to include a list of what was included as individual

categories elsewhere in the list (e.g., anxiety, depression, PTSD). Expert 4 also would have liked to have seen a definition of apparentness (as I was using it) to help participants who may be unfamiliar with the term fully participate. To help ensure participants had a working definition of apparentness, I added an example to the open-ended question regarding apparentness. This example read, e.g., how visible or invisible your dis/ability is to others.

Expert 5

Expert 5 noted that as someone with multiple dis/abling conditions, they could imagine students being confused when being asked questions about "your dis/ability" (e.g., "How apparent do you believe your dis/ability is to...") as a singular experience. To improve the clarity, I added the following statement to the survey to help explain how I wanted to measure dis/ability as a cumulative experience.

> For the purposes of the following questions when it asks for you to designate the apparentness of your dis/ability or to respond based on your experience, if you have more than one dis/ability or health condition please respond considering your holistic experience with dis/ability rather than a singular diagnosis or condition. For example, I have anxiety, OCD, and chronic migraines. When responding I would consider all three rather than answering only in relation to anxiety.

Expert 5 noted that they believed I would get more robust answers to "How do you describe your dis/ability?" if it was located prior to the list of conditions, as this would allow participants to respond using their own language rather than the language I have used within the survey.

Expert 6

Expert 6 recorded herself taking the survey to provide her initial reactions to each question and to share her process when she needed to figure out the wording of a question. Her feedback mirrored many of the other items noted by the first five experts but also included detailed suggestions about stylistic and wording choices that could make the survey more difficult for some users with dis/abilities. As someone with dyslexia, she suggested adding

colored banding to the Likert tables to help define specific lines for the reader. She also noted specific words that she found difficult to process, and that caused her to initially read the question incorrectly. For items where an important word like “all,” “any,” or “not” was used, she suggested bolding the operative word so that participants with print-related dis/abilities would not miss the important context.

Distributing the Final Instrument

After I incorporated final edits to the survey in Qualtrics and received approval to proceed from the Institutional Review Board, I distributed the instrument. I primarily distributed the instrument via e-mail to staff at dis/ability offices at institutions throughout the United States. Staff were asked to distribute the call for participants to students connected with their office via e-mail and include a link to the survey instrument. In addition to distribution via e-mail, I also posted the call for participants on social media and hung physical flyers in the dis/ability cultural centers at five institutions. The survey itself also ended with a link and QR code to the survey that I asked individuals who completed the survey to share with their networks in order to get additional respondents through snowball sampling. My original target goal was to collect approximately 500 responses, which I achieved in May 2023. After running a few initial tests to confirm sampling adequacy, I closed the survey on May 15th in order to begin statistical analysis of the data.

Analysis of the Scale

I began the process of analyzing the data by organizing and cleaning the data. I first reviewed responses within Qualtrics, where a total of 612 responses were submitted. Partial responses that were started but never submitted were automatically deleted by Qualtrics after one month of inactivity. As I noted in Chapter 3, I did a manual review of responses and ultimately

removed 129 responses prior to analysis. Table 5.2 identifies deleted responses and the reason they were removed from analysis.

Table 5.2

Responses Removed From Dataset Before Analysis

Type	Number	Detailed Reason for Removal
Flagged as BOT Completed	45	Qualtrics BOT detection tool flagged 45 responses that its sensors believed were not submitted by humans. All 45 were submitted between April 20th and April 22nd. I reviewed them before deletion and all of them were either incomplete, selected only the first choice for all answers, or were completed in less than 2 minutes.
Manually Identified as BOT Completed	41	The 41 submissions removed were also submitted between April 20th and 22nd and were identified during a manual review of all submissions from these dates. Criteria for removal were a completion time of less than 3 minutes, a mismatch between questions asking about disability type (e.g., open-ended stated "I use a wheelchair," dis/ability type multiple choice selected "anxiety," and assistive devices indicated "hearing aids"), or an obvious pattern to selected responses (e.g., all first choices, all last choices, choices 1 then 2 then 3 in a repeating pattern, etc.).
No Response to Open-Ended Questions	22	There were 22 responses where the respondents did not complete any open-answer questions, which would have made analysis and verification the response was completed by a human difficult.

Type	Number	Detailed Reason for Removal
Missing half of Likert Responses	10	A total of 10 respondents did not complete at least half of the Likert scale questions, and answers did not seem to be missing at random (e.g., were not skipped accidentally).
Under 18	7	A final seven responses were removed because the respondents indicated they were under 18 and thus did not meet the criteria for inclusion in the study.

After I finished cleaning the data, I created a data guide and coding document (see Appendix I) where variables were named and the coding measures were identified. Survey responses for items e1 through e9 were coded 1 (*never*), 2 (*rarely)*, 3 (*sometimes)*, 4 *(frequently)*, and 5 (*always).* Items e10 through e20 were coded 1 (*strongly disagree*), 2 (*somewhat disagree*), 3 (*somewhat agree*), and 4 (*strongly agree*). Items a1 thru a15 were coded 1 (*never*), 2 (*rarely), 3 (frequently),* 4 *(always).* Items t2 and t4 thru t14 were coded 1 (*never*), 2 (*rarely), 3 (frequently),* 4 *(always).* Items i1 through i12 were coded 1 (*strongly disagree*), 2 (*somewhat disagree*), 3 (*somewhat agree*), and 4 (*strongly agree*). Items d1 through d5, d9, d11, d12, d15, d16, and d18 were coded 1 (*strongly disagree*), 2 (*somewhat disagree*), 3 (*somewhat agree*), and 4 (*strongly agree*), and items d6 through d8, d10, d13, d14, d17, d19, and d20 were coded 1 (*none of the time*), 2 (*some of the time)*, 3 (*most of the time*), and 4 (*all of the time).* Following the creation of the data guide, I moved on to factor analysis to validate and test the reliability of the scales.

Factor Analysis

I identified five domains that I believed contributed to apparentness, so I treated each domain as a separate scale and conducted factor analysis on each domain. Before beginning factor analysis, I first conducted measures of sampling adequacy and statistical tests to estimate the descriptive statistics and correlations between items within each domain.

Descriptive Statistics and Correlations

I first estimated descriptive statistics for all items included under the five domains of apparentness. These descriptive statistics included the mean, standard deviation, skewness, and kurtosis for each item, as well as the number of responses. Ten items (see Table 5.3 and Table 5.4) were removed from analysis because they were not shown to all respondents due to faulty skip logic in the Qualtrics survey. Items t1 and t3 were only shown to participants who indicated more than one category of dis/abling condition and items d13-d20 were only shown to participants who indicated the use of at least one assistive device. The issue of faulty skip logic is discussed further in Chapter 7 under limitations and implications for future research. Table 5.5 shows the descriptive statistics for items e1 through d12 (n = 483).

Table 5.3

Descriptive Statistics for Removed Apparentness Scale Items (n = 424)

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
Taking Action	t1	When disclosing, I share all of my dis/abilities/diagnoses with the other person.	2.14	.875	.593	2.80
	t3	When disclosing, I share some of my dis/abilities/diagnoses but not others.	2.58	.891	-.079	2.26

Table 5.4

Descriptive Statistics for Removed Technology Items (n = 347)

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
Embodied Technology	d13	My aide or adaptive tech is noticeable to others.	2.05	.100	.655	2.38

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	d14	I use my adaptive tech.	2.59	.947	.104	2.03
	d15	My adaptive tech is widely used for a variety of reasons (including reasons other than dis/ability).	2.44	1.00	.210	1.97
	d16	My adaptive tech does not draw attention to my dis/ability.	2.66	.977	-.091	1.98
	d17	I use an access tool (including medication) in public settings.	2.40	1.05	.214	1.85
	d18	The adaptive tech or access tool that I use is widely known to be a device used by dis/abled people.	2.58	.988	-.168	2.01
	d19	My aid or access tool makes the impacts of my dis/ability less noticeable.	2.93	.992	-.502	2.15
	d20	I avoid using my adaptive tech around other people.	3.05	.937	-.699	2.55

Table 5.5

Descriptive Statistics for Potential Apparentness Scale Items (n = 483)

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
Environment	e1	Environments I am in daily and have significant control over.	3.31	1.09	-.118	2.26

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	e2	Environments I am in frequently but have minimal control over.	2.82	1.06	.263	2.68
	e3	An environment I have never encountered before.	3.02	1.21	.013	2.09
	e4	An environment or activity that requires me to communicate with others.	3.14	1.11	-.024	2.43
	e5	An environment or activity that requires me to move around.	2.71	1.16	.309	2.35
	e6	An environment or activity that requires me to be stationary.	2.72	1.12	.300	2.49
	e7	An environment where I know all of the other people present.	3.06	.995	.019	2.75
	e8	An environment where I know only a few people present.	2.83	1.02	.236	2.60
	e9	An environment where I know none of the people present.	2.78	1.26	.258	2.10
	e10	My dis/ability is not visible in any setting or context.**	2.83	.961	-.347	2.12
	e11	Most people who meet me are immediately aware of my dis/ability.	1.66	.902	1.19	3.39
	e12	People are unlikely to notice my dis/ability	1.74	.938	1.09	3.15

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
		when meeting me for the first time.**				
	e13	People who know me well are able to recognize subtle impacts of my dis/ability.	3.37	.788	-1.19	3.94
	e14	My close friends are unaware of my dis/ability.**	3.43	.844	-1.344	3.78
	e15	Actions taken by my faculty have impacted the visibility of my dis/ability.	2.48	.975	-.053	2.00
	e16	The design or structure of my classes has an impact on the visibility of my dis/ability.	2.78	1.01	-.444	2.11
	e17	My dis/ability is apparent to all of my faculty in all classes.	2.15	1.06	.476	1.98
	e18	My classmates are never aware of my dis/ability.**	2.33	1.03	.076	1.79
	e19	My dis/ability is visible to others regardless of what activity I am participating in.	1.72	.882	.992	3.01
	e20	All academic settings impact my dis/ability in the same way.	2.28	1.10	.266	1.74
Ableism	a1	People assume that impacts of my dis/ability are due to a	2.40	.898	.249	2.31

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
		lack of effort or care on my part.**				
	a2	When I describe the impacts of my dis/ability people assume that I am overreacting or exaggerating.**	2.27	.886	.318	2.41
	a3	When I advocate for my access needs people assume that I am trying to get attention or special treatment.**	2.53	.874	.032	2.30
	a4	I experience people making assumptions about the impact or cause of my dis/ability.	2.78	.906	-.356	2.36
	a5	People make jokes about the way I move or communicate.	2.02	.924	.488	2.26
	a6	People who I do not know well do not know how to act around me.	1.93	.904	.696	2.64
	a7	People offer me assistance or do things for me without being asked.	1.67	.796	1.09	3.66
	a8	People ask me if something is wrong or if I am ok even when the situation does not warrant it.**	2.88	.907	-.351	2.25

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	a9	People have implied that I am faking my dis/ability to receive benefits or accommodations.**	3.16	.894	-.730	2.55
	a10	People's behavior towards me changes after they learn about my diagnosis.**	2.65	.920	-.186	2.21
	a11	I have been told my dis/ability is not real.**	3.01	.907	-.420	2.11
	a12	I have been accused of faking my dis/ability.**	3.24	.885	-.860	2.71
	a13	I have been told my dis/ability is not that bad.	2.45	.943	-.018	2.08
	a14	I encounter people who have never heard of my dis/ability.	2.05	1.06	.594	2.08
	a15	Strangers or people I do not know well, notice something about my dis/ability and comment on it.	1.76	.858	.917	3.03
Taking Action	t2	I intentionally share my dis/ability with my faculty.**	2.10	.876	.297	2.22
	t4	I receive formal accommodations (e.g., approved by the dis/ability office) that my faculty are aware of.	3.40	.893	-1.40	3.96

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	t5	I use informal accommodations/adjustments that I ask my faculty to support.	2.28	1.01	.270	1.97
	t6	I only disclose my dis/ability after I have experienced or identified an access issue.**	2.56	.976	-.032	2.00
	t7	I am able to choose when people are aware of my dis/ability.**	2.08	.854	.618	2.91
	t8	I am able to mask or conceal the impacts of my dis/ability.**	2.04	.784	.603	3.22
	t9	I take steps to keep people from noticing my dis/ability.**	2.10	.954	.517	2.33
	t10	I am able to change how aware people are of my dis/ability in most environments. **	2.14	.823	.488	2.84
	t11	I am able to make my dis/ability more visible to those around me.	2.51	.957	-.056	2.06
	t12	People know I am dis/abled even if they do not know what my specific dis/abilities/diagnoses are.	1.87	.886	.791	2.85
	t13	I participate in clubs or activities for people with dis/abilities.	1.63	.971	1.38	3.63

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	t14	I wear clothing or items (buttons, stickers) that reveal my dis/abled identity.	1.30	.650	2.23	7.53
Identity	i1	I am frequently the only person in the room with my dis/ability.	2.56	1.03	.109	1.82
	i2	People attribute aspects or impacts of my dis/ability to another identity.	1.96	1.00	.545	2.01
	i3	My physical appearance (e.g., height, weight, skin color, etc.) makes people less likely to notice my dis/ability.**	2.24	1.09	.369	1.85
	i4	People notice another aspect of my identity (race, sexual orientation, gender) and it draws attention to my dis/ability.	1.75	.93	.943	2.74
	i5	I stand out in any room I enter.	1.88	1.00	.773	2.35
	i6	People attribute impacts of my dis/ability to my race.	1.33	.712	2.30	7.63
	i7	My age makes people overlook my dis/ability.**	2.48	1.16	.105	1.55
	i8	My dis/ability is ignored or overlooked because of my race.**	3.54	.826	-1.78	5.24

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	i9	People do not recognize my dis/ability as a possibility in people my age.	2.44	1.15	.004	1.55
	i10	Aspects of my dis/ability have been ignored because of my gender.**	2.61	1.22	-.067	1.43
	i11	People attribute aspects of my dis/ability to my sexual orientation.	1.51	.859	1.55	4.25
	i12	My physical appearance (e.g., height, weight, skin color, etc.) makes people more likely to notice my dis/ability.	1.53	.843	1.52	4.36
Embodied Dis/ability	d1	My dis/ability makes routine academic tasks (e.g., homework, writing, exams, etc.) take longer to complete.	3.43	.838	-1.47	4.44
	d2	My dis/ability is only visible to others when I am moving.**	3.54	.783	-1.66	4.90
	d3	My dis/ability impacts how I spend my time on academics.	3.39	.834	-1.42	4.45
	d4	I need to allocate more time for coursework because of my dis/ability.	3.08	.962	-.601	2.17

Domain	Item	Statement	Mean	Std. Deviation	Skewness	Kurtosis
	d5	Things take me longer to complete than my classmates because of my dis/ability.	2.83	.974	-.207	1.89
	d6	I miss class or activities due to my dis/ability.	1.97	.734	.762	3.91
	d7	My dis/ability requires me to be absent for specific in-class activities.	1.54	.729	1.37	4.70
	d8	My participation in class is the same as my peers.**	2.32	.924	.145	2.16
	d9	My dis/ability has caused health issues that have led to extended or repeat absences from academics.	2.37	1.18	.114	1.50
	d10	I am late as the result of my dis/ability.	1.90	.894	.814	2.95
	d11	People notice when I am not present in class and attribute it to my dis/ability.	1.67	.911	1.18	3.36
	d12	My dis/ability alters the way I am able to participate in some academic environments or activities.	3.12	.875	-.868	3.14

Note. ** indicates items that were reverse-coded for analysis

I then estimated bivariate correlations between the items of each domain to ensure that items correlated at a level > 0.30 with at least one other item and examined the significance levels of

each correlation. Items that had no relationships > 0.30 were assessed for removal from the domain; however, if the item had at least one statistically significant correlation (Acock, 2022), even if it was not > 0.30, it was retained. Correlations for all domains can be seen in Tables 5.6, 5.7, 5.8, 5.9, and 5.10.

Items e1 through e19 made up the Environment domain, the Ableism domain consisted of items a1 through a15, the Taking Action domain included items t2 and t4 through t14, and the Identity domain contained items i1 through i12. All items in d1 through d20 were assessed for inclusion in the Embodied Dis/ability domain; however, items d13 through d20 only applied to individuals who indicated the use of one or more adaptive technology items (n = 347) due to faulty skip logic in my survey instrument. As is revealed in the correlation tables, most items d13 through d20 are not correlated with the other Embodied Dis/ability items. As a result, items d13 through d20 were removed from the Embodied Dis/ability domain prior to final scale analysis.

Environment

I used the principle component factor (PCF) method to conduct exploratory factor analysis (Acock, 2022; Watkins, 2022). Prior to conducting PCF, I conducted tests to determine that the sample size was adequate for conducting factor analysis. I tested the sample size using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. KMO indicates the proportion of variance within a set of variables that may be caused by an underlying factor (Acock, 2022), and a minimum value of .60 is required to be considered valid, while a value over .70 is preferred for exploratory factor analysis (Watkins, 2022). Bartlett's Test of Sphericity should be statistically significant to indicate adequate sampling size (Watkins, 2021). The KMO (KMO = .875) and Bartlett's Test (X^2=*3457.14, df*

Table 5.6

Bivariate Correlation Table for Proposed Environment Items

Variable	e1	e2	e3	e4	e5	e6	e7	e8	e9	e10	e11	e12
e1	-											
e2	.2667 [m]	-										
e3	.0469	.6396 [m]	-									
e4	.1748 [m]	.5012 [m]	.5151 [m]	-								
e5	.2262 [m]	.4586 [m]	.3939 [m]	.3976 [m]	-							
e6	.2905 [m]	.4246 [m]	.3571 [m]	.3687 [m]	.4091 [m]	-						
e7	.4439 [m]	.3937 [m]	.2772 [m]	.4429 [m]	.3798 [m]	.4071 [m]	-					
e8	.1675 [m]	.6151 [m]	.6383 [m]	.5826 [m]	.4703 [m]	.4694 [m]	.4562 [m]	-				
e9	.0563	.6012 [m]	.6942 [m]	.5815 [m]	.4100 [m]	.4194 [m]	.2393 [m]	.7923 [m]	-			
e10	.1904 [m]	.3608 [m]	.2977 [m]	.3184 [m]	.2320 [m]	.2419 [m]	.3294 [m]	.3666 [m]	.3165 [m]	-		
e11	.1200 [a]	.3752 [m]	.3296 [m]	.4035 [m]	.4203 [m]	.2683 [m]	.3301 [m]	.4457 [m]	.3646 [m]	.3289 [m]	-	
e12	.0730	.3444 [m]	.3522 [m]	.3665 [m]	.3047 [m]	.2469 [m]	.2833 [m]	.3795 [m]	.3647 [m]	.4037 [m]	.5451 [m]	-
e13	.1847 [m]	.2010[m]	.1924 [m]	.2138 [m]	.1163 [y]	.2051 [m]	.3106 [m]	.2268 [m]	.2262 [m]	.1618 [m]	.0958 [y]	.0719
e14	.1779 [m]	.0776	.0669	.0338	.1007 [y]	.0556	.2132 [m]	.0886	.0236	.1652 [m]	.0381	.1705 [m]
e15	-.0051	.0496	.0713	.1045 [y]	-.0145	.0239	.0452	.0751	.1154 [y]	.1145 [y]	.0765	.0495
e16	.0916 [y]	.2011 [m]	.1701 [m]	.1697 [m]	.1032 [y]	.2104 [m]	.1753 [m]	.2096 [m]	.2105 [m]	.2076 [m]	.1376 [a]	.1648 [m]
e17	.1116 [y]	.2352 [m]	.1490 [y]	.2682 [m]	.2357 [m]	.1830 [m]	.2524 [m]	.2779 [m]	.2405 [m]	.1955 [m]	.3935 [m]	.2574 [m]
e18	.0352	.2298 [m]	.2040 [m]	.1990 [m]	.1743 [m]	.1810 [m]	.2736 [m]	.2813 [m]	.2435 [m]	.2331 [m]	.3123 [m]	.3501 [m]
e19	.1179 [a]	.3725 [m]	.2934 [m]	.3084 [m]	.3674 [m]	.2931 [m]	.2720 [m]	.3732 [m]	.3266 [m]	.2284 [m]	.5477 [m]	.4229 [m]

Table 5.6 - Continued

Bivariate Correlation Table for Proposed Environment Items

Variable	e13	e14	e15	e16	e17	e18	e19
e13	-						
e14	.2951 [m]	-					
e15	.0902 [y]	-.0892 [y]	-				
e16	.1704 [m]	.0186	.4924 [m]	-			
e17	.0941 [y]	.0369	.2324 [m]	.2710 [m]	-		
e18	.1370 [a]	.1466 [a]	.0810	.2402 [m]	.3978 [m]	-	
e19	.0718	.0397	.1291**	.1482 [a]	.4480 [m]	.3516 [m]	-

Note. [m] $p < .001$, [a] $p < .01$, [y] $p < .05$

Table 5.7

Bivariate Correlation Table for Proposed Ableism Items

Variable	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10
a1	-									
a2	.5915 [m]	-								
a3	.0521 [m]	.5913 [m]	-							
a4	-.3759 [m]	-.4569 [m]	-.5810 [m]	-						
a5	-.2846 [m]	-.2639 [m]	-.2598 [m]	.3142 [m]	-					
a6	-.1378 [a]	-.1114	-.2603 [m]	.2978 [m]	.4062 [m]	-				
a7	.0729	.0461	-.1143 [y]	.1478 [a]	.2106 [m]	.4144 [m]	-			
a8	.1042 [y]	.1708 [m]	.1439 [a]	-.2745 [m]	-.3145 [m]	-.3874 [m]	-.4054 [m]	-		
a9	.3518 [m]	.4273 [m]	.5437 [m]	-.3946 [m]	-.3066 [m]	-.2377 [m]	-.0660	.1814 [m]	-	
a10	.2164 [m]	.2196 [m]	.3246 [m]	-.3606 [m]	-.3442 [m]	-.4615 [m]	-.2718 [m]	.3152 [m]	.3674 [m]	-
a11	.3992 [m]	.4431 [m]	.4795 [m]	-.3607 [m]	-.2277 [m]	-.1003 [y]	.0536	.1023 [y]	.5906 [m]	. 2701 [m]
a12	.3645 [m]	.4354 [m]	.4974 [m]	-.3792 [m]	-.2288 [m]	-.1761 [m]	-.0226	.1928 [m]	.6964 [m]	.3099 [m]
a13	-.4496 [m]	-.5064 [m]	-.4980 [m]	.4439 [m]	.2725 [m]	.1968 [m]	.0341	-.2016 [m]	-.5535 [m]	-.3328 [m]
a14	-.0880	-.1613 [m]	-.1786 [m]	.2315 [m]	.0778	.1141 [y]	.1758 [m]	-.0961 [y]	-.1808 [m]	-.1646 [m]
a15	-.1445 [a]	-.1144	-.1720 [m]	.2653 [m]	.3124 [m]	.5070 [m]	.4185 [m]	-.3410 [m]	-.2056 [m]	-.3234 [m]

Note. [m] $p < .001$, [a] $p < .01$, [y] $p < .05$

Table 5.7 - Continued

Bivariate Correlation Table for Proposed Ableism Items

Variable	a11	a12	a13	a14	a15
a11	-				
a12	.7072 [m]	-			
a13	-.6234 [m]	-.6045 [m]	-		
a14	-.1821 [m]	-.1424 [a]	.2005 [m]	-	
a15	-.1229 [y]	-.2013 [m]	.2264 [m]	.2120 [m]	-

Note. [m] $p < .001$, [a] $p < .01$, [y] $p < .05$

Table 5.8

Bivariate Correlation Table for Proposed Taking Action Items

Variable	t2	t4	t5	t6	t7	t8	t9	t10	t11	t12	t13	t14
t2	-											
t4	-.3774 [m]	-										
t5	-.2427 [m]	.1149 [y]	-									
t6	-.2615 [m]	.1670 [m]	-.0471	-								
t7	-.0552	-.0243	.0348	.1521 [m]	-							
t8	-.1596 [m]	.0444	.1036 [y]	.1719 [m]	.5559 [m]	-						
t9	-.1652 [m]	.0836	-.0138	.2431 [m]	.1601 [m]	.3552 [m]	-					
t10	-.1224 [a]	.0278	.0167	.1998 [m]	.4428 [m]	.5309 [m]	.4515 [m]	-				
t11	-.1294 [a]	.0043	.2017 [m]	-.0746	.0265	-.0132	-.0812	-.1778 [m]	-			
t12	-.0752	.0231	.1371 [a]	-.0152	.3546 [m]	.2404 [m]	.0544	.1503 [m]	.2939 [m]	-		
t13	-.0392	.0589	.1639 [m]	.0011	.1729 [m]	.1336 [a]	.1426 [a]	.0971 [y]	.2126 [m]	.3068 [m]	-	
t14	-.0829	.0009	.1947 [m]	.0901 [y]	.0890	.1155 [y]	.1295 [a]	.0948 [y]	.1669 [m]	.2508 [m]	.4414 [m]	-

Note. [m] $p < .001$, [a] $p < .01$, [y] $p < .05$

Table 5.9

Bivariate Correlation Table for Proposed Identity Items

Variable	i1	i2	i3	i4	i5	i6	i7	i8	i9	i10	i11	i12
i1	-											
i2	.0305	-										
i3	-.0888	-.1187 [a]	-									
i4	.0547	.4757 [m]	-.0629	-								
i5	.1939 [m]	.2636 [m]	.0375	.3631 [m]	-							
i6	.0689	.2642 [m]	-.1169 [y]	.3387 [m]	.3018 [m]	-						
i7	-.1435 [a]	-.3168 [m]	.2590 [m]	-.2620 [m]	-.1148 [y]	-.1609 [m]	-					
i8	.0182	-.2180 [m]	.1246 [a]	-.3130 [m]	-.2344 [m]	-.5614 [m]	.1979 [m]	-				
i9	.1704 [m]	.2107 [m]	-.1979 [m]	.2075 [m]	.0633	.1137	-.6023 [m]	-.1315 [a]	-			
i10	.0699	-.3574 [m]	.1950 [m]	-.3265 [m]	-.1191 [a]	-.1409 [a]	.3810 [m]	.2001 [m]	-.3378 [m]	-		
i11	-.0087	.4397 [m]	-.0696	.4491 [m]	.2405 [m]	.3271 [m]	-.2046 [m]	-.3058 [m]	.1628 [m]	-.4060 [m]	-	
i12	.1122 [y]	.2382 [m]	.0917 [y]	.3293 [m]	.3071 [m]	.3225 [m]	-.1881 [m]	-.1876 [m]	.1712 [m]	-.1604 [m]	.2232 [m]	-

Note. [m] $p < .001$, [a] $p < .01$, [y] $p < .05$

Table 5.10

Bivariate Correlation Table for Embodied Dis/ability Items

Variable	d1	d2	d3	d4	d5	d6	d7	d8	d9	d10	d11	d12
d1	-											
d2	-.0596	-										
d3	.6342 [m]	-.0180	-									
d4	.5924 [m]	-.0440	.6295 [m]	-								
d5	.5770 [m]	-.0209	.4549 [m]	.5890 [m]	-							
d6	.1546 [m]	-.0627	.2246 [m]	.2549 [m]	.1578 [m]	-						
d7	.1010 [y]	-.2165 [m]	.1398 [a]	.1537 [m]	.1212 [a]	.4738 [m]	-					
d8	.0900	.0122	.1482 [a]	.1077 [y]	.0998	.2881 [m]	.2834 [m]	-				
d9	.1536 [m]	-.1876 [m]	.2729 [m]	.1995 [m]	.0764	.4963 [m]	.4770 [m]	.2463 [m]	-			
d10	.3065 [m]	-1395 [y]	.3229 [m]	.3701 [m]	.3359 [m]	.4618 [m]	.2513 [m]	.2128 [m]	.3810 [m]	-		
d11	.1514 [m]	-.2836 [m]	.0987 [y]	.1115 [y]	.0354	.2609 [m]	.3522 [m]	.1422 [a]	.4366 [m]	.2773 [m]	-	
d12	.3627 [m]	-.0646	.4383 [m]	.3045 [m]	.2720 [m]	.2565 [m]	.2133 [m]	.2757 [m]	.3322 [m]	.1976 [m]	.2003 [m]	-
d13	-.0653	-.1168 [y]	-.0572	-.0798	-.1049	-.0730	.1244 [y]	.0166	.1387 [a]	-.0529	.1754 [a]	.1390 [a]
d14	.0041	.0359	.0277	-.0548	-.0080	-.0142	-.0042	-.1408 [a]	.0070	-.0603	.0908	.0134
d15	-.1831 [m]	.0800	-.1394 [a]	-.1295 [y]	-.1563 [a]	-.0030	-.0584	.0952	-.0136	-.0819	.0126	-.0320
d16	-.1283 [y]	-.0027	-0721	-.0881	-.1701 [a]	-.0805	-.0339	.0733	.0072	-.1245 [y]	.0950	.1246 [y]
d17	.0313	.0088	.0338	.0602	.0046	.1347 [y]	.1604 [a]	-.0255	.2447 [m]	.1012	.1410 [a]	.0919
d18	-.0376	-.1169 [y]	-.0121	-.0035	-.0885	.0249	.1295 [y]	.0133	.2201 [m]	.0637	.1409 [a]	.0930
d19	-.0038	-.0023	-.0310	-.0347	-.0242	-.1241 [y]	-.0364	.0339	-.0499	-.0612	-.0193	.0084
d20	-.0696	.0121	-.1176 [y]	-.1074 [y]	-.1150 [y]	-.1762 [m]	-.2231 [m]	-.0943	-.1800 [m]	-.1133 [y]	-.0922	-.0807

Table 5.10-Continued

Bivariate Correlation Table for Embodied Dis/ability Items

Variable	d13	d14	d15	d16	d17	d18	d19	d20
d13	-							
d14	.3720 [m]	-						
d15	-.0601	.2266 [m]	-					
d16	.3832 [m]	-.0158	.3257 [m]	-				
d17	.3585 [m]	.5322 [m]	-.1250 [y]	.0489	-			
d18	.3643 [m]	.2579 [m]	-.0616	.2467 [m]	.2192 [m]	-		
d19	.0738	-.2706 [m]	.1925[m]	.3215 [m]	-.2365 [m]	-.0269	-	
d20	-.0032	.1167 [y]	.1760 [a]	.-.0110	.1447 [a]	-.0650	-.0052	-

Note. [m] $p < .001$, [a] $p < .01$, [y] $p < .05$

=171, and p < .001) both indicated that the sample was large enough to proceed with factor analysis for the Environment scale.

I then estimated the factor analysis using the principal component factor method in Stata. Prior to analysis, I determined that I would consider factor loadings > 0.40 to be strong factor loadings (Acock, 2022; Watkins, 2022) and the cutoff for inclusion of the items in the scale. The results indicated that five factors returned eigenvalues ≥ 1. Factor 1 returned an eigenvalue = 6.16, Factor 2 returned an eigenvalue = 1.65, Factor 3 had an eigenvalue = 1.54, Factor 4 had an eigenvalue of 1.39, and Factor 5 reported an eigenvalue =1.10. In reviewing the scree plot (see Figure 5.1) of the eigenvalues for the Environment domain and the eigenvalues themselves, I suspected that I had three real factors represented in the scale because factors 4 and 5 were not substantially higher than the cutoff value of 1 and the scree plot appears to begin to level off after the 3rd factor. I then rotated the factor using an oblique rotation method, which resulted in e5 and e10 not loading above the predetermined 0.40 cut-off. Of the represented five factors, the highest loading for e10 was on the fifth factor and had a factor loading = 0.30. The highest loading for e5 was the third factor, with a loading = 0.36. I decided to remove e10 and run the factor analysis again.

Round two of the PCF again returned five potential factors with eigenvalues of > 1. The factors had the following eigenvalues: Factor 1 eigenvalue = 5.91; Factor 2 eigenvalue = 1.65; Factor 3 eigenvalue = 1.53; Factor 4 eigenvalue = 1.39; and Factor 5 eigenvalue = 1.08. Following the second oblique rotation, items e1-e4, e6-e9, and e11-e19 returned a factor loading of at least 0.40 on one of the first three factors. However, e5 again did not return a score of at least 0.40 after the removal of e10. I then looked closely at Factor 5, which had two items load

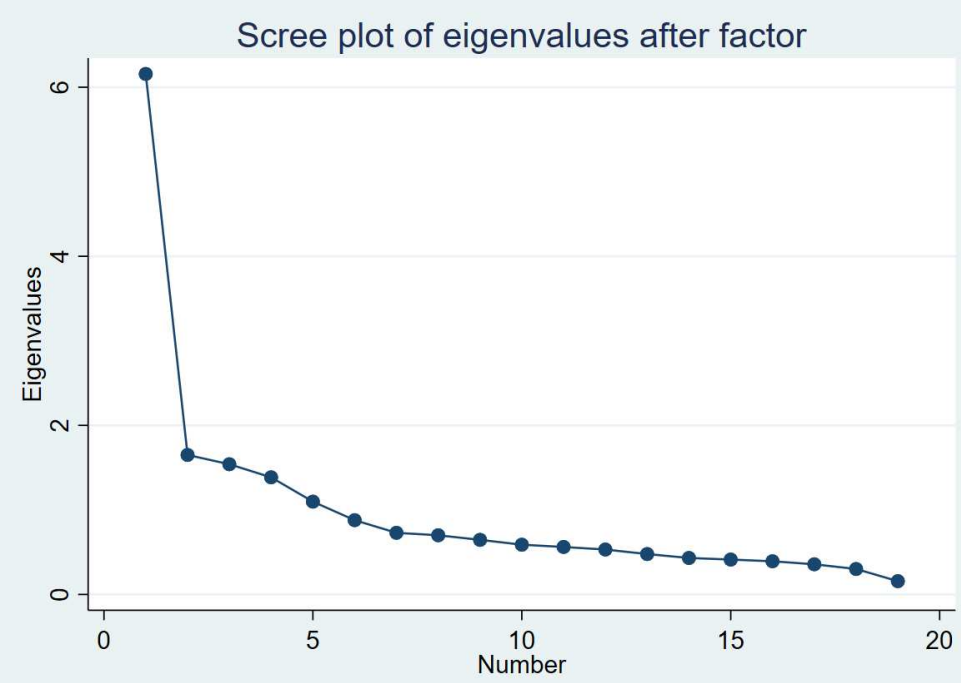

Figure 5.1

Initial Scree Plot of Eigenvalues After Factor for Environment

strongly (e1, e14) and Factor 4, which had three items load strongly (e11, e15, e16); however, all five of these items across Factors 4 and 5 also loaded heavily on one of the first three factors and were not unique to Factor 4 or Factor 5. As a result, I removed Factors 4 and 5 from future analysis and constrained future rotations and estimations to a maximum of three factors.

I removed e5 and estimated the PCF for a third time. On both the factor and the oblique rotation, all items returned at least one factor loading of > 0.40. Next, I conducted Cronbach's Alpha to test the reliability of the scale. Prior to conducting Cronbach's Alpha, I determined that I needed to achieve an alpha of at least 0.70 to move the scale forward for confirmatory factor analysis (CFA) and that I preferred to achieve an alpha score of 0.80 for greater reliability (Acock, 2022; Watkins, 2022). I determined that I would evaluate items that would increase alpha on an individual basis for removal from the scale. Cronbach's Alpha for the scale was α

=0.856. Both items e14 and e15 would increase alpha with their removal, and the removal of e15 resulted in a greater increase in alpha. I decided to remove e15 and re-estimate PCF to see if it further clarified the scale.

In this round of PCF, following the removal of e15, e16 did not achieve a factor loading of > 0.40. I removed e16 and ran the factor analysis again, which resulted in all items having at least one factor loading > 0.40 in both the initial factor and after the oblique rotation. I then calculated Cronbach's Alpha, and this time, $\alpha = 0.862$. Once again, the removal of e14 would result in an increase of Cronbach's Alpha. Removal of e1 also would result in an increased alpha but to a lesser extent than removal of e14. I removed e14 and ran PCF, which resulted in e13 not having any factor loadings of at least 0.40. I removed e13 and ran the factor analysis again, which resulted in all items achieving a factor loading of > 0.40 on both the factor and the oblique rotation. Cronbach's Alpha was $\alpha = 0.869$. Removal of e1 would increase alpha, so I removed e1 and conducted another round of PCF.

I conducted the PCF with items e2, e3, e4, e6, e8, e9, e11, e12, e17, e18, and e19 which resulted in two distinct factors. Factor 1 had an eigenvalue of 5.24, and Factor 2 had an eigenvalue of 1.49. All items had a factor loading of > 0.40; however, after oblique rotation e7 failed to achieve a factor loading of > 0.40 and was removed. After removal of e7, items e2, e3, e4, e6, e8, and e9 loaded strongly onto Factor 1, and e11, e12, e17, e18, and e19 loaded strongly onto Factor 2 (see Table 5.11). Cronbach's Alpha was $\alpha = 0.872$, and no item would increase alpha by being removed. In evaluating the remaining items, I determined that items in Factor 1 pertained to *interactions* with the surrounding environment and items in Factor 2 pertained to *perceptions* of people within the environment.

Table 5.11

Factor Loadings for the Environment Scale Based on PCF

Variable	Component 1	Component 2
e2-How apparent is your dis/ability in environments you are in frequently but have minimal control over (e.g., local grocery store, college library, etc.)	0.780	
e3-How apparent is your dis/ability in an environment you have never encountered before?	0.880	
e4-How apparent is your dis/ability in an environment or activity that requires you to communicate with others?	0.694	
e6-How apparent is your dis/ability in an environment or activity that requires you to be stationary?	0.573	
e8- How apparent is your dis/ability in an environment where you know only a few of the people present?	0.837	
e9- How apparent is your dis/ability in an environment where you know none of the people present?	0.890	
e11- Most people who meet me are immediately aware of my dis/ability.		0.694
e12- People are unlikely to notice my dis/ability when meeting me for the first time.		0.584
e17- My dis/ability is apparent to all of my faculty in all of my classes.		0.787
e18- My classmates are never aware of my dis/ability.		0.714
e19- My dis/ability is visible to others regardless of what activity I am participating in.		0.750

Confirmatory factor analysis. Once I had completed the PCF for the environment domain, I moved on to conducting confirmatory factor analysis (Acock, 2022). To begin I cloned variables e2, e3, e4, e6, e8, e9, e11, e12, e17, e18, and e19 and renamed them env1 through env11. I then conducted structural equation modeling (SEM) for the Environment scale using env1 through env 11 (see Figure 5.2). Several indicators in the model and post-estimation tests indicate that this model is a poor fit. For example, multiple items do not maintain a factor loading of ≥0.40 (env9, env10), the Chi-square is significant, and RMSEA is outside of the minimum acceptable range (0.05-0.08). The CFI is the only test that is in an acceptable range for goodness of fit at 0.827.

Based on this information, I reviewed the modification indices and decided to conduct two variations on the initial model. In the first variation, I allowed for covariance between items that returned a modification (MI) index of ≥50.00, and that made sense based on the anticipated relationship between two items based on the literature. Three relationships, env5 and env6

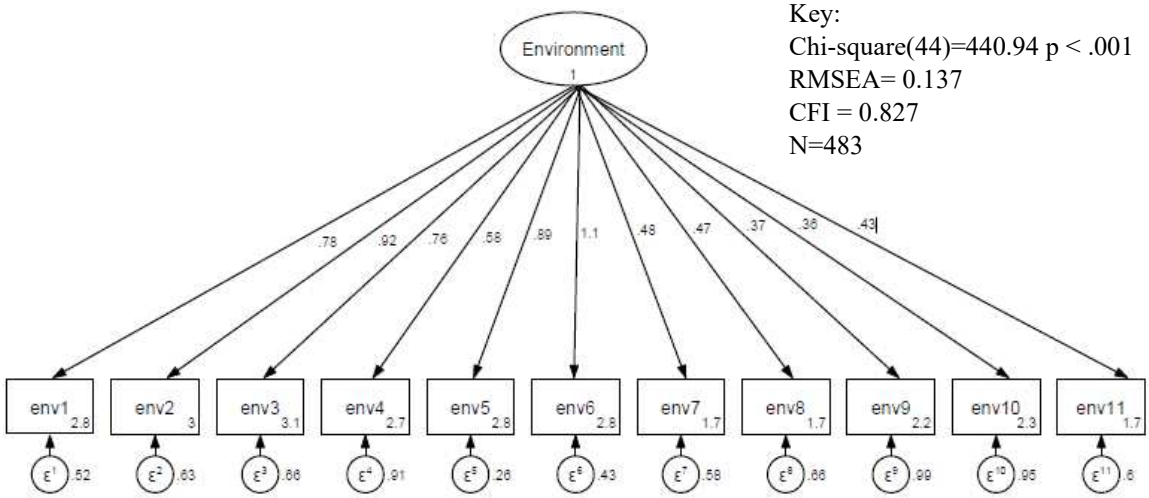

Figure 5.2

Initial Structural Equation Model for Environment Scale

(MI=56.60), env7 and env8 (MI=74.79), and env9 and env11(MI=58.03) met my inclusion criteria. Items env5 and env6 both relate to the impact of movement within the environment, so allowing them to covary made logical qualitative sense. Env7 and env8 both pertained to relationships with other people in the environment and made sense to covary. Env9 and env11 both pertained to meeting new people and made sense to covary. The first variation of the model is depicted in Figure 5.3. Allowing for covariance within the model improved the goodness of fit, but the RMSEA=0.107 is still outside the range for an acceptable fit.

With the second variation of the Environment scale, I continued to allow covariance but also treated the model as though I had two distinct latent variables underneath Environment, *interaction* and *perception*. *Interaction* included items that had loaded onto the first factor in the exploratory factor analysis and were related to participant interactions with the physical, learning, or informational environment. *Perception* consisted of the items from the second factor in the exploratory factor analysis and related to scenarios that indicated the perceptions of others

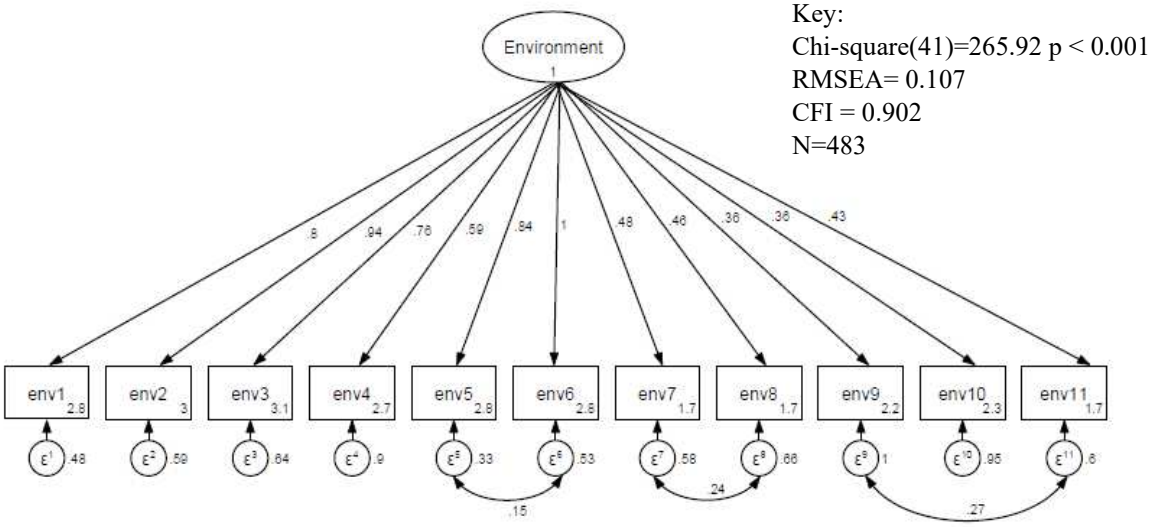

Figure 5.3

First Variation Structural Equation Model for Environment Scale

within the environment. The second variation of the model is depicted in Figure 5.4. Ideally, the chi-square for SEM should not be statistically significant and this model still returns a chi-square that is significant; however, this test of goodness of fit is highly sensitive to sample size and is considered to be the least reliable measure (Acock, 2022). Other goodness of fit statistics were within acceptable ranges (RMSEA of 0.06; CFI of 0.967). The final round of SEM reported that all 11 items retained during the PCA had standardized factor loadings > 0.40 (see Table 5.12) on the two components.

Model Selection. I selected the final variation of the model, which represented the Environment scale with the two latent variables of *Interaction* and *Perception* and covariance between env5 and env6, env7 and env8, and env9 and env11. Of the three models I tested, the final model returned the best goodness of fit statistics and had both an RMSEA (0.06) and CFI (0.967) in acceptable ranges. As noted in Acock (2022), an RMSEA of less than 0.5 is

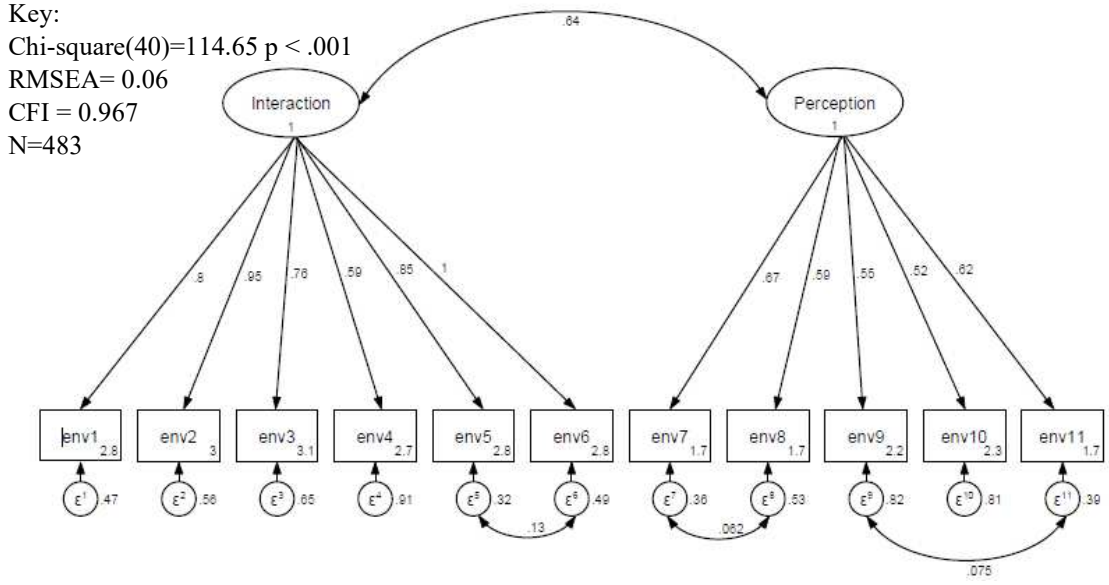

Figure 5.4

Second Variation Structural Equation Model for Environments Scale

considered to be an excellent fit and an RMSEA between 0.5 and 0.8 is considered to be an

acceptably good fit. Similarly, a CFI greater than 0.95 is considered acceptable (Schreiber et al., 2010). The selected model also had sufficiently high standardized factor loadings on each variable underneath the two latent variables (see Table 5.12).

Table 5.12

Standardized Factor Loadings for the Environment Scale

Variable	Component 1	Component 2
env1-How apparent is your dis/ability in environments you are in frequently but have minimal control over (e.g., local grocery store, college library, etc.)	0.760	
env2-How apparent is your dis/ability in an environment you have never encountered before?	0.787	
env3-How apparent is your dis/ability in an environment or activity that requires you to communicate with others?	0.687	
env4-How apparent is your dis/ability in an environment or activity that requires you to be stationary?	0.526	
env5- How apparent is your dis/ability in an environment where you know only a few of the people present?	0.832	
env6- How apparent is your dis/ability in an environment where you know none of the people present?	0.832	
env7- Most people who meet me are immediately aware of my dis/ability.		0.746
env8- People are unlikely to notice my dis/ability when meeting me for the first time.		0.633
env9- My dis/ability is apparent to all of my faculty in all of my classes.		0.522

Variable	Component 1	Component 2
env10- My classmates are never aware of my dis/ability.		0.499
env11- My dis/ability is visible to others regardless of what activity I am participating in.		0.704

Discussion of items removed. The eight items included in the initial Qualtrics survey (see Table 5.13) that were removed from the Environment scale during PCF were e1, e5, e7, e10, e13, e14, e15, and e16. As a result, these eight items were not included in any of the confirmatory factor analysis models. The final model accepted under confirmatory factor analysis for the Environment scale included the two latent variables of *Interaction* and

Table 5.13

Environment Items Removed During PCF

Item	Statement
e1	How apparent is your dis/ability in environments you are in daily and have significant control over (e.g., home)?
e5	How apparent is your dis/ability in an environment or activity that requires you to move around?
e7	How apparent is your dis/ability in an environment where you know all of the other people present?
e10	My dis/ability is not visible to others in any setting or context.
e13	People who know me well are able to recognize the impacts of my dis/ability.
e14	My close friends are unaware of my dis/ability.
e15	Actions taken by my faculty have impacted the visibility of my dis/ability.
e16	The design or structure of my classes has an impact on the visibility of my dis/ability.

Perception. Items e1, e5, and e7 also seem to relate to interaction with the environment; however, all three items were very similar to another question related to the Environment scale. Additionally, e1 and e7 also represented environments where the respondent had the greatest degree of control. Items e10, e13, and e14 all asked participants to assess others' perception of the participant's dis/ability, which may have made these questions particularly difficult for participants to accurately respond to, rendering the data difficult to interpret meaningfully. I expected items e15 and e16 to be meaningful based on both the participant expert narratives and the literature, and I suspect that these two items may still be relevant to the latent variable of apparentness but may have been analyzed under the wrong domain. The mismatch between the qualitative and quantitative data for these two items is discussed further in the limitations section in Chapter 7.

Ableism

I used the same procedures and parameters as described above in the Environment scale to analyze the Ableism scale. In the initial analysis of the sample size, the KMO Measure of Reliability was 0.884, and the Bartlett's Test of Sphericity was $X^2 = 2842.21$, $df=105$, and $p< .001$, which indicated that the data under the Ableism scale was appropriate for factor analysis. I then estimated the initial factor loadings for items a1 through a15. The model retained three factors with eigenvalues > 1, with the eigenvalue of Factor1 = 5.35, the eigenvalue of Factor2 = 2.25, and the eigenvalue of Factor3 =1.03. Based on the third factor having an eigenvalue barely above 1 and on the review of the scree plot (see Figure 5.5), I suspected that I had two real factors. All of the items had a factor loading of > 0.40 on the first two factors except for a14, which returned a factor loading of 0.534 on the third factor. Though I suspected that I only had two real factors, I retained a14 in the first round of analysis.

To test the reliability of the scale with three factors, I conducted Cronbach's Alpha (α = 0.860) to see if the removal of any items would result in an increased alpha score. Removal of a7 or a14 would increase alpha. Because a14 had also not loaded onto either of the first two factors, I first removed a14 and then re-estimated the factor and completed an oblique rotation. All items returned a score of > 0.40 on the first two factors. I conducted Cronbach's Alpha (α = 0.866), and again, the removal of a7 would increase alpha. I conducted several more rounds of factor analysis, with each round suggesting that the removal of an additional item would improve alpha. After review, I removed all of the additional items that would increase alpha (a5, a6, a8, a10, a15) and retained items a9, a11, a12, and a13 on the first factor and a1, a2, a3, a4 on the second factor (see Table 5.14). Items on the first factor were related to *enacted* ableism (e.g., behaviors or actions towards the individual), and items on the second factor were related to *communicated* ableism (e.g., things said to the individual).

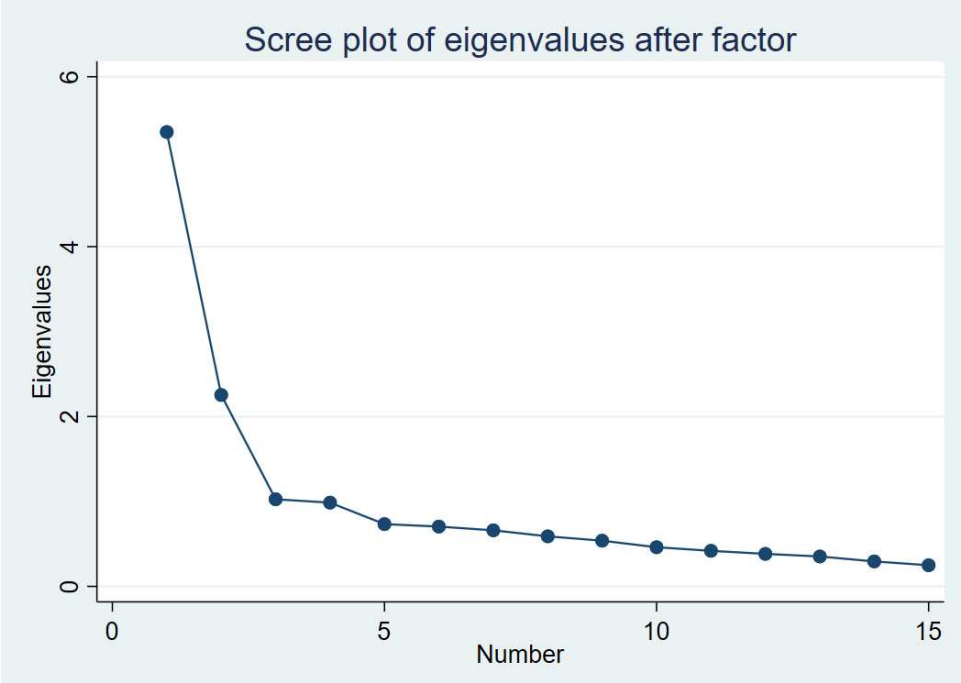

Figure 5.5

Scree Plot of Eigenvalues for Ableism Scale

Confirmatory factor analysis. Now that I had completed exploratory PCF for the Ableism domain, I moved to conducting confirmatory factor analysis. I cloned variables a1, a2, a3, a4, a9, a11, a12, a13 and renamed them able1 thru able8. I then conducted SEM for the Ableism scale using able1 through able8. As with the Environment scale, I first ran the CFA without allowing for covariance between items and treating the items as a single scale. The first

Table 5.14

Factor Loadings for the Ableism Scale Based on PCF

Variable	Component 1	Component 2
a1-People assume that impacts of my dis/ability are due to a lack of effort or care on my part.		0.838
a2- When I describe the impacts of my dis/ability people assume that I am overreacting or exaggerating.		0.831
a3- When I advocate for my access needs people assume that I am trying to get attention or special treatment.		0.707
a4- I experience people making assumptions about the impact or the cause of my dis/ability.		-0.722
a9- People have implied that I am faking my dis/ability to receive benefits or accommodations.	0.826	
a11- I have been told my dis/ability is not real.	0.858	
a12- I have been accused of faking my dis/ability.	0.930	
a13-I have been told my dis/ability is not that bad.	-0.628	

SEM model (see Figure 5.6) was not a good fit according to the goodness of fit statistics (X^2=*275.27, df=20, p < .00*1, RMSEA=0.163, and CFI= 0.865). I estimated the modification indices to see if there were covariances that would improve the model and conceptually made sense to covary.

I decided to allow able1 and able2 (MI=67.96), able3 and able4 (MI=52.36), able5 and able7 (MI=48.78) and able6 and able7 (MI=52.31) to covary. Items able1 and able2 both related to assumptions about the impact of dis/ability. Able3 and able4 both related to assumptions about the cause of dis/ability impacts. Able5 and able7 related to experiences of being accused of faking dis/ability. And able6 and able7 both conveyed disbelief about the dis/ability. In the

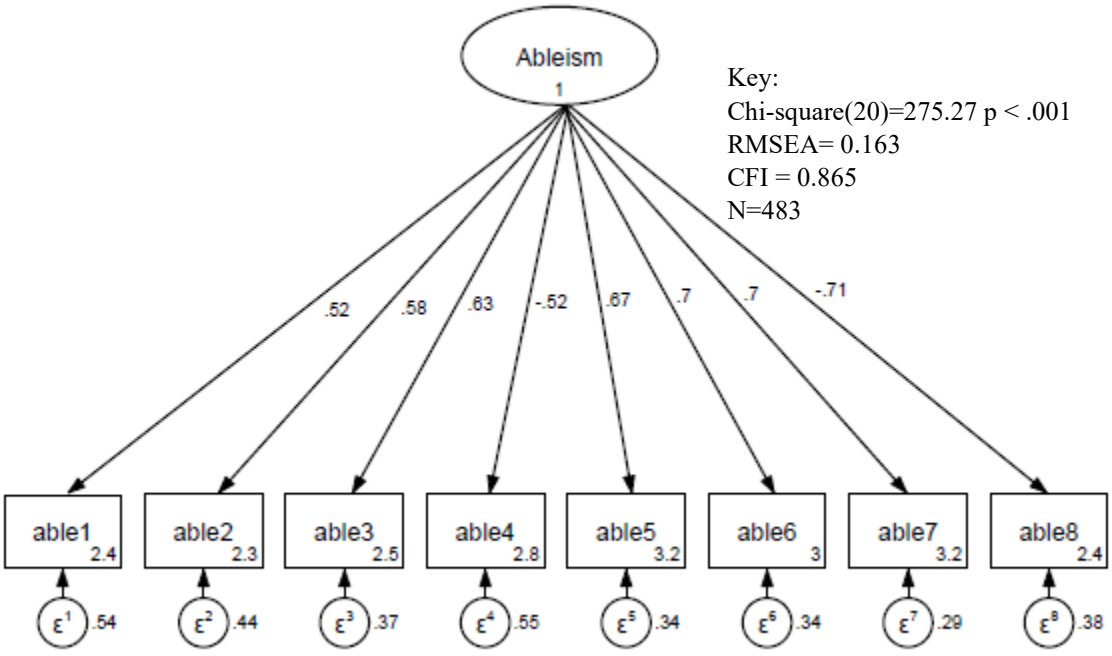

Figure 5.6

Initial Structural Equation Model for Ableism Scale

second model (see Figure 5.7), all three goodness of fit metrics improved, but the RMSEA indicated the second SEM was still outside of an adequate fit (X^2=*81, df=16, p < .001*, RMSEA=0.092, and CFI= 0.966). I conducted a third SEM, which continued the covariance and divided the model into two latent variables of *communicated* and *enacted* ableism (see Figure 5.8). The latent variable *communicated* included items where participants encountered ableist language or spoken microaggressions. The latent variable *enacted* included items where participants experienced others' behavior towards them that was ableist in nature. This third model is a good fit for the analyzed data with an RMSEA < 0.05 and a CFI > 0.95 (X^2=*29.95 df=15 p < .05,* RMSEA=0.046, and CFI= 0.992).

Model Selection. As with the Environment scale, I chose to use the final variation of the

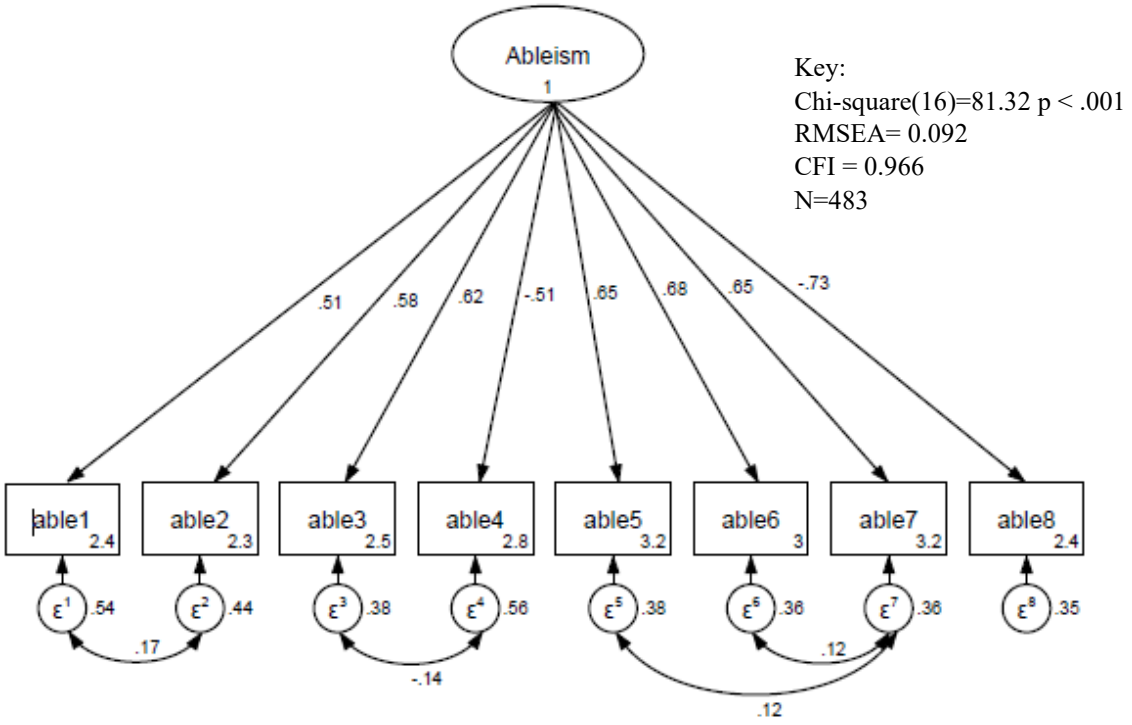

Figure 5.7

First Variation Structural Equation Model for Ableism Scale

model, which included two latent variables and covariance between items. I chose this model because it had the strongest goodness of fit statistics, with both the RMSEA and the CFI being within acceptable ranges. Additionally, all of the individual items had standardized factor loadings >0.40 (see Table 5.15). Items under the latent variable *communicated* had loaded onto the second factor in the original exploratory factor analysis and items under the latent variable *enacted* had loaded onto the first factor in EFA.

Discussion of items removed. Seven items included in the initial Qualtrics survey (Table 5.16) were removed from the scale during PCF. These items included a5, a6, a7, a8, a10, a14 and a15. Items a6, a7, a8, a10, a14, and a15 are all interactions where the ableism is subtle, could

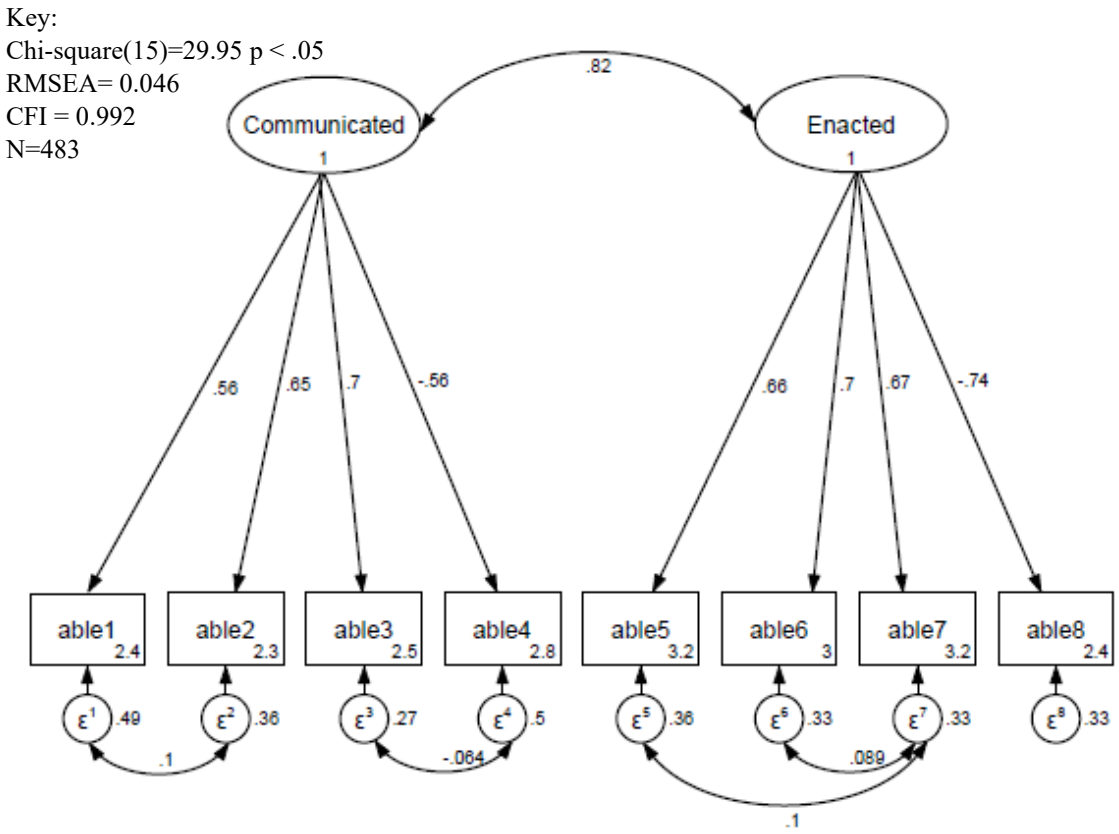

Figure 5.8

Second Variation Structural Equation Model for Ableism Scale

be seen as a microaggression, or interpreted in another way. Several of these items were important in the qualitative narratives of one or more participant experts. However, it is possible that their wording led respondents to interpret them in a variety of ways, thus affecting their statistical significance. The item that I most expected to have been relevant was a5, "people make jokes about the way I move or communicate," as this was a significant theme in the qualitative interviews of participants with mobility and communication-related dis/abilities. It is possible that a5 is still meaningful but fits better under another latent variable, or the results were skewed because of the relatively low number of participants with mobility impairments that impacted walking and participants with a communication-based dis/ability (e.g., Tourette's).

Table 5.15

Standardized Factor Loadings for the Ableism Scale

Variable	Component 1	Component 2
able1-People assume that impacts of my dis/ability are due to a lack of effort or care on my part.		0.626
able2- When I describe the impacts of my dis/ability people assume that I am overreacting or exaggerating.		0.733
able3- When I advocate for my access needs people assume that I am trying to get attention or special treatment.		0.803
able4- I experience people making assumptions about the impact or the cause of my dis/ability.		-0.628
able5- People have implied that I am faking my dis/ability to receive benefits or accommodations.	0.739	
able6- I have been told my dis/ability is not real.	0.777	

Variable	Component 1	Component 2
able7- I have been accused of faking my dis/ability.	0.762	
able8-I have been told my dis/ability is not that bad.	-0.790	

Table 5.16

Ableism Items Removed During PCF

Item	Statement
a5	People make jokes about the way I move or communicate.
a6	People who I do not know well do not know how to act around me.
a7	People offer me assistance or do things for me without being asked.
a8	People ask me if something is wrong or if I am ok even when the situation does not warrant it.
a10	People's behavior towards me changes after they learn about my diagnosis.
a14	I encounter people who have never heard of my dis/ability.
a15	Strangers or people I do not know well, notice something about my dis/ability and comment on it.

Taking Action

I used the same procedures and parameters as described above in the Environment and Ableism scales to analyze the Taking Action scale. I conducted PCF analysis on the Taking Action scale. I began by conducting tests of sampling adequacy. The Measure of Reliability (KMO= 0.698) was slightly below the target KMO > 0.70, indicating that the factor analysis would be more reliable with a larger sample size but was above the minimum KMO (i.e., >0.60) to be considered for analysis. Bartlett's Test of Sphericity ($X^2 = 1050.657$, $df=66$, and $p < .001$)

did indicate sampling adequacy, so I decided to move forward with factor analysis and made a note to address the KMO in my limitations.

I conducted an initial factor analysis to estimate the factor loadings for each item and to evaluate the eigenvalues of the factors (see Figure 5.9). Four factors were retained, and the initial eigenvalues were Factor 1=2.79, Factor 2=1.76, Factor 3=1.50, and Factor 4=1.07. Though all four factors had an eigenvalue of >1, Factor 4 was barely over 1, so I suspected that I had only two or three real factors. One item (t6) did not return an initial factor loading of >0.40 on any of the retained four factors. I removed t6 and ran the factor analysis again.

The second factor analysis iteration resulted in all items having a factor loading of > 0.40 on at least one of the factors. Next, I conducted an oblique rotation of the factors and all items retained a factor loading > 0.40. Cronbach's Alpha ($\alpha = 0.651$) indicated the removal of two

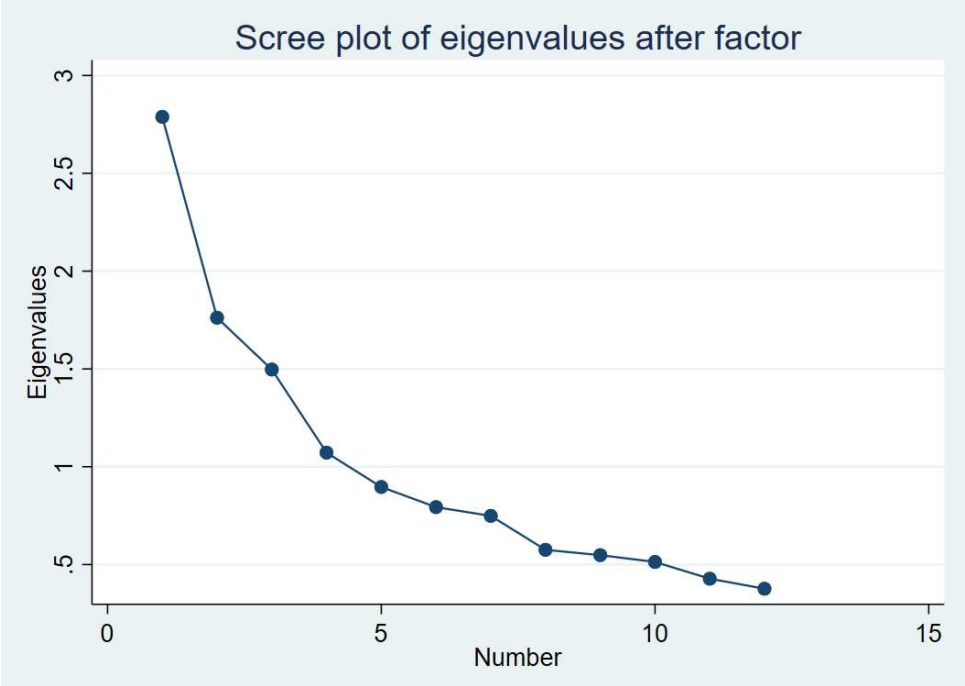

Figure 5.9

Scree Plot of Eigenvalues for Taking Action

items (t4 and t11) improve alpha. The impact of removing t11 was greater than removal of t4, so I removed t11 and conducted the factor analysis again. All items had a factor loading of > 0.40 on at least one factor and were retained. I conducted Cronbach's Alpha (α = 0.658) to test the reliability of the scale and to see if the removal of additional items would increase alpha. Once again, removal of t4 would increase alpha.

After removing t4, I ran the factor analysis again with items t2, t5, t7, t8, t9, t10, t12, t13, and t14. In this iteration, the eigenvalues of the three factors retained by the PCF were Factor 1=2.65, Factor 2=1.50, and Factor 3=1.15. All items had a factor loading of > 0.40 on at least one of the three factors following oblique rotation. I calculated Cronbach's Alpha (α = 0.667) for the scale, which indicated that removal of item t5 would increase alpha. I removed t5 and

Table 5.17

Factor Loadings for the Taking Action Scale Based on PCF

Variable	Component 1	Component 2
t7- I am able to choose when people are aware of my dis/ability.	0.700	
t8- I am able to mask or conceal the impacts of my dis/ability.	0.830	
t9- I take steps to keep people from noticing my dis/ability	0.617	
t10- I am able to change how aware people are of my dis/ability in most environments.	0.844	
t12- People know I am dis/abled even if they do not know what my specific disabilities/diagnoses are.		0.593
t13- I participate in clubs or activities for people with dis/abilities.		0.812
t14- I wear clothing or items (buttons, stickers) that reveal my dis/abled identity.		0.797

repeated the prior steps. This time, the removal of t2 would increase the reliability of the scale. I removed t2 and conducted factor analysis for a final time, resulting in two factors and α=0.695. The final alpha score was below the standard of > 0.70 that I had set for my analysis, which could be attributed to the slightly insufficient KMO from the initial test of sampling adequacy. The first factor included items t7, t8, t9, and t10 and related to actions *concealing* disability. The second factor included items t12, t13, and t14 and related to actions *revealing* disability (see Table 5.17). I decided to move forward with confirmatory factor analysis on the scale because while alpha was lower than the internal reliability standard I had set, it was still within the range considered to be acceptable.

Confirmatory factor analysis. I began CFA by cloning variables t7, t8, t9, t10, t12, t13, and t14 and naming them take1 thru take7 respectively. I first completed SEM without allowing for covariance between items and treating the items as a single scale. Three of the individual items, those I considered to be related to revealing dis/ability did not have factor loadings > 0.40. Additionally, the model (Figure 5.10) reported goodness of fit statistics that showed the model was not a good fit (X^2=*216.64, df=14, p < .001*, RMSEA=0.173, and CFI= 0.715). Next, I estimated the modification indices to see if there were covariances that would improve the model and made sense to covary from a conceptual standpoint.

The modification indices indicated that there was a high level of covariance between take6 and take7. Both take6 and take7 related to items or activities that indicated the individual explicitly claimed a dis/abled identity and made sense to covary within the model. Allowing take6 and take7 to covary (see Figure 5.11) further lowered the factor loadings of these two items but did improve the goodness of fit statistics for the entire model (X^2=*124.45, df=13*

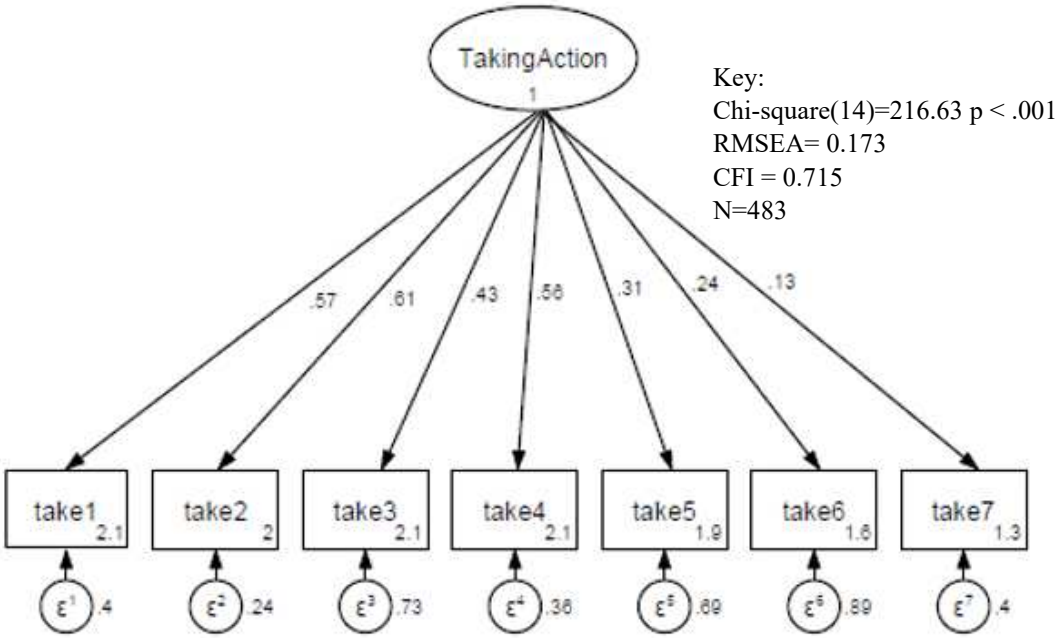

Figure 5.10

Initial Structural Equation Model for Taking Action Scale

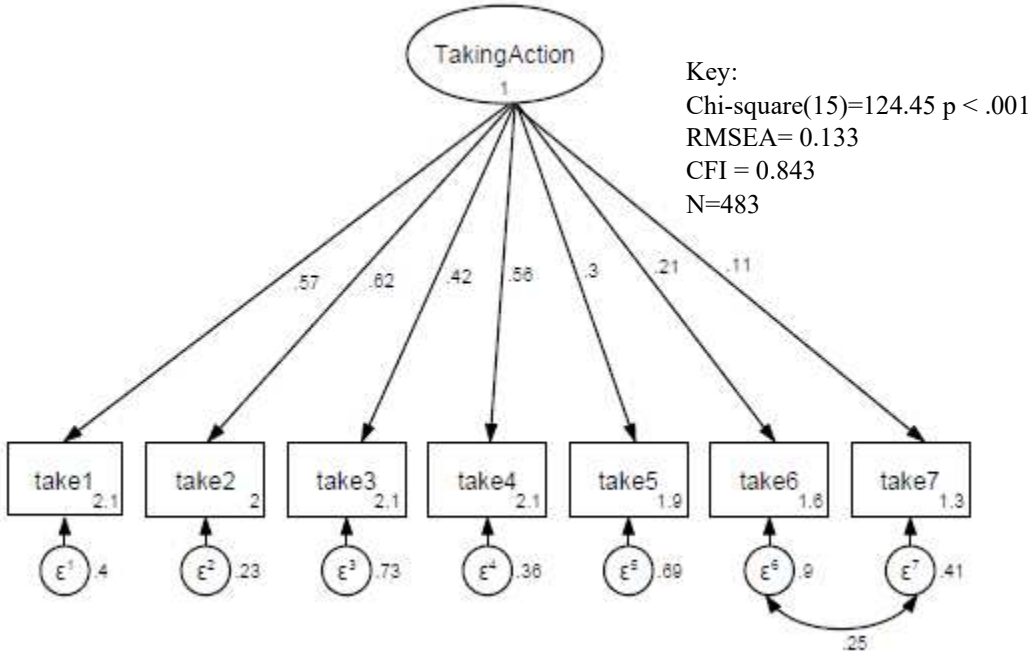

Figure 5.11

First Variation of Structural Equation Model for Taking Action Scale

p < *.001*, RMSEA=0.133, and CFI= 0.843). Since the RMSEA still indicated that the model was not an acceptable fit, I decided to conduct a second variation that included two latent variables: *conceal* and *reveal*.

For the second variation of the Taking Action model, I included two latent variables, *conceal* and *reveal* (Figure 5.12), but did not allow any covariances due to the prior low factor loadings. Items under the latent variable *conceal* related to actions that participants took to hide or reduce the likelihood that others would notice their dis/ability. Items under *reveal,* on the other hand, related to actions that participants undertook to make their dis/ability more visible and recognizable to those around them. Again, this improved the model but still did not result in a model with an acceptable fit (X^2=*102.63, df=13, p* < *.001*, RMSEA=0.120, and CFI= 0.874). Before I decided to reject the model, I first reviewed the items that had substantially lower factor loadings than the other items, take3, take5, and take7. Both take3 and take5 were > 0.40

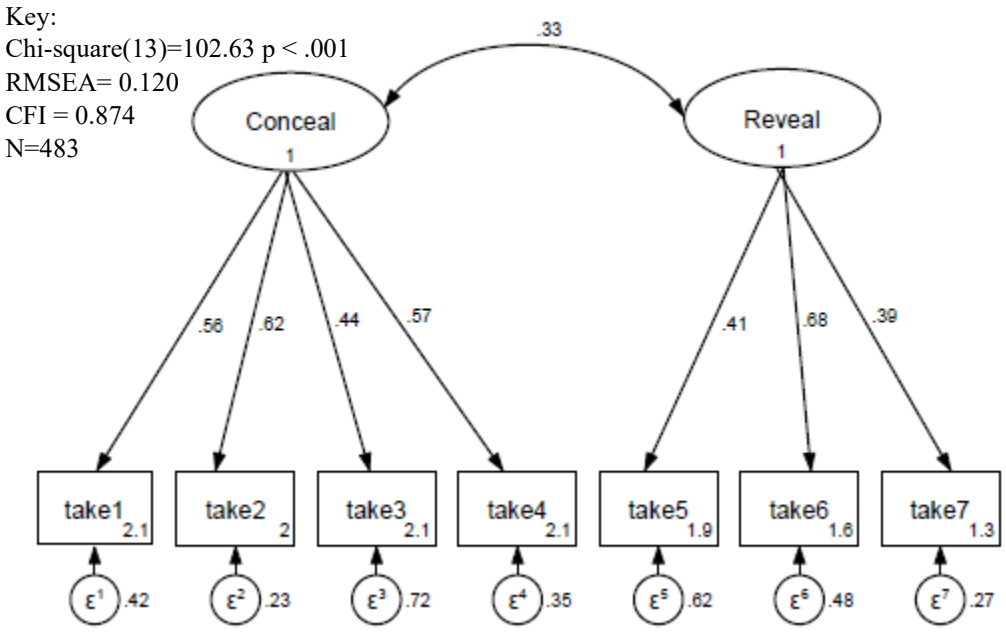

Figure 5.12

Second Variation of Structural Equation Model for Taking Action Scale

however, because they were noticeably lower than the other items under their respective latent variable, I considered them for removal.

Take3, take5, and take7 all had factor loadings that were substantially lower than others under their respective latent variables—in taking a second look at the four items that made up the scale under the latent variable of *conceal*, while take3 was about taking specific action to conceal dis/ability take1, take2, and take4 referenced the ability to adjust others' awareness of dis/ability. For these reasons, I decided to run a third variation of SEM for Taking Action after removal of take3 to see if I could achieve sufficient goodness of fit. I also decided to rename the latent variable, formerly called conceal, to *mask* to better reflect the actual focus of the observed items.

I removed take3 and estimated the model goodness of fit statistics and modification indices. The initial goodness of fit statistics without covariance were X^2=*48.00, df=8, p < .001*,

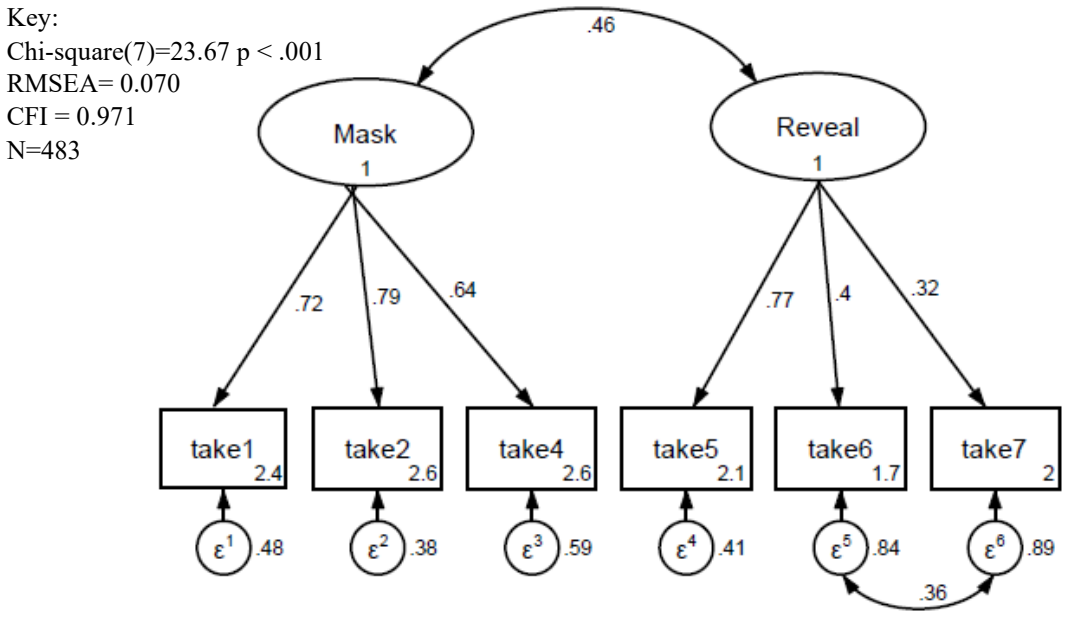

Figure 5.13

Third Variation Structural Equation Model for Taking Action Scale

RMSEA=0.102, and CFI= 0.931. Both the RMSEA and CFI were within the acceptable range but were right at the margins of acceptable, so I reviewed the items with the greatest modification indices. Once again, take6 and take7 were indicated for covariance and made conceptual sense to allow to covary. Take1 and take5 also returned a relatively high modification index (MI=38). However, in reviewing take1 and take5, these were not items where covariance made sense conceptually, so I did not allow these two items to covary.

I re-estimated the structural equation model and resulting goodness of fit statistics after allowing take6 and take7 to covary (Figure 5.13; X^2=*23.673, df=7, p < .001*, RMSEA=0.070, and CFI= 0.971). In this model, take7 had a standardized factor loading below 0.40; however, removal of take7 would decrease the overall fit of the model and cause a drop in factor loadings for other items. As a result, I decided to keep the third variation with take7 as my final model.

Model selection. As with the prior two scales, I chose the final variation of the model for Taking Action, which included the use of two latent variables and allowed for covariance between items take6 and take7. I chose to retain this model because it was the only version of the Taking Action model that achieved adequate goodness of fit statistics and inclusion of the two latent variables *mask* and *reveal* made conceptual sense under the broader domain of Taking Action. Additionally, though two of the individual items (take6 and take7) had standardized factor loadings (see Table 5.18) below 0.40, I attributed the lower factor loadings to the covariance between the two items and kept them in the model.

Discussion of items removed. Several items were removed from the scale during PCF and SEM. Items t2, t4, t5, t6, and t11 were removed during PCF and an additional item, take3 (see Table 5.19), was removed during SEM. Items t2, t4, t5, and t6 all related to the act of disclosure, which, though closely related to revealing, was a distinct category. Conceptually I

Table 5.18

Standardized Factor Loadings for the Taking Action Scale

Variable	Component 1	Component 2
take1- I am able to choose when people are aware of my dis/ability.	0.719	
take2- I am able to mask or conceal the impacts of my dis/ability.	0.787	
take4- I am able to change how aware people are of my dis/ability in most environments.	0.641	
take5- People know I am dis/abled even if they do not know what my specific dis/abilities/diagnoses are.		0.767
take6- I participate in clubs or activities for people with dis/abilities.		0.402
take7- I wear clothing or items (buttons, stickers) that reveal my dis/abled identity.		0.325

expect that items related to disclosure are significant to the latent variable of apparentness, even though they were not significantly connected to the Taking Action scale. As with two items under the Environment scale, I believe that these items may still be meaningful but were analyzed under the wrong scale or are connected to a latent variable that I did not identify in this study. I discuss this limitation and its implications for future research in Chapter 7. I also removed one item during confirmatory factor analysis. After reviewing those items with lower factor loadings than the other items under their corresponding latent variable during CFA, I realized that Take3 is related to the actual act of concealing, whereas its counterparts are related to the act of masking.

Table 5.19

Taking Action Items Removed During PCF and SEM

Item	Statement
t2	I intentionally share my dis/ability with my faculty.
t4	I receive formal accommodations (e.g., approved by the dis/ability office) that my faculty are aware of.
t5	I use informal accommodations/adjustments that I ask my faculty to support.
t6	I only disclose my dis/ability after I have experienced or identified an access issue.
t11	I am able to make my dis/ability more visible.
take3	I am able to take steps to keep people from noticing my dis/ability.

Note: Items beginning with "t" were removed during PCF. Items beginning with "take" were removed during SEM.

Identity

The Identity scale was the next scale I analyzed using PCF and SEM. First, I conducted PCF with the proposed items for the Identity scale. I began by ensuring sampling adequacy. The KMO Measure of Reliability was 0.787, and Bartlett's Test of Sphericity was $X^2 = 1317.37$, $df=66$, and $p < .001$. Both measures indicated that the combination of Identity items had an adequate sample size for exploratory factor analysis. The first round of factor analysis in Stata retained four factors with eigenvalues for Factor 1 = 3.56, Factor 2 = 1.58, Factor 3 = 1.22, and Factor 4 = 1.09. Again, I suspected that only two or three real factors are represented (see Figure 5.14). All items had a factor loading greater than 0.40 on at least one of the retained factors. Next, I conducted an oblique rotation of the factors and all items maintained a factor loading of > 0.40 and thus were retained. I estimated Cronbach's Alpha ($\alpha = 0.755$) to test the reliability of the scale, which indicated that removal of i1 or i3 would increase alpha.

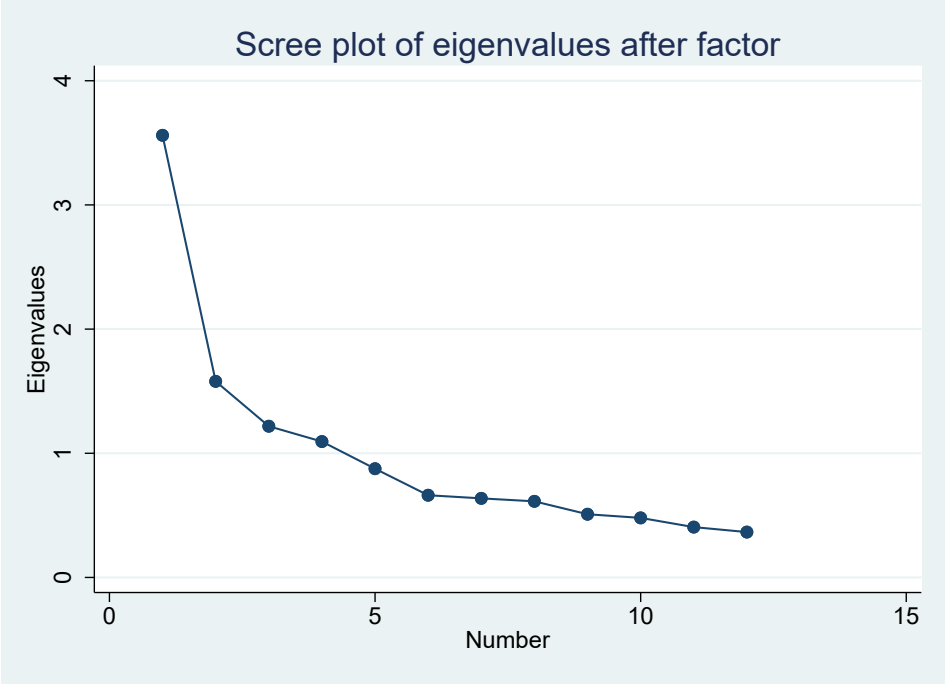

Figure 5.14

Scree Plot of Eigenvalues for Identity Scale

I decided to remove i1 and conduct the factor analysis again. The removal of i1 reduced the retained factors to three, with eigenvalues of Factor1=3.54, Factor2=1.57, and Factor3=1.10. All items had a factor loading of > 0.40 on at least one of the three retained factors, and factor loadings stayed > 0.40 after oblique rotation. After this round, Cronbach's Alpha was in acceptable ranges ($\alpha = 0.769$), but the removal of i3 would still improve alpha.

I conducted the factor analysis for a third time, including items i2, i4, i5, i6, i7, i8, i9, i10, i11, and i12. The model again had three retained factors. All items had a factor loading of > 0.40 on at least one retained factor. Following oblique rotation, item i5 no longer had a factor loading of > 0.40 on any of the three retained factors. I removed i5 and ran the factor analysis again. After a final rotation, Factor1 included items i2, i4, i10, and i11, Factor2 included items i6, i8, i12, and Factor3 included items i7 and i9. Cronbach's Alpha confirmed that the removal of any

single item would not increase the reliability (α = 0.776). I looked closely at the items that loaded onto each factor to determine if there was an underlying theme to each factor. Items i2, i4, i10, and i11 all related to the impact of physical appearance and gender or sexual orientation on

Table 5.20

Factor Loadings for the Identity Scale Based on PCF

Variable	Component 1	Component 2	Component 3
i2- People attribute aspects or impacts of my dis/ability to another identity.	0.795		
i4- People notice another aspect of my identity (race, sexual orientation, gender) and it draws attention to my dis/ability.	0.689		
i6- People attribute impacts of my dis/ability to my race.		0.875	
i7- My age makes people overlook my dis/ability.			0.867
i8- My dis/ability is ignored or overlooked because of my race.		-0.821	
i9- People do not recognize my dis/ability as a possibility in people my age.			-0.919
i10- Aspects of my dis/ability have been ignored because of my gender.	-.0611		
i11- People attribute aspects of my dis/ability to my sexual orientation.	0.816		
i12- My physical appearance (e.g., height, weight, skin color, etc.) makes people more likely to notice my dis/ability.		0.429	

dis/ability apparentness, items i6, i8, and i12 all pertained to the impact of race on dis/ability apparentness, and items i7 and i9 both pertained to the impact of age on dis/ability apparentness.

Confirmatory factor analysis. Following exploratory factor analysis, I conducted confirmatory factor analysis through SEM to further test the relationships between the items and the latent variable of identity. I began SEM by cloning variables i2, i4, i6, i7, i8, i9, i10, i11, and i12 and naming them iden1 through iden9 based on the factor component they loaded on during PCF. Next, I conducted SEM on the nine items without allowing for covariance or separating the items out underneath individual latent variables (see Figure 5.15). All items had a standardized factor loading ≥0.40 on this initial SEM for the Identity scale. All three goodness of fit statistics indicated the model is not a good fit (X^2=*344.56, df=37, p < .001*, RMSEA=0.157, and CFI= 0.702). In particular, the RMSEA score was well outside of the acceptable range for a model.

After the goodness of fit statistics showed that the initial model was not a good fit, I checked the modification indices for items to determine if allowing covariance would improve the model. Two relationships had very large modification indices, iden5 and iden6 (MI=103.24)

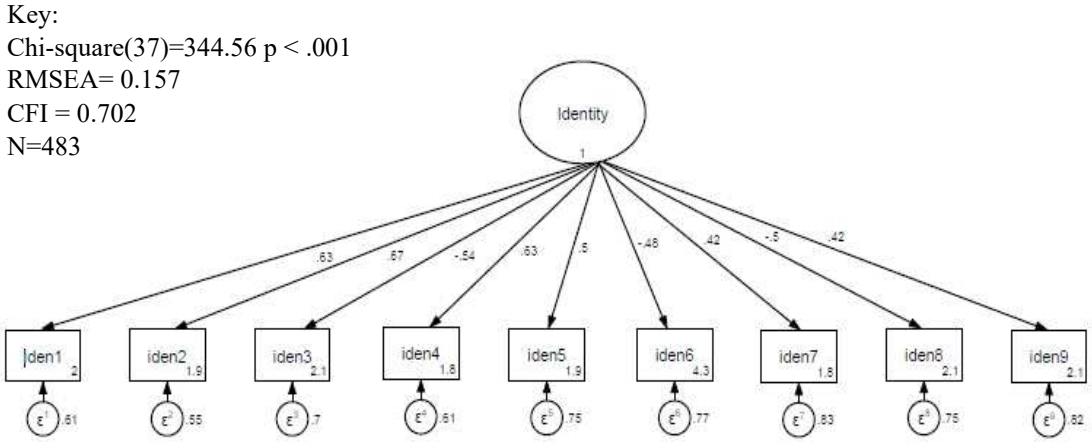

Figure 5.15

Initial Structural Equation Model for Identity Scale

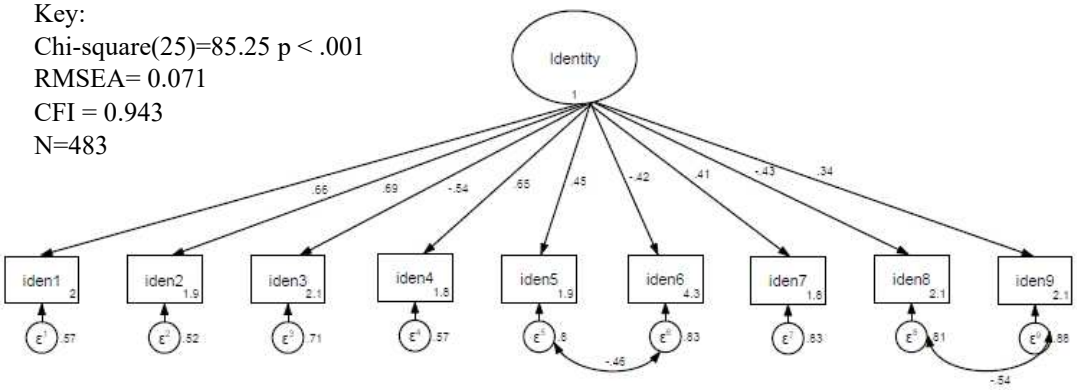

Figure 5.16

First Variation of Structural Equation Modeling for Identity Scale

and iden8 and iden9 (MI=144.88). Conceptually, these items made sense to allow to covary, so I conducted a variation of the structural equation model that allowed for these items to covary (Figure 5.16) to see if it improved the fit of the model.

The goodness of fit statistics for this first variation indicated that allowing covariance significantly improved the fit of the model (X^2=*85.25, df=25, p < .001*, RMSEA=0.071, and CFI= 0.943). Although the RMSEA and CFI are slightly outside of the range to be considered a good fit, they were well within the range of an acceptable fit for a model. As all of the previous models had performed better when the multiple factors were separated into separate latent variables, I decided to conduct a second variation of the model (see Figure 5.17), allowing for three separate latent variables of *Genderorient (*gender/sexual orientation)*, race,* and *age* to see if it further improved the model. *Genderorient* included items that loaded onto Factor 1 in exploratory factor analysis, and all items pertained to gender or sexual orientation and dis/ability. *Race* included items that loaded onto Factor 2 and pertained to race and dis/ability. *Age*

encompassed the items that loaded onto Factor 3 and pertained to age and dis/ability. The goodness of fit statistics did not improve from the previous model (X^2=*93.47, df=24, p < .001*, RMSEA=0.078, and CFI= 0.935). Additionally, one item (iden7) under the latent variable *race* did not achieve a standardized factor loading of > 0.40. Before I rejected this model in favor of the prior model without separate latent variables, I removed iden7 and conducted a final estimate of the structural equation model and goodness of fit statistics (X^2=*59.34, df=17, p < .001*, RMSEA=0.072, and CFI= 0.957; see Figure 5.18).

Model selection. Both the first variation, which included covariance, and the third variation, which used the three latent variables of *genderorient*, *race*, and *age,* were models with reasonably good fits and had very similar RMSEA, 0.071 and 0.072, respectively. However, the third variation had a higher CFI (0.957) compared with the CFI (0.943) of the first variation and this higher CFI met the recommended threshold to be considered a good fit. For this reason, I chose to select the third variation, which is depicted in Figure 5.18. The standardized factor

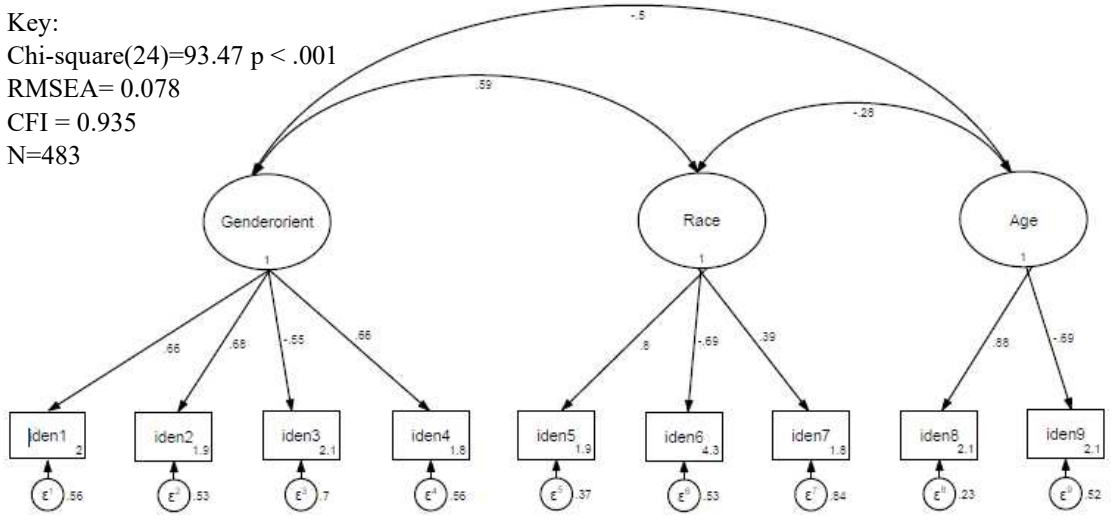

Figure 5.17

Second Variation of Structural Equation Model for Identity Scale

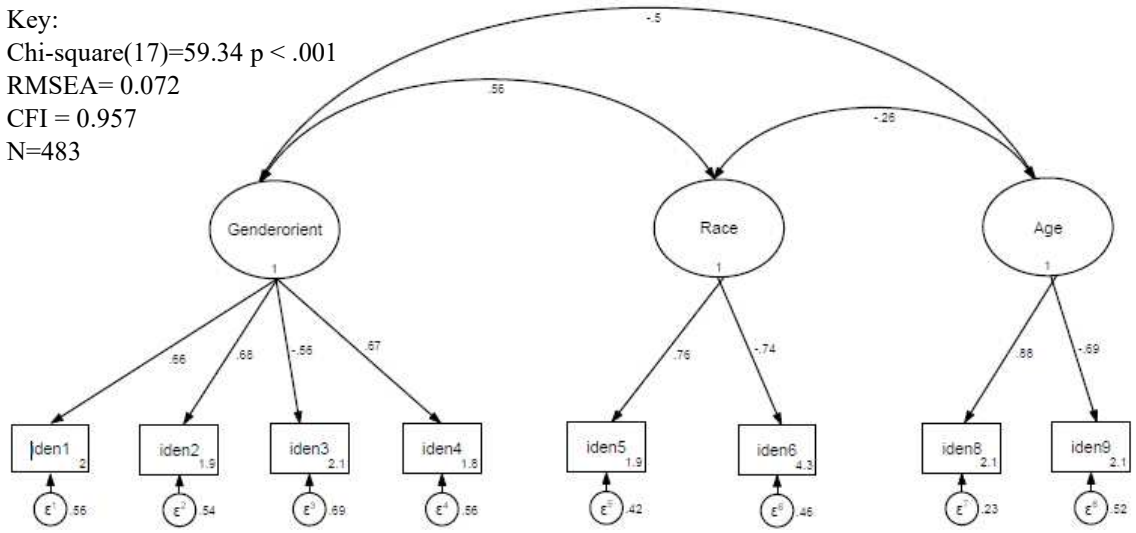

Figure 5.18

Third Variation of Structural Equation Model for Identity Scale

loadings for all variables under the latent variables of *genderorient, race,* and *age* were well above the 0.40 threshold and are depicted in Table 5.21. Selecting the model with the three latent variables also mimicked the selected models for Environment, Ableism, and Identity.

Table 5.21

Standardized Factor Loadings for Identity Scale

Variable	Component 1	Component 2	Component 3
iden1- People attribute aspects or impacts of my dis/ability to another identity.	0.663		
iden2-People notice another aspect of my identity (race, sexual orientation, gender) and it draws attention to my dis/ability.	0.678		
iden3- Aspects of my dis/ability have been ignored because of my gender.	-0.557		

iden4- People attribute aspects of my dis/ability to my sexual orientation.	0.666		
iden5- People attribute impacts of my dis/ability to my race.		0.763	
iden6- My dis/ability is ignored or overlooked because of my race.		-0.736	
iden8- My age makes people overlook my disability.			0.879
iden9- People do not recognize my disability as a possibility in people my age.			-0.692

Discussion of items removed. Several items included in the initial Qualtrics survey (see Table 5.22) were removed from the scale during PCF, including items i1, i3, and i5. Unlike the items retained in the model, these three items did not ask about a specific social identity and rather were focused on experiences of standing out or being the only person with a dis/ability in the room. An additional item (iden7) was removed during SEM which also pertained to general appearance rather than a specific identity.

Table 5.22

Identity Items Removed During PCF and SEM

Item	Statement
i1	I am frequently the only person in the room with my dis/ability.
i3	My physical appearance (e.g., height, weight, skin color, etc.) makes people less likely to notice my dis/ability.
i5	I stand out in any room I enter.
iden7	My physical appearance (e.g., height, weight, skin color, etc.) makes people more likely to notice my dis/ability.

Note: Items beginning with "i" were removed during PCF. Items beginning with "iden" were removed during SEM.

Embodied Dis/ability

Finally, I analyzed the Embodied Dis/ability scale through PCF, ensuring I had an adequate sample for exploratory factor analysis. The Measure of Reliability (KMO = 0.819) and Bartlett's Test of Sphericity (X^2 = *1791.89, df=66,* and $p < .001$) indicated that the data is appropriate for factor analysis. I conducted an initial factor analysis to review the factor loadings for each item, evaluate the eigenvalues of the factors, and make a prediction regarding how many factors are represented within the scale.

The initial factor analysis for items d1-d12 retained three factors with eigenvalues of Factor 1=3.94, Factor 2=1.99, and Factor 3=1.12 (Figure 5.19). Again, I suspected that the final factor retained by the model would not hold as I continued refining the scale. All items had an initial factor loading of > 0.40 on at least one of the three retained factors prior to rotation; however, after I completed an oblique rotation, d12 failed to load onto any of the three factors > 0.40. As a result, I removed d12 and conducted the factor analysis again, which resulted in all items having a factor loading > 0.40 for both the initial and rotated matrix. Next, I conducted Cronbach's Alpha to test the reliability of the scale (α =0.784), which indicated that removal of d2 would increase alpha.

After removing d2, I once again analyzed the factors. This time, the model retained only two factors (Factor 1=3.62 and Factor 2=1.94). All items except for d8 had a factor loading of > 0.40. D8 failed to return a factor loading > 0.40 on either factor, so it was removed, and I estimated the factor analysis again. During both the initial estimation and the rotated model, all remaining items had a factor loading of > 0.40. Cronbach's Alpha (α =0.795) indicated that removal of any item would not improve alpha. The following items loaded onto each factor:

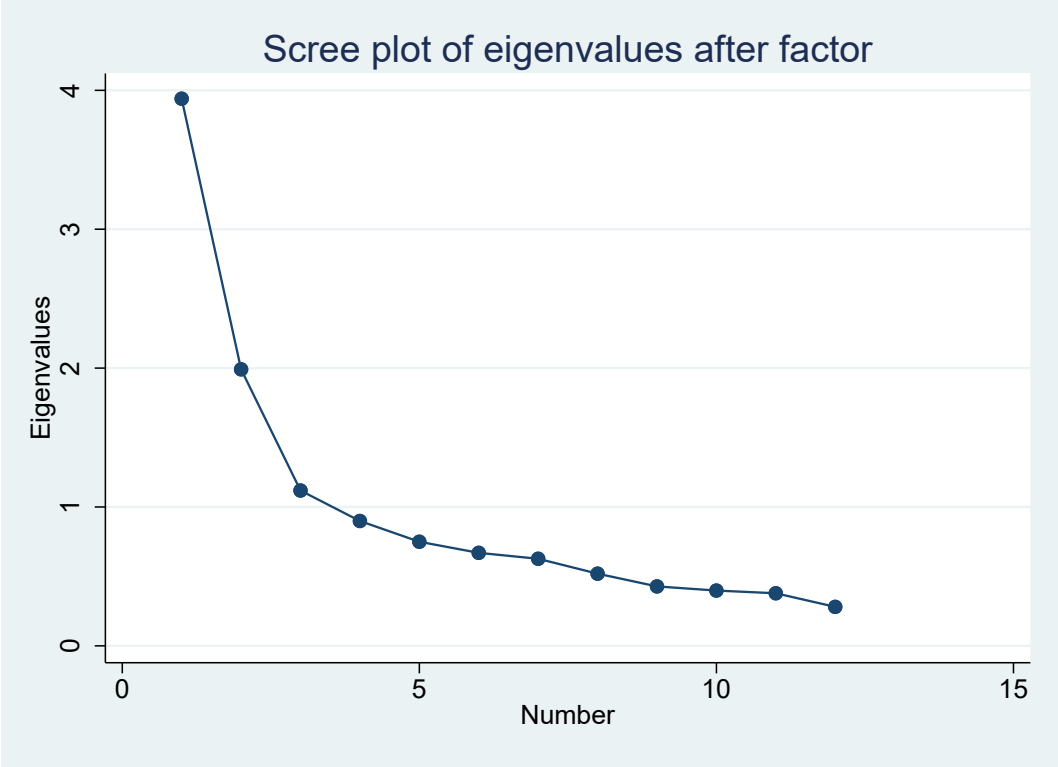

Figure 5.19

Scree Plot of Eigenvalues for Embodied Dis/ability Scale

Factor1=d1, d3, d4, d5 and Factor2=d6, d7, d9, d10, d11. Items on the first factor all pertained to dis/ability-related impacts on *time* and the items on the second factor related to *absence* from activities.

Table 5.23

Factor Loadings For Embodied Dis/ability Based on PCF

Variable	Component 1	Component 2
d1- My dis/ability makes routine academic tasks (e.g., homework, writing, exams, etc.) take me longer to complete.	0.853	
d3- My dis/ability impacts how I spend my time on academics.	0.797	

Variable	Component 1	Component 2
d4- I need to allocate more time for coursework because of my dis/ability.	0.839	
d5- Things take me longer to complete than my classmates because of dis/ability.	0.818	
d6- I miss class or activities due to my dis/ability.		0.742
d7- My dis/ability requires me to be absent for specific in-class activities.		0.764
d9- My dis/ability has caused health issues that have led to extended or repeat absences from academics		0.815
d10- I am late as the result of my dis/ability.		0.497
d11- People notice when I am not present in class and attribute it to my dis/ability.		0.674

Confirmatory factor analysis. I began confirmatory factor analysis by cloning variables d1, d3, d4, d6, d7, d9, d10, and d11 and renamed them embody1 through embody9, respectively. Next, I conducted structural equation modeling on the eight items without allowing for covariance or separating the items out underneath separate latent variables. Several items (embody5, embody6, embody7, and embody9) did not have a factor loading of ≥0.40 and the goodness of fit statistics for the model did not indicate an acceptable fit (X^2=*533.86, df=27, p < .001*, RMSEA=0.197, and CFI= 0.658; see Figure 5.20).

In order to attempt to improve the fit of the model, I next checked the modification

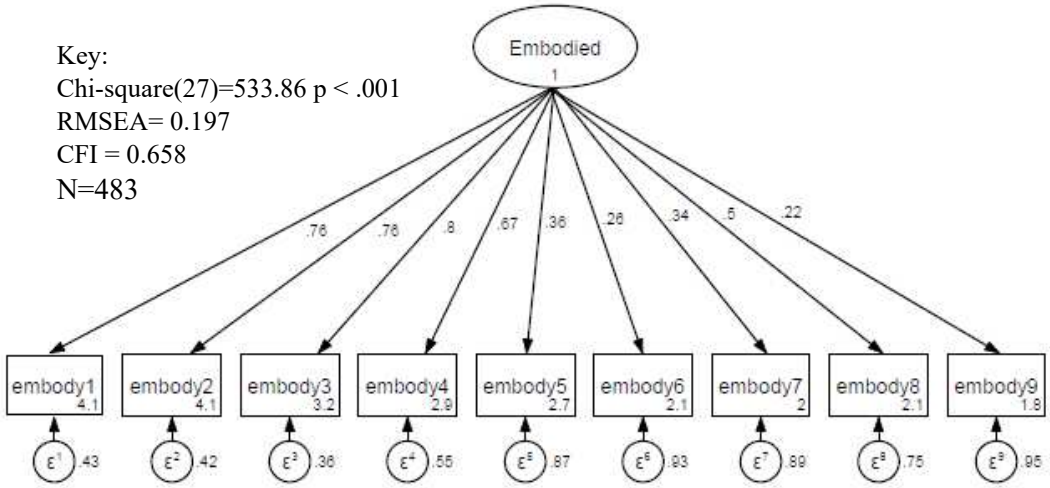

Figure 5.20

Initial Structural Equation Model for Embodied Dis/ability Scale

indices to see if there were items where covariance made conceptual sense and would significantly improve the model. I decided to allow several pairs of items to covary (see Figure 5.21). The first pair was embody5 and embody6 (MI=89.52), the second pair were embody 5 and

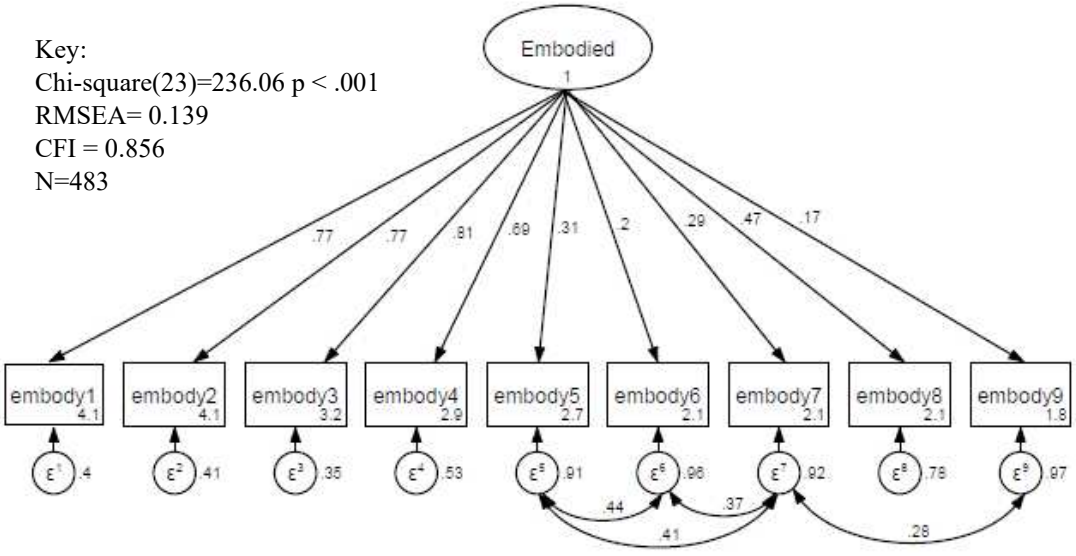

Figure 5.21

First Variation Structural Equation Model for Embodied Dis/ability Scale

embody 7 (MI=92.40), the third pair was embody 6 and embody7 (MI=91.84), and embody7 and embody9 (MI=78.00). The model with covariances had improved goodness of fit statistics; however, it was still not considered to be within an acceptable range of fit (X^2=*236.06, df=23, p < .001*, RMSEA=0.139, and CFI= 0.856).

I decided to try another variation of the model (Figure 5.22), where I split out the two factors into separate latent variables of *time* and *absence*. Without allowing covariance between items, all items had a standardized factor loading of ≥0.40 and goodness of fit statistics were just outside acceptable ranges (X^2=*157.35, df=26, p < .001*, RMSEA=0.102, and CFI= 0.911). I reviewed the modification indices and decided to allow three pairs of items to covary: embody2 and embody4 (MI=26.26), embody6 and embody8 (MI=19.56), and embody7 and embody9 (MI=13.14). After allowing for covariance, all items had a standardized factor loading of ≥0.40 and goodness of fit statistics showed that while the model was not a great fit, it was within

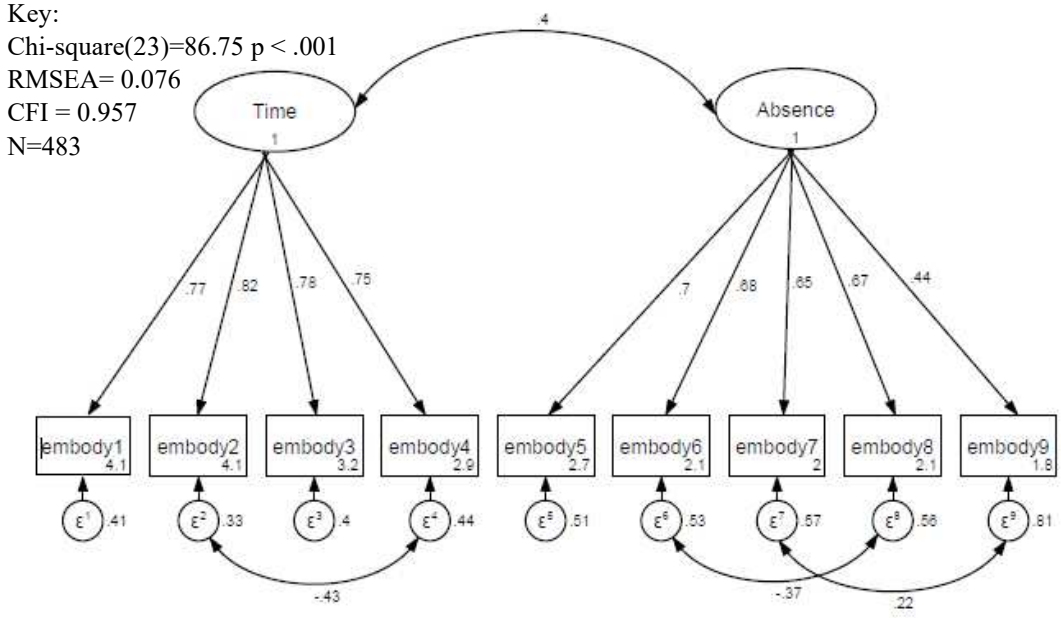

Figure 5.22

Second Variation Structural Equation Model for Embodied Dis/ability Scale

acceptable ranges for both the RMSEA and CFI statistics (X^2=*86.75, df=23, p < .001*, RMSEA=0.076, and CFI= 0.957).

Model selection. I selected the final model variation, which included both two latent variables and covariance, as it was the only model that had acceptable results for both RMSEA and CFI. Additionally, all of the standardized factor loadings were greater than 0.40. The selected model for Embodied Dis/ability also matched the four prior scales where the most reliable model took into account multiple latent variables under a single scale.

Table 5.24

Standardized Factor Loadings for Embodied Dis/ability Scale

Variable	Component 1	Component 2
embody1- My dis/ability makes routine academic tasks (e.g., homework, writing, exams, etc.) take me longer to complete.	0.768	
embody2- My dis/ability impacts how I spend my time on academics.	0.820	
embody3- I need to allocate more time for coursework because of my dis/ability.	0.777	
embody4- Things take me longer to complete than my classmates because of dis/ability.	0.751	
embody5- I miss class or activities due to my dis/ability.		0.699
embody6- My dis/ability requires me to be absent for specific in-class activities.		0.683
embody7- My dis/ability has caused health issues that have led to extended or repeat absences from academics.		0.653

Variable	Component 1	Component 2
embody8- I am late as the result of my dis/ability.		0.666
embody9- People notice when I am not present in class and attribute it to my dis/ability.		0.436

Discussion of items removed. Several items included in the initial Qualtrics survey (Table 5.25) were removed from the scale during PCF. Item d2 pertained to visibility while moving and closely resembled similar questions that were included under the Environment scale. D2 may still be relevant to the overall latent variable of apparentness even though it was not related to the Embodied Dis/ability scale. Items d8 and d12 both pertained to participation in classroom settings, which again may be related to Environment rather than Embodied Dis/ability. In future data analysis, these items should be tested to see if they correlate with and load onto factors underneath Environment.

Table 5.25

Embodied Dis/ability Items Removed During PCF

Item	Statement
d2	My dis/ability is only visible to others when I am moving.
d8	My participation in class is the same as my peers.
d12	My dis/ability alters the way I am able to participate in some academic environments or activities.

Summary

In this chapter, I described the process of developing the Scale of Dis/ability Apparentness in Educational Settings (SDAES) based on the thematic findings from participant expert interviews. The chapter covered item development, theme verification and refinement, survey creation and distribution, and the analysis of the scale. The next chapter explores which variables had statistically significant impacts on experiences of dis/abled apparentness through deeper statistical analyses and regression modeling.

CHAPTER 6-RESEARCH FINDINGS AND RESULTS: REGRESSION MODELS

Scale development and factor analysis helped me to identify specific latent variables and items that contribute to apparentness of dis/ability. Factor analysis allowed me to address my primary research question in order to further address my primary research question as well as to examine my secondary research question regarding differences across various social groups. I use this chapter to conduct additional statistical analyses to look for meaningful differences in the data. I used the demographic variables, dis/ability variables, self-reported visibility, and variables created through scale development to explore which variables had a statistically significant impact on experiences of dis/abled apparentness among the participants in the study. After conducting statistical analyses to review patterns within the data, I created regression models to determine what demographic and disability context variables are associated with specific aspects of apparentness in higher education. This chapter describes the results of these statistical analyses and regression models.

Predicting Experiences of Dis/abled Apparentness

I conducted statistical analyses using scale variables, key demographic variables, and dis/ability context variables (e.g., dis/ability type, assistive aids used, etc.) to identify patterns in the data to determine which characteristics, factors, and interactions influence apparentness of dis/ability as well as how those change for multiply-marginalized populations in higher education. I conducted mean comparison tests using t-tests to look for significant differences in the Environment, Ableism, Identity, Taking Action, and Embodied Dis/ability scales for participants with various dis/ability categories (e.g., mental health, learning dis/abilities, physical

dis/abilities, and sensory dis/abilities) and for those from particular demographic categories (e.g., People of Color, Queer people, and Trans* people), and those who reported specific self-assessed apparentness scores.

In order to compare the findings, I first conducted t-tests for the full sample, followed by the specific t-tests by self-reported visibility scores combined with demographics and disability type. I also conducted t-tests that compared scale scores for participants in different disability categories by demographic variables and participants in different disability categories by assistive technology/access aid usage. The results are described in the following sections.

Full Sample Comparisons of SDAES Scores

The full sample t-test and ANOVA comparisons are described in this section. Tables 6.1 through 6.3 display the mean differences in scale scores for the full sample by key demographics. Tables 6.4 through 6.9 display the mean differences in scale scores for the full sample by dis/ability context variables.

Demographic Variables

I began with full sample comparisons of the scale scores by key demographic variables in order to determine what relationship, if any, demographics had on reported scale scores. Table 6.1 displays the mean differences in scale scores for *People of Color* (n = 170) for the full sample. Notably, there were statistically significant higher mean scores for People of Color in the Taking Action ($t = -1.73, p < .05$) and Embodied Dis/ability ($t = -3.10, p < .001$) domains when compared with others in the full sample. Table 6.2 displays the mean differences in scale scores for *Queer* participants (n = 278). Unlike the results for People of Color, no significant difference was present in the Taking Action for Queer participants. Additionally, no significant difference in mean scores for Environment existed for Queer participants in the full sample. However, there

was a significantly lower mean for the Ableism domain *(t = 4.88, p < .001*) and significantly higher means for the Identity (*t = -2.15, p < .05*) and Embodied Dis/ability (*t = -3.22, p < .001*) domains when compared with the full sample. As with the results for Queer participants, *Trans** participants (n = 112) experienced similar differences when compared with those in the sample who were not Trans*. Table 6.3 shows, as with Queer participants, there is not a significant difference in means for the Environment or Taking Action domains. However, there was a significantly lower mean for the Ableism (*t = 2.89, p < .01*) domain and significantly higher means for the Identity (*t = -3.15, p < .001*) and Embodied Dis/ability (*t = -3.14, p < .001*) domains when compared with the full sample. The final demographic variable I examined for differences in the scale scores of the full sample was *Age*. I conducted a one-way ANOVA to test differences between Age groups in the sample for each of the scales. When looking at Age as the independent variable, no significant difference was present for the Environment, Ableism, Identity, or Taking Action scales. The only statistically significant one-way ANOVA by *Age* was for Embodied Dis/ability, where there was a statistically significant difference in mean scores between at least two age groups (F(6,475) = [2.15], p < .05).

Table 6.1

Mean Differences in Scale Scores for People of Color for Total Sample (n = 483)

	Person of Color							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	170	2.49	0.79	313	2.42	0.65	-1.05	
Ableism	170	2.72	0.41	313	2.72	0.41	0.19	
Identity	170	2.14	0.31	313	2.11	0.29	-0.97	
Taking Action	170	1.90	0.56	313	1.81	0.49	-1.73	*
Embodied Dis/ability	170	2.57	0.57	313	2.41	0.54	-3.10	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6.2

Mean Differences in Scale Scores for Queer People for Total Sample (n = 483)

	Queer							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	278	2.44	0.68	205	2.45	0.73	0.26	
Ableism	278	2.65	0.39	205	2.83	0.37	4.88	***
Identity	278	2.15	0.32	205	2.09	0.27	-2.15	*
Taking Action	278	1.83	0.52	205	1.87	0.52	0.95	
Embodied Dis/ability	278	2.54	0.55	205	2.37	0.55	-3.22	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

As described in detail in the prior section, all four demographic categories resulted in statistically significant differences in Embodied Dis/ability scores, and Ableism, Identity, and Taking Action were all statistically significant for at least one of the tested demographics. However, there were no significant differences for demographic variables in the Environment

Table 6.3

Mean Differences in Scale Scores for Trans People for Total Sample (n = 483)*

	Trans*							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	112	2.50	0.70	371	2.43	0.71	-0.79	
Ableism	112	2.63	0.40	371	2.75	0.39	2.89	**
Identity	112	2.20	0.30	371	2.10	0.29	-3.15	***
Taking Action	112	1.88	0.55	371	1.84	0.51	-0.74	
Embodied Dis/ability	112	2.61	0.54	371	2.42	0.56	-3.14	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

scale. After comparing the results by demographic variables, I next looked at differences in scale scores for the full sample by specific dis/ability and assistive technology variables.

Dis/ability Context Variables

Use of assistive technology or adaptive aids resulted in significantly different means for all of the scales in the full sample when comparing those who used at least one *assistive device, technology, or access aid* (n = 351) with those who did not. Scale scores by use of an assistive technology or aid are depicted in Table 6.4. For the Environment *($t = -3.15, p < .001$)*, Identity *($t = 1.97, p < .05$)*, Taking Action ($t = -5.02, p < .001$), and Embodied Dis/ability ($t = -3.41, p < .001$) Scales, participants who used an assistive device or access aid had significantly higher scores than those who did not. The Ableism Scale ($t = 1.97, p < .05$) was the only domain where participants who used an assistive device had a significantly lower score.

Five variables were used to compare scale scores by dis/ability type (e.g., mental health, learning dis/ability, physical dis/ability, sensory dis/ability, and multiple dis/ability categories). The first four variables were coded as dummy variables, where 1 indicated those who had a dis/ability under that category umbrella. The variable multiple dis/ability categories was also dummy coded where 1 indicated those who had dis/abilities in two or more of the prior categories (e.g., both a mental health and a sensory dis/ability).

Participants with *mental health dis/abilities* (n = 387) reported significantly lower scores on the Ableism Scale ($t = 4.07, p < .001$) and Taking Action Scale ($t = 2.86, p < .05$) than others in the study (see Table 6.5). They also had significantly higher scores on the Embodied Dis/ability Scale ($t = -5.78$, $p < .001$) than those without mental health dis/abilities. Results for individuals who have *learning dis/abilities* (n = 269) had very similar outcomes to those reporting mental health dis/abilities, as individuals with learning dis/abilities also reported lower

scores on the Ableism (*t = 3.55, p < .001*) and Taking Action (*t = 2.29, p < .01*) Scales and significantly higher scores on the Embodied Dis/ability Scale (*t = -5.19, p < .001*; see Table 6.6). Participants who have a *physical dis/ability* (n = 215) had statistically significant lower scores on the Environment Scale (*t = 1.72, p < .05*) and significantly higher scores on the Identity (*t = -1.63, p < .05*), Taking Action (*t = -2.62, p < .01*), and Embodied Dis/ability (*t = -4.68, p < .001*) Scales than those participants without a physical dis/ability (see Table 6.7). Participants with *sensory dis/abilities* (n = 67) reported significantly higher scores on the Environment (*t = -4.86, p < .001*), Identity (*t = -1.93, p < .05*), and Taking Action (*t = -5.38, p < .001*) Scales (see Table 6.8). However, unlike the other three dis/ability categories, those with a sensory disability were the only group to have a significantly lower score on the Embodied Dis/ability Scale (*t = 1.89, p < .05*).

Table 6.9 displays the mean differences in scale scores for those who reported *dis/abilities in multiple categories* (n= 423) compared with the full sample. The majority of respondents in the study had multiple dis/abilities or diagnoses and for many of the respondents,

Table 6.4

Mean Differences in Scale Scores by Use of Assistive Technology for Total Sample (n = 483)

	Uses at least one AT/Aid (including medication)							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	351	2.51	0.63	131	2.29	0.63	-3.15	***
Ableism	351	2.70	0.40	131	2.78	0.36	1.97	*
Identity	351	2.16	0.30	131	2.04	0.29	-3.87	***
Taking Action	351	1.92	0.52	131	1.66	0.45	-5.02	***
Embodied Dis/ability	351	2.52	0.56	131	2.33	0.51	-3.41	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

these dis/abilities fell into different categories (e.g., mental health, physical, etc.). Individuals with dis/abilities in multiple categories had statistically significant lower scores on the Ableism Scale ($t = 4.84, p < .001$) than those with dis/abilities in only one category. They also had significantly higher scores in the Embodied Dis/ability Scale ($t = -6.99, p < .001$).

Table 6.5

Mean Differences in Scale Scores by Mental Health Dis/ability for Total Sample (n = 483)

	Mental Health							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	387	2.43	0.66	96	2.52	0.84	1.18	
Ableism	387	2.69	0.39	96	2.87	0.37	4.07	***
Identity	387	2.11	0.30	96	2.17	0.29	1.52	
Taking Action	387	1.81	0.51	96	1.98	0.54	2.86	*
Embodied Dis/ability	387	2.54	0.53	96	2.18	0.56	-5.78	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6.6

Mean Differences in Scale Scores by Learning Disability for Total Sample (n = 483)

	Learning Dis/ability							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	269	2.45	0.69	214	2.44	0.72	-0.15	
Ableism	269	2.67	0.41	214	2.80	0.36	3.55	***
Identity	269	2.12	0.30	214	2.13	0.29	0.43	
Taking Action	269	1.80	0.47	214	1.90	0.57	2.29	**
Embodied Dis/ability	269	2.58	0.51	214	2.32	0.58	-5.19	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6.7

Mean Differences in Scale Scores by Physical Dis/ability for Total Sample (n = 483)

	Physical Dis/ability							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	215	2.39	0.74	268	2.50	0.67	1.72	*
Ableism	215	2.73	0.39	268	2.73	0.39	0.03	
Identity	215	2.15	0.30	268	2.10	0.30	-1.63	*
Taking Action	215	1.91	0.55	268	1.79	0.48	-2.62	**
Embodied Dis/ability	215	2.60	0.56	268	2.36	0.53	-4.68	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6.8

Mean Differences in Scale Scores by Sensory Dis/ability for Total Sample (n = 483)

	Sensory Dis/ability							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	67	2.83	0.76	416	2.39	0.68	-4.86	***
Ableism	67	2.78	0.41	416	2.72	0.39	-1.11	
Identity	67	2.19	0.29	416	2.11	0.30	-1.93	*
Taking Action	67	2.15	0.55	416	1.80	0.50	-5.38	***
Embodied Dis/ability	67	2.35	0.61	416	2.48	0.55	1.89	*

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6.9

Mean Differences in Scale Scores by Multiple Dis/ability for Total Sample (n = 483)

	Dis/abilities in Multiple Categories							
	Yes			No				
	n	*M*	*SD*	*n*	*M*	*SD*	*t*	
Environment	423	2.45	0.69	60	2.44	0.80	-0.11	
Ableism	423	2.70	0.39	60	2.95	0.34	4.84	***
Identity	423	2.13	0.30	60	2.11	0.28	-0.27	
Taking Action	423	1.84	0.52	60	1.91	0.54	1.06	
Embodied Dis/ability	423	2.53	0.53	60	2.02	0.58	-6.99	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Comparing Scale Scores by Specific Dis/ability Based on Self-Reported Levels of Visibility

Scale scores differed meaningfully by specific dis/ability based on self-reported levels of visibility. In the next four sections, I examine the significant differences in scale scores for individuals with mental health, learning, physical, and sensory dis/abilities based on their self-reported visibility to strangers, casual, and close contacts.

Mental Health Dis/Abilities

Table 6.10 displays the mean differences in the Apparentness Scale scores by self-reported visibility to strangers, casual contacts, and close contacts for those with mental health dis/abilities. For participants with mental health dis/abilities who reported their dis/ability was *never or rarely visible to strangers* (n = 257), there was a significant difference in the Ableism ($t = 3.78, p < .001$) and Embodied Dis/ability ($t = -4.38, p < .001$) Scales compared to those without a mental health dis/ability who reported the same level of visibility. The scores for the Ableism Scale were significantly lower for those with mental health dis/abilities in comparison to the scores for the Embodied Dis/ability Scale, which were significantly higher. Participants with mental health dis/abilities who reported that their dis/ability was *sometimes visible to strangers* (n = 94) had a significant difference in Embodied Dis/ability Scale ($t = -3.04, p < .01$) scores compared to others without a mental health dis/ability whose dis/ability was sometimes visible to strangers. In terms of individuals with mental health dis/abilities who reported their dis/ability was *frequently or always visible to strangers* (n = 36) there were significant differences in the scores for the Environment ($t = 2.68, p < .01$), Ableism ($t = 1.63, p < .05$), Taking Action ($t = 1.95, p < .05$), and Embodied Dis/ability ($t = -2.29, p < .01$) Scales. Embodied Dis/ability was the only scale score where the significant difference was higher for

those with mental health dis/abilities than those without mental health dis/abilities when dis/ability was *frequently or always visible to strangers*.

Participants with mental health dis/abilities who reported their dis/ability was *never or rarely visible to casual contacts* (n = 150) had significant differences in the Ableism (*t = 2.82, p < .01*), Taking Action (*t = 1.77, p < .05*), and Embodied Dis/ability (*t = -3.83, p < .001*) Scales compared to those without a mental health dis/ability who reported this same level of visibility. The scores for the Ableism Scale and Taking Action Scale were significantly lower for those with mental health dis/abilities. In comparison, the scores for Embodied Dis/ability Scale were significantly higher. For participants with mental health dis/abilities who reported that their dis/ability was *sometimes visible to casual contacts* (n = 166), there was a significant difference for the Environment (*t = -1.84, p < .05*), Ableism (*t = 2.42, p < .01*), and Embodied Dis/ability (*t = -2.81, p < .01*) Scales. Participants with mental health dis/abilities reported higher scores in both the Environment and Embodied Dis/ability Scales and reported lower scores in the Ableism Scale than those without mental health dis/abilities. Individuals with mental health dis/abilities who reported their dis/ability was *frequently or always visible to casual contacts* (n = 71), there were significant differences in the scores for Environment (*t = 2.18, p < .05*), Taking Action (*t = 2.09, p < .01*), and Embodied Dis/ability (*t = -3.07, p < .001*) Scales. Embodied Dis/ability was the only Scale where the score was significantly higher for those with mental health dis/abilities.

No significant differences existed for those with mental health dis/abilities who reported their dis/ability was *never or rarely visible to close contacts* (n = 31) compared with those without mental health dis/abilities. However, when participants reported their dis/ability was s*ometimes visible to close contacts* (n = 114), there were significant differences in the Ableism (*t = 3.39, p < .001*) and Embodied Dis/ability (*t = -4.33, p < .001*) Scales. In direct contrast to the

scores when participants reported their dis/ability was *never or rarely visible*, participants with mental health dis/abilities whose dis/ability was reported as *frequently or always visible to close contacts* (n = 242) had significantly lower scores on the Environment ($t = 190, p < .05$), Ableism ($t = 2.35, p < .01$), Identity ($t = 1.91, p < .05$), and Taking Action ($t = 2.63, p < .01$) Scales, however, these participants had higher scores on the Embodied Dis/ability Scale ($t = -3.96, p < .001$) compared to those without mental health dis/abilities.

Table 6.10

Mean Differences for Participants with Mental Health Dis/abilities by Self-Reported Visibility

	Never or Rarely Visible to Strangers (n=317)							
	Mental Health Yes			Mental Health No				
	n	M	SD	n	M	SD	t	
Environment	257	2.18	0.55	60	2.10	0.55	-0.90	
Ableism	257	2.68	0.38	60	2.88	0.37	3.78	***
Identity	257	2.08	0.29	60	2.10	0.27	0.45	
Taking Action	257	1.70	0.44	60	1.79	0.43	1.41	
Embodied Dis/ability	257	2.51	0.52	60	2.19	0.54	-4.38	***
	Never or Rarely Visible to Casual Contacts (n=185)							
	Mental Health Yes			Mental Health No				
	n	M	SD	n	M	SD	t	
Environment	150	1.98	0.51	35	1.91	0.51	-0.78	
Ableism	150	2.67	0.38	35	2.87	0.36	2.82	**
Identity	150	2.06	0.30	35	2.06	0.28	0.15	
Taking Action	150	1.60	0.40	35	1.74	0.42	1.77	*
Embodied Dis/ability	150	2.55	0.53	35	2.16	0.55	-3.83	***
	Never or Rarely Visible to Close Contacts (n=43)							
	Mental Health Yes			Mental Health No				
	n	M	SD	n	M	SD	t	
Environment	31	2.10	0.66	12	2.02	0.59	-0.38	
Ableism	31	2.70	0.42	12	2.93	0.36	1.63	
Identity	31	2.12	0.35	12	2.17	0.29	0.44	
Taking Action	31	1.75	0.49	12	1.89	0.42	0.88	

Embodied Dis/ability	31	2.36	0.57	12	2.14	0.52	-1.19	
			Sometimes Visible to Strangers (n=116)					
		Mental Health Yes			Mental Health No			
	n	M	SD	n	M	SD	t	
Environment	94	2.77	0.51	22	2.83	0.59	0.45	
Ableism	94	2.75	0.39	22	2.84	0.36	1.04	
Identity	94	2.13	0.27	22	2.20	0.29	1.10	
Taking Action	94	1.97	0.50	22	2.11	0.56	1.23	
Embodied Dis/ability	94	2.56	0.57	22	2.16	0.50	-3.04	**
			Sometimes Visible to Casual Contacts (n=198)					
		Mental Health Yes			Mental Health No			
	n	M	SD	n	M	SD	t	
Environment	166	2.53	0.48	32	2.36	0.44	-1.84	*
Ableism	166	2.69	0.38	32	2.87	0.37	2.42	**
Identity	166	2.12	0.29	32	2.14	0.28	0.32	
Taking Action	166	1.85	0.45	32	1.82	0.38	-0.28	
Embodied Dis/ability	166	2.48	0.55	32	2.19	0.52	-2.81	**
			Sometimes Visible to Close Contacts (n=136)					
		Mental Health Yes			Mental Health No			
	n	M	SD	n	M	SD	t	
Environment	114	2.07	0.54	22	1.96	0.58	-0.88	
Ableism	114	2.67	0.34	22	2.94	0.34	3.39	***
Identity	114	2.07	0.30	22	2.03	0.22	-0.61	
Taking Action	114	1.64	0.39	22	1.68	0.42	0.43	
Embodied Dis/ability	114	2.57	0.50	22	2.06	0.54	-4.33	***
			Frequently or Always Visible to Strangers (n=50)					
		Mental Health Yes			Mental Health No			
	n	M	SD	n	M	SD	t	
Environment	36	3.35	0.57	14	3.84	0.63	2.68	**
Ableism	36	2.64	0.43	14	2.86	0.41	1.63	*
Identity	36	2.29	0.37	14	2.38	0.30	0.85	
Taking Action	36	2.21	0.64	14	2.60	0.59	1.95	*
Embodied Dis/ability	36	2.63	0.55	14	2.20	0.73	-2.29	**

	Frequently or Always Visible to Casual Contacts (n=100)							
	Mental Health Yes			Mental Health No				
	n	M	SD	n	M	SD	t	
Environment	71	3.15	0.60	29	3.45	0.71	2.18	*
Ableism	71	2.74	0.42	29	2.87	0.40	1.48	
Identity	71	2.21	0.30	29	2.31	0.26	1.58	
Taking Action	71	2.17	0.61	29	2.44	0.54	2.09	*
Embodied Dis/ability	71	2.64	0.50	29	2.19	0.63	-3.07	***
	Frequently or Always Visible to Close Contacts (n=304)							
	Mental Health Yes			Mental Health No				
	n	M	SD	n	M	SD	t	
Environment	242	2.64	0.63	62	2.82	0.83	1.90	*
Ableism	242	2.70	0.40	62	2.83	0.39	2.35	**
Identity	242	2.13	0.29	62	2.21	0.30	1.91	*
Taking Action	242	1.90	0.54	62	2.10	0.56	2.63	**
Embodied Dis/ability	242	2.54	0.54	62	2.23	0.57	-3.96	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Learning Dis/Abilities

Table 6.11 displays the mean differences in the Apparentness Scale scores by self-reported visibility to strangers for those with learning dis/abilities (n = 190). For participants who reported their dis/ability was *never or rarely visible to strangers*, there was a significantly lower score on the Ableism Scale ($t = 1.94, p < .05$) and a significantly higher mean for the Embodied Dis/ability Scale ($t = -3.44, p < .001$) when compared with those without learning dis/abilities. When comparing scores for participants with learning dis/abilities who indicated their dis/abilities were *sometimes visible to strangers* (n = 54) to those who did not have learning dis/abilities there were significant differences on all Scales except for the Identity Scale. Participants with learning dis/abilities reported significantly higher scores in the Environment ($t = -1.91, p < .05$) and Embodied Dis/ability ($t = -3.48, p < .001$) Scales and significantly lower

scores in the Ableism ($t = 2.79, p < .01$) and Taking Action ($t = 1.76, p < .05$) Scales. Of the fifty participants who said their disability was *frequently or always visible to strangers*, half (n = 25) reported learning dis/abilities and when compared to those without learning dis/abilities there were significant differences in two scales with significantly lower scores in the Taking Action Scale ($t = 1.64, p < .05$) and significantly higher scores on the Embodied Dis/ability Scale ($t = -2.36, p < .01$).

For participants with learning dis/abilities who reported their dis/ability was *never or rarely visible to casual contacts* (n = 102), there was a significantly lower score on the Identity Scale ($t = 1.96, p < .05$) and a significantly higher score for the Embodied Dis/ability Scale ($t = -1.99, p < .05$) when compared with those without learning dis/abilities. When comparing scale scores for participants with learning dis/abilities who indicated their dis/abilities were s*ometimes visible to casual contacts* (n = 117) to those who did not have learning dis/abilities, participants with learning dis/abilities reported significantly higher scores on the Environment ($t = -1.75, p < .05$) and Embodied Dis/ability ($t = -4.15, p < .001$) Scales and significantly lower scores in the Ableism ($t = 3.30, p < .001$) Scale. Of the one hundred participants who said their dis/ability was *frequently or always visible to casual contacts*, half (n = 50) reported learning dis/abilities. Participants with learning dis/abilities reported lower scores on the Ableism ($t = 2.52, p < .01$) and Taking Action ($t = 2.58, p < .01$) Scales and significantly higher scores on the Embodied Dis/ability Scale ($t = -3.10, p < .001$) compared to those without learning dis/abilities.

As with participants with mental health dis/abilities, there are no significant differences for those with learning dis/abilities who reported their dis/ability was *never or rarely visible to close contacts* (n = 19) when compared to those without learning dis/abilities. Results for participants with learning dis/abilities who reported their dis/abilities were *sometimes visible to*

close contacts (n = 77) also resembled those for participants with mental health dis/abilities with significantly lower scores on the Ableism Scale (t = *1.95, p < .05*) and significantly higher scores on the Embodied Dis/ability Scale (*t = -2.94, p < .01*) compared to those without learning dis/abilities.

Table 6.11

Mean Differences for Participants with Learning Dis/abilities by Self-Reported Visibility

	Never or Rarely Visible to Strangers (n=317)							
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	190	2.19	0.53	137	2.12	0.57	-1.05	
Ableism	190	2.68	0.41	127	2.77	0.35	1.94	*
Identity	190	2.08	0.29	127	2.09	0.27	0.29	
Taking Action	190	1.71	0.42	127	1.71	0.48	-0.03	
Embodied Dis/ability	190	2.54	0.51	127	2.33	0.56	-3.44	***
	Never or Rarely Visible to Casual Contacts (n=185)							
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	102	1.98	0.51	83	1.96	0.51	-0.24	
Ableism	102	2.70	0.42	83	2.72	0.35	0.39	
Identity	102	2.02	0.29	83	2.10	0.29	1.96	*
Taking Action	102	1.63	0.39	83	1.63	0.44	0.05	
Embodied Dis/ability	102	2.55	0.53	83	2.38	0.57	-1.99	*
	Never or Rarely Visible to Close Contacts (n=43)							
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	19	2.03	0.69	24	2.11	0.60	0.37	
Ableism	19	2.68	0.51	24	2.83	0.32	1.14	
Identity	19	2.13	0.28	24	2.13	0.37	0.06	
Taking Action	19	1.74	0.41	24	1.83	0.52	0.62	
Embodied Dis/ability	19	2.42	0.46	24	2.20	0.61	-1.28	
	Sometimes Visible to Strangers (n=116)							

	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	54	2.88	0.50	62	2.70	0.53	-1.91	*
Ableism	54	2.66	0.39	62	2.85	0.37	2.79	**
Identity	54	2.16	0.28	62	2.13	0.27	-0.51	
Taking Action	54	1.91	0.45	62	2.07	0.52	1.76	*
Embodied Dis/ability	54	2.67	0.48	62	2.32	0.61	-3.48	***
Sometimes Visible to Casual Contacts (n=198)								
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	117	2.55	0.49	81	2.43	0.45	-1.75	*
Ableism	117	2.65	0.38	81	2.82	0.36	3.30	***
Identity	117	2.15	0.30	81	2.09	0.26	-1.62	
Taking Action	117	1.82	0.43	81	1.88	0.44	1.02	
Embodied Dis/ability	117	2.57	0.49	81	2.50	0.58	-4.15	***
Sometimes Visible to Close Contacts (n=136)								
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	77	2.05	0.52	59	2.07	0.58	0.18	
Ableism	77	2.67	0.38	59	2.78	0.31	1.95	*
Identity	77	2.08	0.30	59	2.05	0.27	-0.49	
Taking Action	77	1.66	0.38	59	1.63	0.42	-0.40	
Embodied Dis/ability	77	2.61	0.50	59	2.34	0.56	-2.94	**
Frequently or Always Visible to Strangers (n=50)								
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	25	3.54	0.58	25	3.44	0.67	-0.56	
Ableism	25	2.61	0.49	25	2.80	0.35	1.58	
Identity	25	2.31	0.35	25	2.32	0.36	0.13	
Taking Action	25	2.17	0.65	25	2.47	0.61	1.64	*
Embodied Dis/ability	25	2.71	0.58	25	2.31	0.62	-2.36	**
Frequently or Always Visible to Casual Contacts (n=100)								
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	

Environment	50	3.2	0.67	50	3.27	0.62	0.55	
Ableism	50	2.67	0.46	50	2.88	0.35	2.52	**
Identity	50	2.24	0.28	50	2.25	0.31	0.11	
Taking Action	50	2.10	0.55	50	2.40	0.62	2.58	**
Embodied Dis/ability	50	2.68	0.51	50	2.34	0.60	-3.10	***
	Frequently or Always Visible to Close Contacts (n=304)							
	Learning Dis/ability Yes			Learning Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	173	2.68	0.66	131	2.68	0.70	-0.05	
Ableism	173	2.67	0.41	131	2.80	0.38	2.69	**
Identity	173	2.14	0.31	131	2.17	0.29	0.83	
Taking Action	173	1.86	0.50	131	2.04	0.59	2.84	**
Embodied Dis/ability	173	2.59	0.52	131	2.34	0.58	-3.92	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Physical Dis/Abilities

Table 6.12 displays the mean scores for participants' self-reported visibility by physical dis/ability. All three levels of reported visibility to strangers within the Environment and Embodied Dis/ability Scales had significant differences. Participants with physical dis/abilities who reported their dis/ability was *never or rarely visible to strangers* (n = 143) had significantly lower scores on the Environment Scale ($t = 2.06, p < .05$) than those without physical dis/abilities and significantly higher scores on the Embodied Dis/ability Scale ($t = -2.98, p < .01$). The same was true for participants with physical dis/abilities who reported their dis/ability was *sometimes visible to strangers* with a lower score for the Environment Scale ($t = 2.20, p < .05$) and higher mean for the Embodied Dis/ability Scale ($t = -3.09, p < .001$). However, for participants with physical dis/abilities who indicated their dis/ability was f*requently or always visible to strangers* (n = 21), there was a significantly higher score on the Environment Scale ($t=$

-2.37, p < .05) than for those without physical dis/abilities. Notably, this is a reversal of scores compared with when participants reported their dis/ability was *never/rarely or sometimes visible to strangers*. Scores on the Taking Action (*t = -4.08, p < .001*) and Embodied Dis/ability (*t = -2.24, p < .01*) Scales were also significantly higher for individuals with physical dis/abilities reporting their dis/ability was frequently or always visible than for those without a physical dis/ability.

Participants with physical dis/abilities who reported that their dis/ability was *never or rarely visible to casual contacts* (n = 87) reported significantly lower scores on the Environment Scale (*t = 2.95, p < .01*) than those without physical dis/abilities and significantly higher scores on the Identity (*t = -2.18, p < .01*) and Embodied Dis/ability (*t = -1.68, p < .05*) Scales. Participants with physical dis/abilities who reported their dis/ability was *sometimes visible to casual contacts* (n = 88) experienced higher scores in both the Taking Action (t = -2.45, p < .01) and Embodied Dis/ability (t = -3.06, p < .001) Scales than those without physical dis/abilities. Participants with physical dis/abilities who indicated their dis/ability was *frequently or always visible to casual contacts* (n = 40) also had higher scores on the Taking Action (*t = -3.59, p < .001*) and Embodied Dis/ability (*t= -3.85, p < .001*) Scales.

The Ableism Scale (*t = 2.59, p < .01*) was the only scale where there was a significant difference for participants with a physical dis/ability that was *never or rarely visible to close contacts* (n = 20). When participants reported their dis/ability was *sometimes visible to close contacts* (n = 60), the Environment (*t = 2.29, p < .01*) and Embodied Dis/ability (*t = -2.36, p < .01*) domains were significant. The Embodied Dis/ability Scale (*t = -3.92, p < .001*) remained significant when participants with physical dis/abilities reported that their dis/ability was

frequently or always visible to close contacts (n = 135). They had significantly higher scores on the Taking Action Scale ($t = -3.36$, $p < .001$) than their peers without physical dis/abilities.

Table 6.12

Mean Differences for Participants with Physical Dis/abilities by Self-Reported Visibility

	Never or Rarely Visible to Strangers (n=317)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	143	2.09	0.55	174	2.22	0.54	2.06	*
Ableism	143	2.72	0.39	174	2.72	0.39	0.10	
Identity	143	2.10	0.28	174	2.07	0.29	-0.96	
Taking Action	143	1.74	0.44	174	1.69	0.44	-1.06	
Embodied Dis/ability	143	2.55	0.56	174	2.37	0.51	-2.98	**
	Never or Rarely Visible to Casual Contacts (n=185)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	87	1.85	0.47	98	2.07	0.52	2.95	**
Ableism	87	2.72	0.38	98	2.70	0.39	-0.22	
Identity	87	2.11	0.26	98	2.01	0.31	-2.18	*
Taking Action	87	1.63	0.39	98	1.63	0.42	-0.05	
Embodied Dis/ability	87	2.55	0.55	98	2.41	0.55	-1.68	*
	Never or Rarely Visible to Close Contacts (n=43)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	20	2.09	0.70	23	20.6	0.59	-0.16	
Ableism	20	2.60	0.43	23	2.91	0.34	2.59	**
Identity	20	2.16	0.39	23	2.11	0.28	-0.44	
Taking Action	20	1.69	0.51	23	1.87	0.43	1.24	
Embodied Dis/ability	20	2.41	0.55	23	2.21	0.56	-1.17	
	Sometimes Visible to Strangers (n=116)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	51	2.67	0.41	65	2.88	0.59	2.20	*
Ableism	51	2.76	0.35	65	2.76	0.41	-0.02	

Identity	51	2.19	0.25	65	2.11	0.29	-1.43	
Taking Action	51	2.07	0.42	65	1.94	0.53	-1.37	
Embodied Dis/ability	51	2.66	0.55	65	2.34	0.56	-3.09	***
	Sometimes Visible to Casual Contacts (n=198)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	88	2.52	0.44	110	2.49	0.51	-0.50	
Ableism	88	2.72	0.36	110	2.72	0.40	-0.04	
Identity	88	2.13	0.31	110	2.13	0.27	-0.06	
Taking Action	88	1.93	0.44	110	1.78	0.42	-2.45	**
Embodied Dis/ability	88	2.57	0.54	110	2.33	0.54	-3.06	***
	Sometimes Visible to Close Contacts (n=136)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	60	1.94	0.50	76	2.15	0.57	2.29	**
Ableism	60	2.74	0.34	76	2.70	0.37	-0.78	
Identity	60	2.08	0.23	76	2.05	0.33	-0.67	
Taking Action	60	1.66	0.38	76	1.64	0.41	-0.41	
Embodied Dis/ability	60	2.61	0.54	76	2.39	0.53	-2.36	**
	Frequently or Always Visible to Strangers (n=50)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	21	3.72	0.72	29	3.32	0.48	-2.37	*
Ableism	21	2.71	0.49	29	2.69	0.40	-0.11	
Identity	21	2.37	0.40	29	2.28	0.32	-0.88	
Taking Action	21	2.70	0.71	29	2.05	0.42	-4.08	***
Embodied Dis/ability	21	2.74	0.60	29	2.35	0.61	-2.24	**
	Frequently or Always Visible to Casual Contacts (n=100)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	40	3.26	0.77	60	3.22	0.55	-0.30	
Ableism	40	2.76	0.46	60	2.78	0.39	0.24	
Identity	40	2.29	0.31	60	2.21	0.27	-1.21	

Taking Action	40	2.5	0.60	60	2.08	0.55	-3.59	***
Embodied Dis/ability	40	2.76	0.61	60	2.34	0.49	-3.85	***
	Frequently or Always Visible to Close Contacts (n=304)							
	Physical Dis/ability Yes			Physical Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	135	2.63	0.72	169	2.71	0.64	1.05	
Ableism	135	2.74	0.40	169	2.72	0.41	-0.43	
Identity	135	2.18	0.31	169	2.13	0.28	-1.43	
Taking Action	135	2.06	0.57	169	1.85	0.51	-3.36	***
Embodied Dis/ability	135	2.62	0.57	169	2.37	0.53	-3.92	***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Sensory Dis/Abilities

Table 6.13 displays the scale scores for participants by self-reported visibility to strangers and sensory dis/ability. When participants with sensory dis/abilities reported their dis/ability was *never or rarely visible to strangers* (n = 31), they had significantly higher scores on the Environment ($t = -3.51, p < .001$) and Taking Action ($t = -3.88, p < .001$) Scales when compared to those without sensory dis/abilities. For participants with sensory dis/abilities whose dis/ability was *sometimes visible to strangers* (n =22), there was a significant difference in the Ableism ($t = -1.74, p < .05$), Taking Action ($t = -1.89, p < .05$), and Embodied Dis/ability ($t = 2.99, p < .01$) Scales. Participants with sensory dis/abilities that are *always visible to strangers* did not have statistically different scores from other participants who reported their dis/ability was always visible to strangers.

Participants with sensory dis/abilities who reported their dis/ability was *never or rarely visible to casual contacts* (n = 12) had significantly higher scores on the Environment ($t = - 1.63, p < .05$) and Taking Action ($t = -1.93, p < .05$) Scales and significantly lower scores on the

Ableism Scale ($t = 1.76, p < .05$) when compared to those without sensory dis/abilities. For participants with sensory dis/abilities whose dis/ability was *sometimes visible to casual contacts* (n = 27), there was a significant difference in the Ableism ($t = -1.81, p < .05$) and Taking Action ($t = -3.12, p < .001$) Scales. When participants with sensory dis/abilities reported their dis/ability was *frequently or always visible to casual contacts* (n = 28), they had significantly higher scores on the Environment Scale ($t = -1.89, p < .05$) and significantly lower scores on the Embodied Dis/ability Scale ($t = 1.72, p < .05$) than those without sensory dis/abilities.

Very few individuals with sensory dis/abilities reported that their disability was *never or rarely visible to close contacts* (n = 5), and there were no significant differences at this reported level of visibility when compared with those without a sensory dis/ability. However, significant differences existed between those with sensory dis/abilities who reported their dis/ability was *sometimes visible to close contacts* (n = 12) and those without for the Environment ($t = -3.42, p < .001$), Ableism ($t = -1.96, p < .05$), and Taking Action ($t = -2.10, p < .05$) Scales. The Environment ($t = -3.24, p < .001$), Ableism ($t = -1.67, p < .05$), and Taking Action ($t = -4.31, p < .001$) Scales remained significantly higher for individuals with sensory dis/abilities who reported their dis/ability was *frequently or always visible to close contacts* (n = 50) compared to students without sensory dis/abilities. Additionally, at this level of reported visibility, participants with sensory dis/abilities had significantly lower scores on the Embodied Dis/ability Scale ($t = 1.75, p < .05$) than those without sensory dis/abilities.

Table 6.13

Mean Differences for Participants with Sensory Dis/abilities by Self-Reported Visibility

	Never or Rarely Visible to Strangers (n=317)							
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	31	2.48	0.68	286	2.13	0.52	-3.51	***
Ableism	31	2.73	0.47	286	2.72	0.38	-0.13	

Identity	31	2.14	0.26	286	2.08	0.29	-1.02	
Taking Action	31	2.00	0.50	286	1.68	0.43	-3.88	***
Embodied Dis/ability	31	2.44	0.55	286	2.45	0.54	0.09	

Never or Rarely Visible to Casual Contacts (n=185)								
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	12	2.20	0.55	173	1.95	0.50	-1.63	*
Ableism	12	2.52	0.38	173	2.72	0.38	1.76	*
Identity	12	2.09	0.22	173	2.05	0.30	-0.45	
Taking Action	12	1.85	0.43	173	1.61	0.40	-1.93	*
Embodied Dis/ability	12	2.30	0.53	173	2.49	0.56	1.15	

Never or Rarely Visible to Close Contacts (n=43)							
	Sensory Dis/ability Yes			Sensory Dis/ability No			
	n	M	SD	n	M	SD	t
Environment	5	2.2	0.94	38	2.06	0.60	-0.47
Ableism	5	2.63	0.38	38	2.78	0.42	0.80
Identity	5	2.27	0.34	38	2.11	0.33	-0.99
Taking Action	5	1.97	0.63	38	1.76	0.45	-0.91
Embodied Dis/ability	5	2.09	0.71	38	2.33	0.54	0.90

Sometimes Visible to Strangers (n=116)								
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	22	2.86	0.63	94	2.77	0.50	-0.70	
Ableism	22	2.89	0.30	94	2.73	0.40	-1.74	*
Identity	22	2.15	0.22	94	2.14	0.28	-0.13	
Taking Action	22	2.17	0.53	94	1.96	0.47	-1.89	*
Embodied Dis/ability	22	2.16	0.50	94	2.56	0.57	2.99	**

Sometimes Visible to Casual Contacts (n=198)								
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	27	2.48	0.56	171	2.50	0.46	0.20	
Ableism	27	2.84	0.37	171	2.70	0.38	-1.81	*
Identity	27	2.16	0.26	171	2.12	0.29	-0.72	
Taking Action	27	2.08	0.49	171	1.81	0.42	-3.12	***
Embodied Dis/ability	27	2.37	0.55	171	2.45	0.55	0.72	

Sometimes Visible to Close Contacts (n=136)

	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	12	2.55	0.73	124	2.01	0.50	-3.42	***
Ableism	12	2.91	0.31	124	2.70	0.35	-1.96	*
Identity	12	2.06	0.32	124	2.07	0.29	0.12	
Taking Action	12	1.88	0.49	124	1.63	0.38	-2.10	*
Embodied Dis/ability	12	2.44	0.61	124	2.50	0.54	0.37	
	Frequently or Always Visible to Strangers (n=50)							
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	14	3.55	0.60	36	3.47	0.63	-0.40	
Ableism	14	2.71	0.41	36	2.70	0.45	-0.05	
Identity	14	2.37	0.38	36	2.29	0.35	-0.64	
Taking Action	14	2.45	0.58	36	2.27	0.67	-0.91	
Embodied Dis/ability	14	2.42	0.82	36	2.55	0.54	0.63	
	Frequently or Always Visible to Casual Contacts (n=100)							
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	28	3.43	0.54	72	3.16	0.67	-1.89	*
Ableism	28	2.82	0.43	72	2.76	0.41	-0.70	
Identity	28	2.25	0.33	72	2.24	0.28	-0.22	
Taking Action	28	2.35	0.59	72	2.21	0.61	-1.06	
Embodied Dis/ability	28	2.35	0.70	72	2.57	0.52	1.72	*
	Frequently or Always Visible to Close Contacts (n=304)							
	Sensory Dis/ability Yes			Sensory Dis/ability No				
	n	M	SD	n	M	SD	t	
Environment	50	2.96	0.71	254	2.62	0.66	-3.24	***
Ableism	50	2.76	0.43	254	2.72	0.40	-0.65	
Identity	50	2.21	0.27	254	2.14	0.30	-1.67	*
Taking Action	50	2.23	0.54	254	1.88	0.53	-4.31	***
Embodied Dis/ability	50	2.35	0.60	254	2.50	0.55	1.75	*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Comparing Scale Scores by Demographics Based on Self-Reported Levels of Visibility

Significant differences in scale scores were present for different demographic groups based on self-reported levels of visibility to various audiences. This section looks at meaningful differences in scale scores for participants of Color, participants who are queer, and participants who are Trans* when compared with the scale scores of their respective counterparts (e.g., white participants, heterosexual participants, and cisgender participants).

People of Color

The mean differences in scores by self-reported levels of visibility for participants of Color in the study are displayed in Table 6.14. Participants of Color who reported that their dis/ability was *never or rarely visible* had no significant difference in the Environment, Ableism, Identity, or Taking Action Scales regardless of audience (i.e., strangers, close contacts) compared to white participants. However, there was a significant difference in Embodied Dis/ability Scale ($t = -1.92, p < .05$) for participants who reported their dis/ability was *never or rarely visible* in interactions with either strangers (n = 103) or close contacts (n = 19). In both cases, participants of Color experienced higher Embodied Dis/ability scores than their peers who were not People of Color. When dis/ability was reported as being *never or rarely visible to casual contacts* (n =64), there were no significant differences for any of the scales.

Participants of Color who reported their dis/ability was *sometimes visible to strangers* (n = 40) had significantly lower scores on the Environment ($t = 1.97, p < .05$) and Identity ($t = 1.94, p < .05$) Scales and significantly higher scores on the Embodied Dis/ability Scale ($t = -2.08, p < .05$) than their white peers. A significant difference in Embodied Dis/ability Scale ($t = -2.29, p < .01$) scores was also present for participants of Color who indicated their dis/ability was *sometimes visible to casual contacts* (n = 66). However, there were no other significant differences at this level of visibility to casual contacts. Participants of Color who indicated their

dis/ability was *sometimes visible to close contacts* (n = 40) had significantly higher scores on the Ableism Scale (*t = -2.05, p < .05*) than their peers who were not People of Color.

Participants of Color whose disability was *frequently or always visible* to strangers (n =27) reported significantly higher scores on the Identity (*t = -3.08, p < .01*) and Taking Action (*t = -1.74, p < .01*) Scales than their white peers. When participants of Color reported that their dis/ability was f*requently or always visible to casual contacts,* there was a significant difference in all of the scale scores except for the Ableism Scale. On the Environment (*t = -1.70, p < .05*), Identity (*t = -2.79, p < .01*), Taking Action (*t = -2.02, p < .05*), and Embodied Dis/ability (*t = -2.33, p < .01*) Scales, participants of Color recorded significantly higher scores than their peers. When comparing scores for participants of Color who reported their dis/ability *was frequently or always visible to close contacts*, (n = 111) participants of Color had significantly higher scores on both the Taking Action (*t = -1.77, p < .05*) and Embodied Dis/ability (*t = -2.82, p < .01*) Scales than white participants.

Table 6.14

Mean Differences for Participants of Color by Self-Reported Visibility

	Never or Rarely Visible to Strangers (n=317)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	103	2.15	0.60	214	2.17	0.52	0.34	
Ableism	103	2.72	0.41	214	2.72	0.38	-0.01	
Identity	103	2.09	0.27	214	2.09	0.29	-0.03	
Taking Action	103	1.75	0.46	214	1.70	0.43	-1.04	
Embodied Dis/ability	103	2.54	0.53	214	2.41	0.54	-1.92	*

	Never or Rarely Visible to Casual Contacts (n=185)	
	POC Yes	POC No

	n	M	SD	n	M	SD	t	
Environment	64	1.95	0.55	121	1.97	0.48	0.24	
Ableism	64	2.73	0.43	121	2.70	0.36	-0.66	
Identity	64	2.07	0.28	121	2.05	0.30	-0.33	
Taking Action	64	1.65	0.44	121	1.62	0.39	-0.41	
Embodied Dis/ability	64	2.52	0.57	121	2.45	0.55	-0.82	
	Never or Rarely Visible to Close Contacts (n=43)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	19	2.03	0.66	24	2.11	0.62	0.37	
Ableism	19	2.70	0.47	24	2.81	0.37	0.85	
Identity	19	2.12	0.30	24	2.14	0.36	0.26	
Taking Action	19	1.71	0.46	24	1.85	0.48	0.95	
Embodied Dis/ability	19	2.53	0.52	24	2.12	0.53	-2.53	**
	Sometimes Visible to Strangers (n=116)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	40	2.65	0.56	76	2.85	0.49	1.97	*
Ableism	40	2.78	0.37	76	2.76	0.40	-0.28	
Identity	40	2.08	0.24	76	2.18	0.28	1.94	*
Taking Action	40	1.90	0.46	76	2.05	0.50	1.52	
Embodied Dis/ability	40	2.633	0.63	76	2.40	0.53	-2.08	*
	Sometimes Visible to Casual Contacts (n=198)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	66	2.49	0.53	132	2.51	0.45	0.27	
Ableism	66	2.72	0.37	132	2.72	0.39	-0.07	
Identity	66	2.10	0.28	132	2.14	0.29	1.09	
Taking Action	66	1.85	0.42	132	1.84	0.44	-0.08	
Embodied Dis/ability	66	2.56	0.57	132	2.37	0.53	-2.29	**

Sometimes Visible to Close Contacts (n=136)

POC Yes POC No

	n	M	SD	n	M	SD	t	
Environment	40	2.12	0.65	96	2.03	0.50	-0.84	
Ableism	40	2.81	0.35	96	2.68	0.35	-2.05	*
Identity	40	2.07	0.28	96	2.06	0.29	-0.12	
Taking Action	40	1.68	0.40	96	1.64	0.40	-0.51	
Embodied Dis/ability	40	2.52	0.52	96	2.48	0.55	-0.44	
	Frequently or Always Visible to Strangers (n=50)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	27	3.59	0.64	23	3.38	0.64	-1.20	
Ableism	27	2.66	0.50	23	2.75	0.35	0.75	
Identity	27	2.44	0.35	23	2.16	0.30	-3.08	**
Taking Action	27	2.46	0.67	23	2.15	0.57	-1.74	*
Embodied Dis/ability	27	2.61	0.61	23	2.39	0.64	-1.26	
	Frequently or Always Visible to Casual Contacts (n=100)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	40	3.37	0.70	60	3.15	0.60	-1.70	*
Ableism	40	2.70	0.46	60	2.82	0.38	1.41	
Identity	40	2.34	0.30	60	2.18	0.26	-2.79	**
Taking Action	40	2.40	0.62	60	2.15	0.58	-2.02	*
Embodied Dis/ability	40	2.67	0.56	60	2.4	0.57	-2.33	**
	Frequently or Always Visible to Close Contacts (n=304)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	111	2.71	0.78	193	2.66	0.61	-0.62	
Ableism	111	2.69	0.42	193	2.74	0.39	1.08	
Identity	111	2.17	0.32	193	2.14	0.28	-1.02	
Taking Action	111	2.01	0.59	193	1.90	0.51	-1.77	*
Embodied Dis/ability	111	2.60	0.59	193	2.41	0.52	-2.82	**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Queer People

The mean differences by self-reported visibility for Queer participants are displayed in Table 6.15. There were no significant differences for the Environment Scale at any level of self-reported visibility for Queer participants when compared to heterosexual participants. Queer participants who indicated their dis/ability was *never or rarely visible to strangers* (n = 190) or *casual contacts* (n = 109) had significantly lower scores for the Ableism Scale ($t = 3.48, p < .001$; $t = 3.65, p < .001$) and significantly higher scores on the Embodied Dis/ability Scale ($t = -1.76, p < .05$; $t = -2.67, p < .01$) than their heterosexual peers. Queer participants who reported their dis/ability was *never or rarely visible to close contacts* (n = 24) continued to experience significantly lower scores on the Ableism Scale ($t = 2.21, p < .05$) and significantly higher scores on the Embodied Dis/ability Scale ($t = -2.05, p < .05$). In addition, these participants also experienced significantly higher scores on the Identity Scale ($t = -2.74, p < .001$) than their straight peers.

Queer participants who reported their dis/ability was *sometimes visible to strangers* (n = 61) also experienced significantly higher scores on the Identity ($t = -2.37, p < .01$) and Embodied Dis/ability ($t = -2.13, p < .05$) Scales and significantly lower scores on the Ableism Scale ($t = 3.38, p < .001$). The same scales stayed significant for Queer participants when their dis/ability was *sometimes apparent to casual contacts (*n = 123), with significantly lower scores in the Ableism Scale ($t = 1.71, p < .05$) and significantly higher scores on the Identity Scale ($t = -1.76, p < .05$). When Queer participants reported their dis/ability was *sometimes visible to close contacts* (n = 79) they had significantly lower scores on the Ableism Scale ($t = 1.92, p < .05$) and significantly higher scores on the Embodied Dis/ability Scale ($t = -2.19, p < .05$) compared to their straight peers who reported the same level of visibility.

Table 6.15

Mean Differences for Queer Participants by Self-Reported Visibility

	Never or Rarely Visible to Strangers							
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	190	2.18	0.54	127	2.14	0.57	-0.61	
Ableism	190	2.66	0.37	127	2.81	0.39	3.48	***
Identity	190	2.10	0.31	127	2.07	0.24	-0.96	
Taking Action	190	1.69	0.43	127	1.74	0.46	1.01	
Embodied Dis/ability	190	2.50	0.54	127	2.39	0.53	-1.76	*
	Never or Rarely Visible to Casual Contacts							
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	109	1.99	0.48	76	1.94	0.54	-0.65	
Ableism	109	2.63	0.36	76	2.83	0.39	3.65	***
Identity	109	2.07	0.30	76	2.04	0.28	-0.61	
Taking Action	109	1.59	0.37	76	1.68	0.45	1.48	
Embodied Dis/ability	109	2.56	0.54	76	2.35	0.55	-2.67	**
	Never or Rarely Visible to Close Contacts							
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	24	2.16	0.69	19	1.97	0.56	-0.94	
Ableism	24	2.65	0.41	19	2.91	-.37	2.21	*
Identity	24	2.28	0.34	19	1.95	0.20	-2.74	***
Taking Action	24	1.88	0.46	19	1.66	0.47	-1.40	
Embodied Dis/ability	24	2.45	0.56	19	2.11	0.51	-2.05	*
	Sometimes Visible to Strangers							
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	61	2.80	0.48	55	2.77	0.57	-0.39	
Ableism	61	2.65	0.41	55	2.89	0.33	3.38	***
Identity	61	2.20	0.27	55	2.08	0.27	-2.37	**
Taking Action	61	2.00	0.46	55	1.99	0.53	-0.10	
Embodied Dis/ability	61	2.59	0.57	55	2.36	0.56	-2.13	*
	Sometimes Visible to Casual Contacts							

	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	123	2.51	0.48	75	2.49	0.47	-0.36	
Ableism	123	2.68	0.38	75	2.78	0.38	1.71	*
Identity	123	2.16	0.30	75	2.08	0.26	-1.76	*
Taking Action	123	1.86	0.45	75	1.82	0.42	-0.57	
Embodied Dis/ability	123	2.44	0.56	75	2.43	0.54	-0.06	

Sometimes Visible to Close Contacts

	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	79	2.06	0.53	57	2.06	0.57	0.01	
Ableism	79	2.67	0.35	57	2.79	0.35	1.92	*
Identity	79	2.06	0.29	57	2.06	0.29	0.00	
Taking Action	79	1.65	0.41	57	1.65	0.39	0.09	
Embodied Dis/ability	79	2.58	0.55	57	2.37	0.51	-2.19	*

Frequently or Always Visible to Strangers

	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	27	3.49	0.61	23	3.49	0.65	0.01	
Ableism	27	2.63	0.49	23	2.78	0.35	1.17	
Identity	27	2.37	0.36	23	2.25	0.34	-1.14	
Taking Action	27	2.36	0.72	23	2.28	0.55	-0.45	
Embodied Dis/ability	27	2.69	0.56	23	2.30	0.64	-2.30	**

Frequently or Always Visible to Casual Contacts

	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	46	3.33	0.60	54	3.15	0.67	-1.39	
Ableism	46	2.64	0.47	54	2.89	0.33	3.01	**
Identity	46	2.32	0.32	54	2.18	0.24	-2.38	**
Taking Action	46	2.30	0.63	54	2.21	0.58	-0.74	
Embodied Dis/ability	46	2.73	0.52	54	2.32	0.57	-3.71	***

Frequently or Always Visible to Close Contacts

	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	

Environment	175	2.66	0.65	129	2.71	0.71	0.67	
Ableism	175	2.65	0.41	129	2.83	0.38	3.97	***
Identity	175	2.17	0.32	129	2.13	0.26	-1.19	
Taking Action	175	1.9	0.55	129	2.00	0.54	1.52	
Embodied Dis/ability	175	2.53	0.56	129	2.41	0.57	-1.84	*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Trans* People

Table 6.16 displays the mean differences by self-reported visibility for Trans* participants. As with Queer participants, there were no significant differences in the Environment Scale at any level of self-reported visibility for Trans* participants when compared to cisgender participants. Trans* participants who reported their dis/ability was *never or rarely visible to strangers* (n = 76) had significantly higher scores on the Identity Scale ($t = -2.60, p < .01$) than those who are not Trans*. Identity Scale ($t = -2.14, p < .05$) scores also remained significantly higher for Trans* participants who reported their dis/ability was *never or rarely visible to casual contacts* (n = 39). Additionally, Trans* participants whose dis/ability was never or rarely visible to close contacts also reported significantly higher scores on the Embodied Dis/ability Scale ($t = -1.67, p < .05$) and significantly lower scores on the Ableism Scale ($t = 2.07, p < .05$) than cisgender participants. Very few Trans* participants (n = 6) reported their dis/ability was *never or rarely visible to close contacts*; however, for those who did, there were significant differences in the Ableism ($t = 2.33, p < .01$), Taking Action ($t = -2.33, p < .05$), and Embodied Dis/ability ($t = -3.83, p < .001$) Scales.

Trans* participants who reported their dis/ability was *sometimes visible to*

strangers (n = 24) also had significantly lower scores on the Ableism Scale ($t = 2.88, p < .01$) and reported significantly higher scores on the Identity ($t = -1.77, p < .05$) and Embodied Dis/ability ($t = -2.05, p < .05$) Scales. No significant differences in any scores existed for Trans* participants who indicated their dis/ability was *sometimes visible to casual contacts* (n = 55). However, when Trans* participants reported their dis/ability was *sometimes visible to close contacts* (n = 30), they reported significantly lower scores on the Taking Action Scale ($t = 1.99, p < .05$) than cisgender participants who reported the same visibility for close contacts.

There were significant differences in scores for the Ableism ($t = 1.78, p < .05$), Taking Action ($t = -1.94, p < .05$), and Embodied Dis/ability ($t = -3.42, p < .001$) Scales for Trans* participants who reported their dis/ability was *frequently or always visible to strangers* (n = 12). The same was true for the Ableism ($t = 2.70, p < .01$), Taking Action ($t = -1.75, p < .05$), and Embodied Dis/ability ($t = -4.72, p < .001$) Scales for participants who reported their dis/ability was *frequently or always visible to casual contacts* (n = 18). Additionally, the Identity Scale ($t = -2.85, p < .01$) was statistically significantly higher for Trans* participants than their peers. Trans* participants who indicated their dis/ability was *frequently or always visible to close contacts* (n = 76) had significantly lower scores on the Ableism Scale ($t = 2.45, p < .01$) and significantly higher scores on the Identity ($t = -2.34, p < .01$) and Embodied Dis/ability ($t = -2.26, p < .01$) Scales when compared with cisgender participants who also reported their dis/ability was frequently or always visible to close contacts.

Table 6.16

Mean Differences for Trans Participants by Self-Reported Visibility*

	Never or Rarely Visible to Strangers							
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	76	2.22	0.54	241	2.14	0.55	-1.11	
Ableism	76	2.67	0.38	241	2.73	0.39	1.12	
Identity	76	2.16	0.29	241	2.06	0.28	-2.60	**
Taking Action	76	1.71	0.44	241	1.71	0.45	0.07	
Embodied Dis/ability	76	2.52	0.49	241	2.43	0.55	-1.26	
	Never or Rarely Visible to Casual Contacts							
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	39	1.98	0.43	146	1.96	0.53	-0.20	
Ableism	39	2.60	0.39	146	2.74	0.38	2.07	*
Identity	39	2.15	0.22	146	2.03	0.31	-2.14	*
Taking Action	39	1.61	0.36	146	1.63	0.42	0.30	
Embodied Dis/ability	39	2.60	0.49	146	2.44	0.57	-1.67	*
	Never or Rarely Visible to Close Contacts							
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	6	2.33	0.84	37	2.03	0.60	-1.08	
Ableism	6	2.42	0.51	37	2.82	0.37	2.33	**
Identity	6	2.31	0.31	37	2.10	0.33	-1.48	
Taking Action	6	2.17	0.39	37	1.73	0.46	-2.23	*
Embodied Dis/ability	6	3.00	0.31	37	2.19	0.50	-3.83	***
	Sometimes Visible to Strangers							
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	24	2.80	0.48	92	2.78	0.54	-0.15	
Ableism	24	2.57	0.38	92	2.82	0.37	2.88	**
Identity	24	2.23	0.20	92	2.12	0.28	-1.77	*
Taking Action	24	2.03	0.48	92	1.99	0.49	-0.33	

Embodied Dis/ability	24	2.69	0.62	92	2.43	0.56	-2.05	*
			Sometimes Visible to Casual Contacts					
		Trans* Yes			Trans* No			
	n	M	SD	n	M	SD	t	
Environment	55	2.55	0.50	143	2.49	0.47	-0.80	
Ableism	55	2.69	0.37	143	2.73	0.39	0.64	
Identity	55	2.17	0.32	143	2.11	0.27	-1.35	
Taking Action	55	1.87	0.47	143	1.83	0.42	-0.54	
Embodied Dis/ability	55	2.47	0.55	143	2.42	0.55	-0.56	
			Sometimes Visible to Close Contacts					
		Trans* Yes			Trans* No			
	n	M	SD	n	M	SD	t	
Environment	30	1.99	0.45	106	2.08	0.57	0.78	
Ableism	30	2.69	0.35	106	2.72	0.36	0.44	
Identity	30	2.14	0.25	106	2.04	0.30	-1.57	
Taking Action	30	1.52	0.31	106	1.68	0.41	1.99	*
Embodied Dis/ability	30	2.54	0.52	106	2.47	0.55	-0.62	
			Frequently or Always Visible to Strangers					
		Trans* Yes			Trans* No			
	n	M	SD	n	M	SD	t	
Environment	12	3.61	0.62	38	3.45	0.62	-0.79	
Ableism	12	2.51	0.51	38	2.76	0.39	1.78	*
Identity	12	2.40	0.45	38	2.29	0.32	-0.95	
Taking Action	12	2.63	0.64	38	2.22	0.62	-1.94	*
Embodied Dis/ability	12	3.00	0.47	38	2.36	0.59	-3.42	***
			Frequently or Always Visible to Casual Contacts					
		Trans* Yes			Trans* No			
	n	M	SD	n	M	SD	t	
Environment	18	3.45	0.63	82	3.19	0.64	-1.61	
Ableism	18	2.54	0.47	82	2.83	0.39	2.70	**
Identity	18	2.41	0.32	82	2.21	0.27	-2.85	**
Taking Action	18	2.47	0.67	82	2.20	0.58	-1.75	*
Embodied Dis/ability	18	3.04	0.39	82	2.39	0.55	-4.72	***

	Frequently or Always Visible to Close Contacts							
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	76	2.71	0.67	228	2.67	0.68	-0.46	
Ableism	76	2.63	0.40	228	2.76	0.40	2.45	**
Identity	76	2.14	0.25	228	2.13	0.28	-2.34	**
Taking Action	76	1.99	0.58	228	1.92	0.54	-0.97	
Embodied Dis/ability	76	2.60	0.55	228	2.44	0.56	-2.26	**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Comparing Scale Scores for Specific Dis/ability Category by Select Demographics

Similar to the meaningful differences that were revealed for participants in specific demographic categories when scale scores were examined based on self-reported visibility, meaningful differences were also present within each dis/ability category (e.g., mental health, learning dis/ability, etc.) by demographics. This section explores the statistically significant differences in scale scores for participants in specific dis/ability categories based on status as participants of color, queer participants, or trans* participants.

Mental Health

Mean differences for participants with mental health dis/abilities by select demographics are displayed in Table 6.17**.** Participants with mental health dis/abilities experienced statistically significant differences in at least one scale score for each demographic category reviewed. *Participants of Color* with mental health dis/abilities (n = 131) experienced significantly higher Embodied Dis/ability Scale ($t = -3.34, p < .001$) scores than their white counterparts. *Queer* (n = 253) participants with mental health dis/abilities experienced lower scores on the Ableism Scale (t = 2.85, p < .01) and higher scores on the Identity Scale ($t = -2.46, p < .01$) than their heterosexual counterparts. *Trans** (n = 107) participants with mental health dis/abilities, similar to Queer participants, had significantly lower scores on the Ableism Scale ($t = 1.68, p < .01$) and

significantly higher scores on the Identity Scale (*t = -3.75, p < .001*) than cisgender participants. Additionally, Trans* participants also had higher Embodied Dis/ability Scale (*t = -1.79, p < .05*) scores.

Table 6.17

Mean Differences for Participants with Mental Health Dis/abilities by Select Demographics

	Mental Health (n=387)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	131	2.47	0.74	256	2.41	0.62	-0.84	
Ableism	131	2.67	0.41	256	2.70	0.37	0.63	
Identity	131	2.12	0.32	256	2.11	0.29	-0.47	
Taking Action	131	1.85	0.54	256	1.79	0.49	-1.00	
Embodied Dis/ability	131	2.66	0.54	256	2.47	0.52	-3.34	***
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	253	2.43	0.67	134	2.42	0.66	-0.19	
Ableism	253	2.65	0.39	134	2.77	0.37	2.85	**
Identity	253	2.14	0.31	134	2.06	0.27	-2.46	**
Taking Action	253	1.81	0.51	134	1.81	0.50	-0.08	
Embodied Dis/ability	253	2.56	0.55	134	2.50	0.50	-0.95	
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	107	2.48	0.70	280	2.41	0.65	-0.99	
Ableism	107	2.64	0.40	280	2.71	0.38	1.68	*
Identity	107	2.20	0.30	280	2.08	0.29	-3.75	***
Taking Action	107	1.88	0.55	280	1.79	0.49	-1.54	
Embodied Dis/ability	107	2.61	0.55	280	2.51	0.53	-1.79	*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Learning Dis/abilities

Mean scores for participants with learning dis/abilities are displayed in Table 6.18. As with mental health dis/abilities, there was at least one significant difference in scale scores for each of the analyzed demographic variables. *People of Color* with learning dis/abilities (n = 90), like those with mental health dis/abilities, experienced significantly higher scores on the Embodied Dis/ability Scale ($t = -1.75, p < .05$). *Queer* respondents with learning dis/abilities (n = 154) reported significantly lower scores on the Ableism Scale ($t = 5.05, p < .001$) and significantly higher scores on both the Identity ($t = -2.43, p < .01$) and Embodied Dis/ability ($t= -3.50, p < .001$) Scales. *Trans** respondents (n = 70) also had significantly lower scores on the Ableism Scale ($t = 2.04, p < .05$) and significantly higher scores on the Taking Action ($t= -2.30, p < .01$) and Embodied Dis/ability ($t = -2.39, p < .01$) Scales.

Table 6.18

Mean Differences for Participants with Learning Dis/abilities by Select Demographics

	Learning Dis/ability (n=269)							
	POC Yes			POC No				
	n	M	SD	N	M	SD	t	
Environment	90	2.53	0.76	179	2.42	0.65	-1.26	
Ableism	90	2.65	0.45	179	2.68	0.39	0.51	
Identity	90	2.14	0.31	179	2.11	0.30	-0.85	
Taking Action	90	1.86	0.49	179	1.77	0.46	-1.45	
Embodied Dis/ability	90	2.66	0.55	179	2.54	0.49	-1.75	*

	Queer Yes			Queer No				
	n	M	SD	N	M	SD	t	
Environment	154	2.48	0.71	115	2.41	0.67	-0.80	
Ableism	154	2.57	0.40	115	2.81	0.38	5.05	***
Identity	154	2.16	0.33	115	2.07	0.25	-2.43	**
Taking Action	154	1.82	0.50	115	1.77	0.44	-0.86	
Embodied Dis/ability	154	2.67	0.50	115	2.46	0.51	-3.50	***

	Trans* Yes	Trans* No

	n	M	SD	N	M	SD	t	
Environment	70	2.54	0.77	199	2.42	0.66	-1.24	
Ableism	70	2.59	0.40	199	2.70	0.41	2.04	*
Identity	70	2.21	0.33	199	2.09	0.29	-2.83	
Taking Action	70	1.91	0.57	199	1.76	0.43	-2.30	**
Embodied Dis/ability	70	2.70	0.44	199	2.54	0.53	-2.39	**

Note. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Physical Dis/abilities

Table 6.19 displays mean differences for participants with physical dis/abilities by select demographic variables. *Participants of Color* with physical dis/abilities (n = 76) reported significantly higher Taking Action scores ($t = -1.98, p < .05$) than white participants. *Queer* participants with physical dis/abilities (n = 129) had significantly lower scores on the Ableism Scale ($t = 2.61, p < .01$) and significantly higher scores on the Identity Scale ($t = -2.53, p < .01$). *Trans** participants with a physical dis/ability (n = 55) had significant differences in scores on every scale for compared to cisgender participants with a physical dis/ability. Trans* participants reported higher scores on the Environment ($t = -2.03, p < .05$), Identity ($t = -3.17, p < .001$), Taking Action ($t = -1.89, p < .05$), and Embodied Dis/ability ($t = -1.72, p < .05$) Scales. The only scale score where Trans* participants reported a significantly lower score than their cisgender peers was the Ableism Scale ($t = 1.80, p < .05$).

Sensory Dis/abilities

Table 6.20 displays the differences in scale scores for participants with sensory dis/abilities by select demographics. Participants with sensory dis/abilities were the least represented in this study and there were very few significant differences by demographics for participants with sensory dis/abilities. *Participants of Color* with sensory dis/abilities (n = 30)

Table 6.19

Mean Differences for Participants with Physical Dis/abilities by Select Demographics

	Physical Disability							
	POC Yes			POC No				
	n	M	SD	n	M	SD	t	
Environment	76	2.43	0.89	139	2.37	0.64	-0.58	
Ableism	76	2.75	0.41	139	2.71	0.37	-0.71	
Identity	76	2.16	0.32	139	2.14	0.28	-0.54	
Taking Action	76	2.01	0.64	139	1.86	0.49	-1.98	*
Embodied Dis/ability	76	2.64	0.59	139	2.57	0.54	-0.95	
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	t	
Environment	129	2.41	0.72	86	2.36	0.76	-0.43	
Ableism	129	2.67	0.38	86	2.81	0.39	2.61	**
Identity	129	2.19	0.32	86	2.09	0.26	-2.53	**
Taking Action	129	1.92	0.57	86	1.90	0.52	-0.30	
Embodied Dis/ability	129	2.62	0.57	86	2.56	0.54	-0.79	
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	t	
Environment	55	2.56	0.72	160	2.33	0.73	-2.03	*
Ableism	55	2.65	0.41	160	2.75	0.38	1.80	*
Identity	55	2.26	0.28	160	2.11	0.30	-3.17	***
Taking Action	55	2.03	0.60	160	1.87	0.53	-1.89	*
Embodied Dis/ability	55	2.71	0.56	160	2.56	0.56	-1.72	*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

had significantly lower scores on the Ableism Scale ($t = 1.70, p < .05$) and significantly higher scores on the Embodied Dis/ability Scale ($t = -2.09, p < .05$) when compared to those with sensory dis/abilities who were white. *Queer* participants with sensory dis/abilities (n = 29) had no significant differences in scale scores compared with those who were heterosexual with sensory dis/abilties. *Trans** participants with sensory dis/abilities (n = 9) had statistically higher

scores on the Embodied Dis/ability Scale ($t = -2.44, p < .01$) compared with cisgender participants with sensory dis/abilities.

Table 6.20

Mean Differences for Participants with Sensory Dis/abilities by Select Demographics

	Sensory Disability (n = 67)							
	POC Yes			POC No				
	n	M	SD	n	M	SD	T	
Environment	30	2.77	0.81	37	2.87	0.72	0.53	
Ableism	30	2.68	0.41	37	2.85	0.40	1.70	*
Identity	30	2.19	0.31	37	2.19	0.27	0.10	
Taking Action	30	2.07	0.45	37	2.22	0.61	1.15	
Embodied Dis/ability	30	2.51	0.57	37	2.21	0.61	-2.09	*
	Queer Yes			Queer No				
	n	M	SD	n	M	SD	T	
Environment	29	2.72	0.67	38	2.91	0.81	1.01	
Ableism	29	2.74	0.45	38	2.80	0.38	0.60	
Identity	29	2.24	0.29	38	2.15	0.28	-1.32	
Taking Action	29	2.15	0.55	38	2.15	0.55	0.03	
Embodied Dis/ability	29	2.45	0.59	38	2.27	0.62	-1.20	
	Trans* Yes			Trans* No				
	n	M	SD	n	M	SD	T	
Environment	9	2.99	0.79	58	2.80	0.75	-0.69	
Ableism	9	2.76	0.58	58	2.78	0.38	0.10	
Identity	9	2.20	0.28	58	2.19	0.29	-0.09	
Taking Action	9	2.19	0.79	58	2.15	0.51	-0.20	
Embodied Dis/ability	9	2.79	0.54	58	2.28	0.79	-2.44	**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Impact of Use of Assistive Technology on Scale Scores

The use of at least one assistive device or aid (including medication) resulted in many significant differences in scores for participants with mental health, learning, and physical dis/abilities. Differences were not able to be assessed for sensory dis/abilities as only one participant with sensory dis/abilities did not use at least one assistive device or aid. Significant differences existed in all scale scores for *participants with mental health who used an assistive device* (n = 272) compared with those who did not. Participants who used assistive devices and had mental health dis/abilities had significantly higher scores on the Environment ($t = -2.90, p < .01$), Identity ($t = -3.33, p < .001$), Taking Action ($t = -4.22, p < .001$), and Embodied Dis/ability ($t = -4.18, p < .001$) Scales and only had a significantly lower score on the Ableism Scale($t = 2.58, p < .01$). *Participants with learning dis/abilities who used an assistive device* (n = 200) had significantly higher scores on the Environment ($t = -2.06, p < .05$), Identity ($t = -2.34, p < .01$), Taking Action ($t = -3.26, p < .001$), and Embodied Dis/ability ($t = -3.53, p < .001$) Scales than those without an assistive device. There were no significant differences on the Ableism Scale for individuals with learning dis/abilities; however, there was a significant difference in all of the scale scores for *participants with physical dis/abilities who used assistive devices* (n = 182). Similar to participants in other dis/ability categories who used assistive devices, those with physical dis/abilities had significantly higher scores on the Environment ($t = -2.36, p < .01$), Identity ($t = -1.94, p < .05$), Taking Action ($t = -4.21, p < .001$), and Embodied Dis/ability ($t = -3.78, p < .001$) Scales. Participants with physical dis/abilities who use assistive devices also had significantly lower scores on the Ableism Scale ($t = 1.73, p < .05$) than those who did not use assistive devices.

Table 6.21

Mean Differences for Participants by Dis/ability Category and Use of Assistive Technology/Aids

	Mental Health							
	Assistive Tech/Aid Yes			Assistive Tech/Aid No				
	n	M	SD	n	M	SD	t	
Environment	272	2.50	0.67	114	2.28	0.62	-2.90	**
Ableism	272	2.66	0.39	114	2.77	0.36	2.58	**
Identity	272	2.15	0.30	114	2.04	0.28	-3.33	***
Taking Action	272	1.88	0.51	114	1.65	0.46	-4.22	***
Embodied Dis/ability	272	2.61	0.53	114	2.37	0.51	-4.18	***
	Learning Dis/ability							
	Assistive Tech/Aid Yes			Assistive Tech/Aid No				
	n	M	SD	n	M	SD	t	
Environment	200	2.51	0.70	68	2.31	0.65	-2.06	*
Ableism	200	2.65	0.42	68	2.74	0.37	1.57	
Identity	200	2.14	0.30	68	2.05	0.31	-2.34	**
Taking Action	200	1.85	0.49	68	1.64	0.37	-3.26	***
Embodied Dis/ability	200	2.65	0.52	68	2.40	0.43	-3.53	***
	Physical Dis/ability							
	Assistive Tech/Aid Yes			Assistive Tech/Aid No				
	n	M	SD	n	M	SD	t	
Environment	182	2.44	0.75	33	2.11	0.62	-2.36	**
Ableism	182	2.71	0.40	33	2.83	0.29	1.73	*
Identity	182	2.17	0.31	33	2.06	0.23	-1.94	*
Taking Action	182	1.98	0.54	33	1.56	0.46	-4.21	***
Embodied Dis/ability	182	2.66	0.55	33	2.27	0.51	-3.78	***
	Sensory Dis/ability							
	Assistive Tech/Aid Yes			Assistive Tech/Aid No				
	n	M	SD	n	M	SD	t	
Environment	65	2.84	0.74	1	3.27	-	-	
Ableism	65	2.78	0.41	1	2.25	-	-	
Identity	65	2.20	0.29	1	1.89	-	-	
Taking Action	65	2.18	0.53	1	1.33	-	-	
Embodied Dis/ability	65	2.35	0.61	1	2.78	-	-	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Regression Models

To fully answer my primary research question, I used sequential multiple regression analysis to analyze each of the scale variables by using them as the dependent variable within the regression model. I then sequentially accounted for demographic variables, dis/ability variables, self-reported visibility, and the other scale variables. As my study is exploratory in nature, an r-squared of 0.3 is considered to be reasonably good. Acock (2022) considered an r-squared of less than 0.1 to be weak, between 0.1 and 0.2 to be moderated, and greater than 0.3 as strong. I decided to consider my regression models to be acceptable if an r-squared of greater than 0.2 was present.

Environment

I first conducted a regression analysis using the Environment domain as the dependent variable (see Table 6.22). In Model 1, I included the participant demographic variables of *Person of Color, Queer, Trans**, and *Age*. The first three demographic variables were all coded as dummy variables, with 1 indicating that the individual was included in the demographic category and 0 indicating that the individual was not included in the demographic category. Model 1 accounted for less than 1% of the variance in apparentness experiences on the Environment domain, $R^2 = 0.01$, $F(9, 472) = 0.72$, $p > .05$.

In addition to controlling for the demographic variables, Model 2 also accounted for dis/ability variables that included *dis/ability category,* whether or not they use *assistive technology*, and the *assistive devices category.* Model 2 accounts for 14% of the variance in Environment and was significant, $R^2 = 0.14$, $F(25, 455) = 3.07$, $p < .001$. Demographic variables of *Person of Color*, *Queer, Trans**, and *Age* did not have a significant relationship with Environment in this model. However, several of the *disability category* variables, *assistive devices category* variables, and the *number of devices* used did have a significant relationship

with Environment. Participants who had a *physical dis/ability* reported lower scores on Environment than those without a physical dis/ability and the relationship was statistically significant ($\beta = -0.13$, $p < .01$). Participants with a sensory dis/ability ($\beta = 0.15$, $p < .001$) reported significantly higher Environment scores than those without sensory dis/abilities. A significant relationship between *mental health* or *learning dis/ability* and Environment did not exist. Use of any type of *aid* or assistive technology resulted in higher Environment Scale scores compared with those who did not use any assistive devices and there was a statistically significant positive relationship for participants who used *1 to 6* aids compared with those who did not use any. Additionally, two specific categories of aids had a significant relationship with Environment. The use of *adaptive technology* (e.g., speech-to-text software) had a significant negative relationship ($\beta = -0.15$, $p < .05$) and the use of a *person aid* (e.g., an interpreter) had a significant positive relationship ($\beta = 0.14$, $p < .01$) on Environment.

In Model 3, I accounted for self-reported visibility in addition to demographics and dis/ability variables added in earlier models. Model 3 accounted for 59% of the variance in Environment, $R^2 = 0.59$, $F(31, 450) = 21.64$, $p < .001$. Said another way, this means that Model 3 accounted for an additional 45% of the variance beyond what was accounted for in Model 2. The demographic variables of *Person of Color, Queer, Trans*,* and *Age* remained statistically insignificant in Model 3. While *physical dis/ability* and *sensory dis/ability* had a significant relationship with Environment in Model 2, they did not retain this significant relationship in Model 3. Instead, *learning dis/ability* had a positive significant relationship ($\beta = 0.06$, $p < .01$) on Environment in Model 3. *Adaptive technology* ($\beta = -0.10$, $p < .01$) and *person aid* ($\beta = 0.07$, $p < .01$) continued to have a significant, though weaker, relationship with Environment in Model 3. The only number of *aids* that maintained a significant relationship between Model 2 and

Model 3 was the use of 3 aids ($\beta = 0.14$, $p < .01$). Most of the new variables accounted for in Model 3 also had a significant positive relationship on Environment. For all of the self-reported visibility variables, I used never/rarely visible as the reference and for strangers, there was a significant positive relationship for both *sometimes (*$\beta = 0.18$, $p < .001$) and *frequently/always* ($\beta = 0.39$, $p < .001$) on Environment. A similar positive relationship with Environment existed for participants who reported their disability was *sometimes (*$\beta = 0.19$, $p < .001$) or *frequently/always (*$\beta = 0.37$, $p < .001$) visible to casual contact. When looking at visibility to close contacts, there was only a significant positive relationship between *frequently/always (*$\beta = 0.27$, $p < .001$) and Environment.

In Model 4, I further controlled for the other scale variables, as well as the demographic variables, dis/ability variables, and self-reported visibility in the prior three models. The variance of Environment increased to 65%, which means that the other scale variables accounted for an additional 6% of the variance in Environment. *Learning dis/ability, adaptive technology*, and *person aid* were no longer significant in Model 4 and instead, *physical dis/ability (*$\beta = -0.07$, $p < .01$) returned to having a significant negative relationship with Environment. The use of 3 *aids* ($\beta = 0.09$, $p < .001$) continued to have a significant positive relationship on Environment. In Model 4, all of the self-reported visibility variables had a significant positive relationship with Environment. Additionally, the scale variables of *taking action* ($\beta = 0.25$, $p < .001$) and *embodied dis/ability (*$\beta = 0.08$, $p < .01$) also had a significant positive relationship with Environment.

Ableism

I followed the same steps as described above to conduct a regression analysis (see Table

6.23) with Ableism as the dependent variable. In Model 1, I accounted for the demographic variables of *Person of Color*, *Trans*, Queer*, and *Age.* Model 1 accounted for approximately 6% of the variance in apparentness experiences on the Ableism scale, $R^2 = 0.06$, $F(9, 472) = 3.38$, $p < .001$ and the overall model was significant. *Queer* ($\beta = -0.19$, $p < .001$) had a significant negative relationship with Ableism. None of the other demographic variables were individually significant in Model 1.

Model 2, in addition to accounting for demographics, also accounted for dis/ability variables. Model 2 accounts for 12% of the variance in Ableism and was significant, $R^2 = 0.12$, $F(25, 455) = 2.49$, $p < .001$. Said another way, the dis/ability variables accounted for an additional 6% of the overall variance. In Model 2, *queer (*$\beta = -0.17$, $p < .001$) maintained a significant negative relationship with Ableism. Additionally, *mental health (*$\beta = -0.12$, $p < .01$) and *learning dis/ability (*$\beta = -0.14$, $p < .001$) both had a significant negative relationship with Ableism. A significant negative relationship also existed between Ableism and individuals who used *4 aids (*$\beta = -0.15$, $p < .01$).

In Model 3, I accounted for self-reported visibility in addition to demographics and dis/ability variables added in earlier models. Model 3 did not account for additional variance in Ableism; however, the model did remain significant, $R^2 = 0.12$, $F(31, 450) = 2.05$, $p < .001$. All of the variables from Model 2 that were individually significant, *queer (*$\beta = -0.17$, $p < .001$), *mental health (*$\beta = -0.12$, $p < .01$), *learning dis/ability (*$\beta = -0.15$, $p < .001$), and use of *4 aids (*$\beta = -0.15$, $p < .01$), maintained their negative statistically significant relationships with Ableism.

Model 4 accounted for the other scale variables in addition to the variables added in the prior three models. Model 4 accounted for an additional 12% of variance for a total of 24% of variance accounted for by the sequential models, $R^2 = 0.24$, $F(35, 446) = 4.10$, $p < .001$. As with

the prior models, *queer (*β = -0.14, p < .001) maintained a significant negative relationship with Ableism. Additionally, the age group *35-44* (β = 0.08, p < .05) had a significant positive relationship in this model. None of the dis/ability or self-reported visibility variables were significant. Four variables were added with the inclusion of the other scale variables and three of the four had a statistically significant relationship with Ableism. Both *identity* (β = -0.14, p < .001) and *embodied dis/ability (*β = -0.36, p < .001) had a strong negative significant relationship with Ableism and *taking action (*β = 0.11, p < .01) had a positive significant relationship with Ableism.

Identity

Table 6.24 depicts the results of the regression analysis for the Identity scale of apparentness. For this regression analysis, I followed the same procedures as described in the prior regressions. Model 1 incorporated demographic variables and accounted for 3% of the variance in Identity, $R^2 = 0.03$, $F(9, 472) = 1.75$, $p > .05$. Model 1 was not significant at the .05 level; however, the variable *Trans* (*β = 0.14, p < .001) had a statistically significant positive relationship with Identity.

Model 2 accounted for 12% of the variance in Identity, which means that the dis/ability variables added in Model 2 accounted for an additional 9% of the variance beyond those accounted for in Model 1. Model 2 was significant, $R^2 = 0.12$, $F(25,456) = 2.38$, $p < .001$. *Trans* (*β = 0.11, p < .01) continued to have a statistically significant relationship with Identity and two of the added dis/ability variables also had a statistically significant positive relationship with Identity. Both the use of *adaptive equipment* (e.g., wheelchair, cane, etc.; β = 0.13, p < .01) and the use of a *person aid* (e.g., interpreter, personal care attendant; β = 0.12, p < .01) were individually significant.

In Model 3, in addition to controlling for the demographic and dis/ability variables added in the earlier models, I further controlled for participants' self-reported visibility. As with the prior models, *Trans** ($\beta = 0.11$, $p < .01$), *adaptive equipment (*$\beta = 0.11$, $p < .05$), and *person aid (*$\beta = 0.06$, $p < .01$) maintained a statistically significant positive relationship with Identity. Model 3 accounted for 16% of the total variance, meaning that self-reported visibility variables accounted for an additional 4% of the variance in Identity, $R^2 = 0.16$, $F(31, 450) = 2.78$, $p < .001$. Reporting that dis/ability was *frequently/always apparent* to strangers ($\beta = 0.12$, $p < .01$) had a significant positive relationship with Identity, as did reporting dis/ability was *frequently/always* apparent to casual contacts *(*$\beta = 0.17$, $p < .01$).

Model 4 accounted for 22% of the total variance in Identity, $R^2 = 0.22$, $F(35, 446) = 3.51$, $p < .001$. Said another way, this means the other scale variables accounted for an additional 8% of the variance. As with the three prior models, *Trans** *(*$\beta = 0.11$, $p < .01$) continued to have a significant positive relationship with Identity, as did the use of a *person aid (*$\beta = 0.08$, $p < .01$). Neither of the reported visibility variables that were significant in Model 3 maintained their significance in Model 4. *Ableism (*$\beta = -0.15$, $p < .001$) had a significant negative relationship with Identity, while *taking action (*$\beta = 0.22$, $p < .001$) had a significant positive relationship with Identity.

Taking Action

Table 6.25 depicts the results of the regression analysis for the Taking Action scale of apparentness. For this regression analysis, I followed the same procedures as described in the prior regressions. Model 1 incorporated demographic variables and accounted for 2% of the variance in Taking Action and was not significant, $R^2 = 0.02$, $F(9, 472) = 1.11$, $p=0.36$. Though

Model 1 was not significant, the variables *Person of Color (*$\beta = 0.08$, $p < .05$) and *Trans* (*$\beta = 0.09$, $p < .05$) each had statistically significant positive relationships with Taking Action.

Model 2 further controlled for dis/ability variables in addition to the demographic variables controlled for in Model 1. Model 2 accounted for 20% of the total variance in Taking Action, which means that it accounts for an additional 18% of variance beyond what was controlled for in Model 1. Model 2 was significant, $R^2 = 0.20$, $F(25, 456) = 4.62$, $p < .001$. While *Person of Color* and *Trans** were significant in Model 1 they did not remain individually significant in Model 2. Of the four dis/ability category variables, *sensory dis/ability (*$\beta = 0.10$, $p < .01$) was the only one with a statistically significant relationship with Taking Action. As with *sensory dis/ability*, *adaptive equipment (*$\beta = 0.16$, $p < .001$) also had a significant positive relationship with Taking Action. The number of assistive *aids* used by participants also had a significant positive relationship with Taking Action. This positive relationship continued with each additional device used between *2* and *6* ($\beta = 0.19$, $p < .01$; $\beta = 0.18$, $p < .01$; $\beta = 0.16$, $p < .01$; $\beta = 0.27$, $p < .001$; $\beta = 0.18$, $p < .001$).

In addition to the demographic and dis/ability variables controlled for in earlier models, Model 3 also incorporated participants' self-reported visibility. Model 3 remained significant and accounted for 34% of the total variance in Taking Action, which included an additional 14% not accounted for in earlier models, $R^2 = 0.34$, $F(31, 450) = 7.36$, $p < .001$. Of the variables that were significant in the first two models, only *adaptive equipment* ($\beta = 0.12$, $p < .01$) and use of *3, 5,* or *6 aids* ($\beta = 0.14$, $p < .05$; $\beta = 0.18$, $p < .001$; $\beta = 0.14$, $p < .001$) maintained individually significant relationships with Taking Action. Three of the newly added reported visibility variables were also significant. Reporting that dis/ability was *frequently/always apparent* to strangers ($\beta = 0.15$, $p < .001$) had a significant positive relationship with Taking Action.

Additionally, both variables for visibility to casual contacts, *sometimes* ($\beta = 0.14$, $p < .001$) and *frequently/always (*$\beta = 0.29$, $p < .001$), had significant positive relationships with Taking Action.

Model 4 further controlled for the other scale variables and accounted for 43% of the total variance in Taking Action. Said another way, this means that the addition of the other scale variables accounted for an additional 9% of the total variance. Model 4 remained significant, $R^2 = 0.43$, $F(35, 446) = 9.74$, $p < .001$. Four of the variables added in earlier models continued to be individually significant and have a positive relationship with Taking Action within the model. These four variables included using *adaptive equipment (*$\beta = 0.11$, $p < .01$), the use of *5* ($\beta = 0.16$, $p < .001$) *or 6 (*$\beta = 0.12$, $p < .01$) *total aids*, and reporting that dis/ability was *frequently/always visible* to casual contacts ($\beta = 0.11$, $p < .05$). Additionally, three of the four new variables added in Model 4 were also individually significant. *Environment* ($\beta = 0.40$, $p < .001$) had a significant positive relationship with Taking Action as did *ableism (*$\beta = 0.08$, $p < .01$) and *identity* ($\beta = 0.16$, $p < .001$).

Embodied Dis/ability

The final regression analysis I conducted was on Embodied Dis/ability. I followed the same steps and procedures as described in my earlier regression analyses. Model 1 controlled for demographic variables and accounted for 8% of the variance in Embodied Dis/ability, $R^2 = 0.08$, $F(9, 472) = 4.57$, $p < .001$. Additionally, several of the demographic variables were individually significant within this model. *Person of Color (*$\beta = 0.14$, $p < .001$) had a strong significant positive relationship with Embodied Dis/ability. *Trans* (*$\beta = 0.12$, $p < .01$) and *Queer (*$\beta = 0.10$, $p < .01$) also had significant positive relationships with Embodied Dis/ability. Two of the *Age* categories, *25-34 (*$\beta = 0.10$, $p < .01$) and *35-44* ($\beta = 0.10$, $p < .01$), were also positively significant.

Model 2 accounted for an additional 16% of the variance for a total of 24% of all variance in Embodied Dis/ability, $R^2 = 0.24$, $F(25, 456) = 5.87$, $p < .001$. *Person of Color (*$\beta = 0.15$, $p < .001$) continued to be individually significant and have a positive relationship with Embodied Dis/ability in this model, though *Trans*, Queer,* and *Age* were no longer individually significant. Several of the newly added dis/ability variables were significant. *Mental health (*$\beta = 0.21$, $p < .001$)*, learning dis/ability (*$\beta = 0.20$, $p < .001$)*,* and *physical dis/ability (*$\beta = 0.16$, $p < .001$) all had a significant positive relationship with Embodied Dis/ability. Use of two or more *aids* also had significant positive relationships ($\beta = 0.16$, $p < .05$; $\beta = 0.14$, $p < .05$; $\beta = 0.14$, $p < .05$; $\beta = 0.12$, $p < .05$; $\beta = 0.12$, $p < .01$) with Embodied Dis/ability.

Model 3 further controlled for self-reported visibility but only increased the percentage of variance to 25%. Self-reported visibility variables only contributed an additional 1% of variance to the model; however, the model remained significant, $R^2 = 0.25$, $F(31, 450) = 4.93$, $p < .001$. All of the same variables that were significant in Model 2 remained significant in Model 3, and none of the newly introduced self-reported visibility variables were significant. However, the increase in R^2 indicates that they contributed to the overall model.

In addition to controlling for demographic, dis/ability, and self-reported visibility variables, Model 4 also further controlled for the other scale variables. Model 4 accounted for 35% of the total variance in Embodied Dis/ability, $R^2 = 0.35$, $F(35, 446) = 6.89$, $p < .001$. As with prior models, *person of Color (*$\beta = 0.15$, $p < .001$), *mental health (*$\beta = 0.17$, $p < .001$)*, learning dis/ability (*$\beta = 0.15$, $p < .001$)*,* and *physical dis/ability (*$\beta = 0.17$, $p < .001$) all maintained a significant positive relationship with Embodied Dis/ability. Additionally, the *age* range *35-44 (*$\beta = 0.07$, $p < .01$) and the use of *6 aids (*$\beta = 0.12$, $p < .01$) also had significant positive relationships with Embodied Dis/ability. When analyzing the relationship of the other scale

variables, two of the four were statistically significant. *Environment (*$\beta = 0.15$, $p < .01$) had a significant positive relationship with Embodied Dis/ability and *ableism (*$\beta = -0.31$, $p < .001$) had a significant negative relationship with Embodied Dis/ability.

Summary

This chapter discussed the significant correlations between variables within the data and the identified domains of the Apparentness Scale. The regression models for all of the Scales accounted for a sufficient amount of variance to be considered valid for an exploratory study. Additionally, the regression models confirmed that other Scale variables were significant in predicting variance for each domain and that the proposed domains for the Apparentness Scale were interconnected. The next chapter discusses the significant findings of the study, the identified limitations of the current study, and implications for future research and practice.

Table 6.22

Regression Model For Environment Scale

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Demographics												
Person of Color	0.08	(0.07)	0.05	0.03	(0.07)	0.02	-0.03	(0.05)	-0.02	-0.06	(0.04)	-0.04
Trans*	0.11	(0.09)	0.07	0.06	(0.09)	0.04	0.02	(0.06)	0.01	-0.02	(0.06)	-0.01
Queer	-0.05	(0.07)	-0.04	0.00	(0.07)	0.00	0.05	(0.05)	0.04	0.05	(0.05)	0.03
Age												
18-24 (reference)												
25-34	0.09	(0.08)	0.05	0.08	(0.08)	0.05	0.06	(0.06)	0.03	0.04	(0.05)	0.03
35-44	0.11	(0.12)	0.04	0.00	(0.12)	0.00	-0.01	(0.08)	0.00	-0.01	(0.08)	-0.01
45-54	-0.01	(0.17)	-0.00	-0.05	(0.17)	-0.01	-0.12	(0.12)	-0.03	-0.12	(0.11)	-0.03
55-64	0.07	(0.25)	0.01	0.10	(0.25)	0.01	0.02	(0.17)	0.00	0.07	(0.16)	0.01
65-74	-0.37	(0.50)	-0.03	-0.47	(0.48)	-0.04	-0.13	(0.34)	-0.01	-0.12	(0.32)	-0.01
Disability Variables												
Mental Health				-0.02	(0.09)	-0.01	-0.02	(0.06)	-0.01	-0.02	(0.06)	-0.01
Learning Dis/ability				0.07	(0.07)	0.05	0.08*	(0.05)	0.06	0.07	(0.05)	0.05
Physical Dis/ability				-0.18**	(0.07)	-0.13	-0.07	(0.05)	-0.05	-0.11**	(0.05)	-0.07
Sensory Dis/ability				0.30***	(0.11)	0.15	0.14	(0.08)	0.06	0.10	(0.07)	0.05
Medication				-0.16	(0.10)	-0.11	-0.04	(0.07)	-0.03	-0.03	(0.06)	-0.02
Adaptive Technology				-0.21**	(0.11)	-0.15	-0.13*	(0.08)	-0.10	-0.11	(0.07)	-0.08
Adaptive Equipment				0.06	(0.09)	0.04	-0.05	(0.07)	-0.03	-0.09	(0.06)	-0.06
Person Aid				0.34***	(0.13)	0.14	0.16*	(0.09)	0.07	0.16*	(0.09)	0.06
Total # of Aids												
0 (reference)												
1				0.22*	(0.12)	0.14	0.08	(0.08)	0.05	0.04	(0.08)	0.02
2				0.42***	(0.15)	0.25	0.11	(0.11)	0.06	0.05	(0.10)	0.03
3				0.50***	(0.20)	0.21	0.33**	(0.14)	0.14	0.22**	(0.13)	0.09
4				0.44*	(0.24)	0.15	0.11	(0.17)	0.04	-0.02	(0.16)	0.00
5				0.80***	(0.26)	0.22	0.21	(0.14)	0.06	0.00	(0.18)	0.01
6				0.77**	(0.36)	0.13	0.32	(0.25)	0.05	0.06	(0.24)	0.01

Table 6.22 Continued

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Reported Visibility												
Strangers												
Never/Rarely (reference)												
Sometimes							0.30***	(0.06)	0.18	0.27***	(0.06)	0.17
Frequently/Always							0.91***	(0.09)	0.39	0.82***	(0.08)	0.35
Casual Contacts												
Never/Rarely (reference)												
Sometimes							0.28***	(0.06)	0.19	0.23***	(0.05)	0.16
Frequently/Always							0.64***	(0.08)	0.37	0.51***	(0.08)	0.29
Close Contacts												
Never/Rarely (reference)												
Sometimes							0.14	(0.09)	0.09	0.15*	(0.08)	0.09
Frequently/Always							0.40***	(0.08)	0.27	0.38***	(0.08)	0.26
Scale Means												
Ableism										-0.03	(0.06)	-0.02
Identity										0.04	(0.08)	0.02
Taking Action										0.34***	(0.05)	0.25
Embodied Disability										0.10**	(0.04)	0.08
Constant	2.40***	(0.06)		2.25***	(0.11)		1.68***	(0.10)		0.98***	(0.29)	
Observations	482			482			482			482		
Model Significance	p > .05			p < .001			p < .001			p < .001		
R-squared	0.01			0.14			0.60			0.65		
Adjusted R-squared	-0.01			0.09			0.57			0.62		

Note *** p<0.01, ** p<0.05, * p<0.1

Table 6.23

Regression Model For Ableism Scale

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Demographics												
Person of Color	-0.02	(0.04)	-0.02	-0.02	(0.04)	-0.02	-0.01	(0.04)	-0.02	0.03	(0.04)	0.04
Trans*	-0.04	(0.05)	-0.04	0.00	(0.05)	0.00	0.00	(0.05)	0.00	0.03	(0.05)	0.03
Queer	-0.15***	(0.04)	-0.19	-0.14***	(0.04)	-0.17	-0.14***	(0.04)	-0.17	-0.11***	(0.04)	-0.14
Age												
18-24 (reference)												
25-34	-0.06	0.04	-0.06	-0.04	(0.05)	-0.04	-0.04	(0.05)	-0.04	-0.02	(0.04)	-0.02
35-44	0.06	0.06	0.04	0.08	(0.07)	0.06	0.09	(0.07)	0.06	0.11*	(0.06)	0.08
45-54	0.00	0.09	0.00	0.03	(0.09)	0.01	0.03	(0.10)	0.01	0.02	(0.09)	0.01
55-64	0.10	0.14	0.03	0.13	(0.14)	0.04	0.13	(0.14)	0.04	0.15	(0.13)	0.05
65-74	0.30	0.30	0.05	0.26	(0.27)	0.04	0.26	(0.28)	0.04	0.19	(0.26)	0.03
Disability Variables												
Mental Health				-0.12**	(0.05)	-0.12	-0.12**	(0.05)	-0.12	-0.05	(0.05)	-0.05
Learning Dis/ability				-0.11***	(0.04)	-0.14	-0.11***	(0.04)	-0.15	-0.05	(0.04)	-0.07
Physical Dis/ability				0.02	(0.04)	0.02	0.02	(0.04)	0.02	0.06	(0.04)	0.08
Sensory Dis/ability				0.00	(0.06)	0.00	-0.01	(0.06)	0.00	-0.03	(0.06)	-0.03
Medication				0.00	(0.06)	0.00	0.01	(0.06)	0.01	0.01	(0.05)	0.01
Adaptive Technology				0.03	(0.06)	0.04	0.03	(0.06)	0.04	0.02	(0.06)	0.03
Adaptive Equipment				0.01	(0.05)	0.01	0.01	(0.05)	0.01	0.00	(0.05)	0.00
Person Aid				-0.05	(0.07)	-0.03	-0.05	(0.07)	-0.04	-0.02	(0.07)	-0.02
Total # of Aids												
0 (reference)												
1				-0.09	(0.07)	-0.10	-0.09	(0.07)	-0.11	-0.07	(0.06)	-0.08
2				-0.11	(0.09)	-0.12	-0.12	(0.09)	-0.13	-0.08	(0.08)	-0.08
3				-0.08	(0.11)	-0.06	-0.09	(0.11)	-0.07	-0.04	(0.10)	-0.03
4				-0.24*	(0.13)	-0.15	-0.25*	(0.14)	-0.15	-0.15	(0.13)	-0.10
5				-0.14	(0.15)	-0.07	-0.14	(0.15)	-0.07	-0.10	(0.14)	-0.05
6				0.09	(0.20)	0.03	0.09	(0.20)	0.03	0.17	(0.20)	0.05

Table 6.23 Continued

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Reported Visibility												
Strangers												
Never/Rarely (reference)												
Sometimes							-0.01	(0.05)	-0.01	0.00	(0.05)	0.00
Frequently/Always							-0.04	(0.07)	-0.03	-0.02	(0.08)	-0.02
Casual Contacts												
Never/Rarely (reference)												
Sometimes							0.05	(0.05)	0.06	0.03	(0.04)	0.04
Frequently/Always							0.08	(0.07)	0.08	0.09	(0.07)	0.09
Close Contacts												
Never/Rarely (reference)												
Sometimes							-0.03	(0.07)	-0.03	0.01	(0.07)	0.01
Frequently/Always							-0.03	(0.07)	-0.04	0.00	(0.07)	0.00
Scale Means												
Environment										-0.02	(0.04)	-0.04
Identity										-0.19***	(0.06)	-0.14
Taking Action										0.08**	(0.04)	0.11
Embodied Disability										-0.25***	(0.03)	-0.36
Constant	2.84***	(0.03)		3.03***	(0.06)		3.03***	(0.08)		3.73***	(0.16)	
Observations	482			482			482			482		
Model Significance	p < .001			p < .001			p < .001			p < .001		
R-squared	0.06			0.12			0.12			0.24		
Adjusted R-squared	0.04			0.07			0.06			0.18		

Note *** p<0.01, ** p<0.05, * p<0.1

Table 6.24

Regression Model For Identity Scale

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Demographics												
Person of Color	0.03	(0.03)	0.05	0.02	(0.03)	0.03	0.01	(0.03)	0.02	0.01	(0.03)	0.01
Trans*	0.10***	(0.04)	0.14	0.08**	(0.04)	0.11	0.08**	(0.04)	0.11	0.07**	(0.04)	0.11
Queer	0.02	(0.03)	0.03	0.04	(0.03)	0.07	0.05	(0.03)	0.08	0.03	(0.03)	0.06
Age												
18-24 (reference)												
25-34	0.03	(0.03)	0.03	0.01	(0.03)	0.02	0.01	(0.03)	0.02	0.00	(0.03)	0.00
35-44	0.03	(0.05)	0.03	0.00	(0.05)	0.00	0.01	(0.05)	0.01	0.02	(0.05)	0.02
45-54	0.08	(0.07)	0.05	0.04	(0.07)	0.03	0.04	(0.07)	0.03	0.04	(0.07)	0.03
55-64	-0.09	(0.11)	-0.04	-0.14	(0.12)	-0.06	-0.14	(0.10)	-0.06	-0.11	(0.10)	-0.05
65-74	-0.19	(0.21)	-0.04	-0.27	(0.21)	-0.06	-0.27	(0.20)	-0.06	-0.23	(0.20)	-0.05
Disability Variables												
Mental Health				-0.05	(0.04)	-0.07	-0.05	(0.04)	-0.06	-0.05	(0.04)	-0.07
Learning Dis/ability				0.01	(0.03)	0.01	0.01	(0.03)	0.01	0.00	(0.03)	-0.01
Physical Dis/ability				0.00	(0.03)	0.00	0.02	(0.03)	0.03	0.01	(0.03)	0.02
Sensory Dis/ability				-0.02	(0.05)	-0.02	-0.04	(0.05)	-0.05	-0.05	(0.05)	-0.06
Medication				-0.04	(0.04)	-0.06	-0.02	(0.04)	-0.03	-0.01	(0.04)	-0.01
Adaptive Technology				0.02	(0.05)	0.04	0.04	(0.05)	0.07	0.05	(0.05)	0.09
Adaptive Equipment				0.08**	(0.04)	0.13	0.07*	(0.04)	0.11	0.06	(0.04)	0.09
Person Aid				0.12**	(0.06)	0.12	0.10*	(0.06)	0.09	0.09*	(0.05)	0.08
Total # of Aids												
0 (reference)												
1				0.07	(0.05)	0.10	0.06	(0.05)	0.08	0.03	(0.05)	0.05
2				0.03	(0.07)	0.05	-0.01	(0.07)	-0.01	-0.04	(0.06)	-0.06
3				0.05	(0.09)	0.05	0.03	(0.08)	0.03	-0.02	(0.08)	-0.02
4				0.15	(0.10)	0.12	0.11	(0.10)	0.09	0.05	(0.10)	0.04
5				0.07	(0.11)	0.05	-0.01	(0.11)	-0.01	-0.10	(0.11)	-0.06
6				-0.05	(0.16)	-0.02	-0.10	(0.15)	-0.04	-0.18	(0.15)	-0.07

Table 6.24 Continued

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Reported Visibility												
Strangers												
Never/Rarely (reference)												
Sometimes							0.00	(0.04)	0.00	-0.01	(0.04)	-0.02
Frequently/Always							0.12**	(0.05)	0.12	0.07	(0.06)	0.07
Casual Contacts												
Never/Rarely (reference)												
Sometimes							0.05	(0.03)	0.08	0.03	(0.03)	0.05
Frequently/Always							0.12**	(0.05)	0.17	0.07	(0.05)	0.10
Close Contacts												
Never/Rarely (reference)												
Sometimes							-0.05	(0.05)	-0.07	-0.04	(0.05)	-0.07
Frequently/Always							-0.04	(0.05)	-0.06	-0.05	(0.05)	-0.07
Scale Means												
Environment										0.02	(0.03)	0.03
Ableism										-0.12***	(0.04)	-0.15
Taking Action										0.13***	(0.03)	0.22
Embodied Disability										0.01	(0.03)	0.01
Constant	2.07***	(0.03)		2.04***	(0.05)		2.02***	(0.06)		2.12***	(0.15)	
Observations	482			482			482			482		
Model Significance	p > .05			p < .001			p < .001			p < .001		
R-squared	0.03			0.12			0.16			0.22		
Adjusted R-squared	0.01			0.07			0.10			0.15		

Note *** p<0.01, ** p<0.05, * p<0.1

Table 6.25

Regression Model For Taking Action Scale

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Demographics												
Person of Color	0.09*	(0.05)	0.08	0.04	(0.05)	0.03	0.01	(0.04)	0.01	0.02	(0.04)	0.01
Trans*	0.11*	(0.06)	0.09	0.07	(0.06)	0.06	0.06	(0.06)	0.05	0.03	(0.05)	0.03
Queer	-0.08	(0.05)	-0.08	-0.03	(0.05)	-0.03	-0.01	(0.05)	-0.01	-0.03	(0.05)	-0.03
Age												
18-24 (reference)												
25-34	0.05	(0.06)	0.04	0.03	(0.06)	0.02	0.02	(0.05)	0.02	0.00	(0.05)	0.00
35-44	0.10	(0.09)	0.05	-0.02	(0.08)	-0.01	-0.01	(0.08)	0.00	-0.02	(0.07)	-0.01
45-54	0.14	(0.13)	0.05	0.04	(0.12)	0.01	0.02	(0.11)	0.01	0.05	(0.10)	0.02
55-64	-0.13	(0.19)	-0.03	-0.14	(0.18)	-0.04	-0.17	(0.16)	-0.04	-0.15	(0.15)	-0.04
65-74	0.23	(0.37)	0.03	-0.03	(0.34)	0.00	0.06	(0.32)	0.01	0.14	(0.30)	0.02
Disability Variables												
Mental Health				-0.08	(0.06)	-0.06	-0.07	(0.06)	-0.06	-0.05	(0.05)	-0.04
Learning Disability				-0.05	(0.05)	-0.05	-0.05	(0.05)	-0.04	-0.07	(0.04)	-0.06
Physical Disability				0.00	(0.05)	0.00	0.04	(0.05)	0.04	0.05	(0.05)	0.05
Sensory Disability				0.14*	(0.08)	0.10	0.07	(0.07)	0.04	0.05	(0.07)	0.03
Medication				-0.11	(0.07)	-0.10	-0.05	(0.06)	-0.05	-0.04	(0.06)	-0.03
Adaptive Technology				-0.09	(0.08)	-0.08	-0.05	(0.07)	-0.05	-0.03	(0.07)	-0.02
Adaptive Equipment				0.18***	(0.07)	0.16	0.13**	(0.06)	0.12	0.13**	(0.06)	0.11
Person Aid				0.07	(0.09)	0.04	0.00	(0.09)	0.00	-0.07	(0.08)	-0.04
Total # of Aids												
0 (reference)												
1				0.13	(0.09)	0.12	0.09	(0.08)	0.07	0.06	(0.07)	0.05
2				0.23**	(0.11)	0.19	0.12	(0.10)	0.09	0.09	(0.09)	0.07
3				0.32**	(0.14)	0.18	0.25*	(0.13)	0.14	0.14	(0.12)	0.08
4				0.35**	(0.17)	0.16	0.23	(0.16)	0.11	0.19	(0.15)	0.09

Table 6.25 Continued

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
5				0.71***	(0.19)	0.27	0.49***	(0.18)	0.18	0.48***	(0.16)	0.16
6				0.79***	(0.26)	0.18	0.62***	(0.24)	0.14	0.52**	(0.22)	0.12
Reported Visibility												
Strangers												
Never/Rarely (reference)												
Sometimes							0.08	(0.06)	0.06	-0.01	(0.05)	-0.01
Frequently/Always							0.26***	(0.08)	0.15	-0.04	(0.09)	-0.02
Casual Contacts												
Never/Rarely (reference)												
Sometimes							0.15***	(0.05)	0.14	0.05	(0.05)	0.04
Frequently/Always							0.37***	(0.08)	0.29	0.14*	(0.08)	0.11
Close Contacts												
Never/Rarely (reference)												
Sometimes							-0.08	(0.08)	-0.07	-0.11	(0.08)	-0.09
Frequently/Always							0.01	(0.08)	0.00	-0.10	(0.08)	-0.10
Scale Means												
Environment										0.30***	(0.04)	0.40
Ableism										0.11**	(0.05)	0.08
Identity										0.28***	(0.07)	0.16
Embodied Disability										0.03	(0.04)	0.04
Constant	1.81***	(0.05)		1.74***	(0.08)		1.63***	(0.09)		0.17	(0.27)	
Observations	482			482			482			482		
Model Significance	p > .05			p < .001			p < .001			p < .001		
R-squared	0.02			0.20			0.34			0.43		
Adjusted R-squared	0.00			0.16			0.29			0.40		

Note *** p<0.01, ** p<0.05, * p<0.1

Table 6.26

Regression Model for Embodied Dis/ability

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
Demographics												
Person of Color	0.17***	(0.05)	0.14	0.17***	(0.05)	0.15	0.18***	(0.05)	0.15	0.18***	(0.05)	0.15
Trans*	0.17**	(0.07)	0.13	0.07	(0.06)	0.06	0.07	(0.06)	0.06	0.07	(0.06)	0.05
Queer	0.12**	(0.06)	0.10	0.06	(0.06)	0.05	0.07	(0.06)	0.06	0.00	(0.05)	0.00
Age												
18-24 (reference)												
25-34	0.14**	(0.06)	0.10	0.07	(0.06)	0.05	0.07	(0.06)	0.05	0.05	(0.06)	0.03
35-44	0.19**	(0.09)	0.10	0.11	(0.09)	0.05	0.10	(0.09)	0.05	0.14*	(0.08)	0.07
45-54	0.03	(0.13)	0.01	-0.04	(0.13)	-0.01	-0.04	(0.13)	-0.02	-0.02	(0.12)	-0.01
55-64	0.25	(0.20)	0.06	0.11	(0.18)	0.02	0.11	(0.18)	0.03	0.18	(0.17)	0.04
65-74	-0.15	(0.38)	-0.02	-0.17	(0.36)	-0.02	-0.08	(0.36)	-0.01	0.05	(0.34)	0.01
Dis/ability Variables												
Mental Health				0.29***	(0.07)	0.21	0.29***	(0.07)	0.21	0.24***	(0.06)	0.17
Learning Dis/ability				0.22***	(0.05)	0.20	0.22***	(0.05)	0.20	0.16***	(0.05)	0.15
Physical Dis/ability				0.18***	(0.05)	0.16	0.18***	(0.05)	0.16	0.19***	(0.05)	0.17
Sensory Dis/ability				-0.07	(0.08)	-0.04	-0.07	(0.08)	-0.04	-0.09	(0.08)	-0.05
Medication				0.00	(0.07)	0.00	0.00	(0.07)	0.00	0.01	(0.07)	0.01
Adaptive Technology				-0.05	(0.08)	-0.05	-0.06	(0.09)	-0.06	-0.03	(0.08)	-0.03
Adaptive Equipment				-0.03	(0.07)	-0.02	-0.03	(0.07)	-0.03	-0.03	(0.07)	-0.03
Person Aid				0.05	(0.10)	0.02	0.03	(0.10)	0.02	-0.01	(0.09)	-0.01
Total # of Aids												
0 (reference)												
1				0.07	(0.09)	0.05	0.07	(0.09)	0.05	0.01	(0.08)	0.01
2				0.21*	(0.11)	0.16	0.20*	(0.11)	0.15	0.13	(0.11)	0.10
3				0.26*	(0.15)	0.14	0.26*	(0.15)	0.14	0.17	(0.14)	0.09
4				0.33*	(0.18)	0.14	0.36**	(0.18)	0.16	0.22	(0.17)	0.10

Table 6.26 Continued

	Model 1			Model 2			Model 3			Model 4		
	B	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β	*B*	*(SE)*	β
5				0.35*	(0.20)	0.12	0.33*	(0.20)	0.12	0.21	(0.19)	0.08
6				0.57**	(0.27)	0.12	0.57***	(0.27)	0.12	0.54**	(0.26)	0.12
Reported Visibility												
Strangers												
Never/Rarely (reference)												
Sometimes							0.04	(0.06)	0.03	-0.01	(0.06)	0.00
Frequently/Always							-0.01	(0.09)	0.00	-0.14	(0.10)	-0.08
Casual Contacts												
Never/Rarely (reference)												
Sometimes							-0.06	(0.06)	-0.05	-0.08	(0.06)	-0.07
Frequently/Always							0.04	(0.09)	0.03	-0.02	(0.09)	-0.01
Close Contacts												
Never/Rarely (reference)												
Sometimes							0.15	(0.09)	0.12	0.13	(0.09)	0.10
Frequently/Always							0.12	(0.09)	0.10	0.06	(0.09)	0.05
Scale Means												
Environment										0.12**	(0.05)	0.15
Ableism										-0.44***	(0.06)	-0.31
Identity										0.02	(0.09)	0.01
Taking Action										0.04	(0.05)	0.04
Constant	2.26***	(0.05)		1.80***	(0.08)		1.69***	(0.11)		2.70***	(0.28)	
Observations	482			482			482			482		
Model Significance	p < .001			p < .001			p < .001			p < .001		
R-squared	0.08			0.24			0.25			0.35		
Adjusted R-squared	0.06			0.20			0.20			0.30		

Note: *** p<0.01, ** p<0.05, * p<0.1

CHAPTER 7-DISCUSSION AND IMPLICATIONS OF THE SDAES

In the three preceding chapters, I detail the results from both the qualitative and quantitative stages of the research study. Chapter 4 included the thematic analysis of participant expert interviews. Chapter 5 detailed the process of scale development through exploratory and confirmatory factor analysis and Chapter 6 described the results of statistical tests that looked at the significant correlations between variables within the data and the identified apparentness domains. This chapter weaves together the information from the preceding chapters in a discussion of significant findings, implications, limitations, and recommendations for future research.

Discussion of Significant Findings

All of the scale variables were significantly related to at least two other scale variables in the regression models, which indicates that the assumption of the study that the five domains collectively contribute to variance in apparentness is likely as the scales are interrelated. In the following sections, I describe significant findings for each of the domains of apparentness as well as significant findings regarding the relationship between apparentness and demographic and dis/ability context variables. I also discuss the role of self-reported visibility.

Impact of the Environment and Context

A higher mean Environment score indicates that participants experienced greater variation in visibility across a range of environmental contexts. In contrast, lower scores indicate experiencing lesser variation of visibility across a range of environmental contexts. The role of the environment was especially important in the narratives of participant experts with physical (e.g., Halk, Sunny, David, Quinn) and sensory (e.g., Suzanne, Avatar) dis/abilities. The

relationship between environmental influences and dis/ability context was also apparent in the quantitative data as participants with sensory dis/abilities had statistically significant higher scores on the Environment scale than their counterparts without sensory dis/abilities. Participants with physical dis/abilities, on the other hand, had significantly lower scores than their peers. As was evidenced in both the qualitative and quantitative data, participants with physical dis/abilities experienced the least variability in visibility across environmental contexts.

Participant expert narratives, including those of Halk, Sunny, David, and Quinn, revealed that though environment did not substantially alter the visibility of dis/ability for individuals with physical dis/abilities, it did result in different levels of access or ability to be present in particular spaces or activities. Halk and David were especially clear in their narratives that there were locations (e.g., those only accessible by stairs) and activities (e.g., pick-up soccer games) they were unable to access. The regression analysis for the Environment scale showed a statistically significant relationship between the Environment and Embodied Dis/ability scales, which may be partially accounted for by the relationship between environmental context and instances of absence experienced by individuals with physical dis/abilities.

The narratives of Suzanne and Avatar provided context for the relationship between apparentness of sensory dis/abilities and the environmental setting. Both Suzanne and Avatar described how even subtle (e.g., location of seat in the classroom) and routine (e.g., closure of sidewalk segment) environmental changes resulted in variable impacts of their dis/ability, which in turn led to differences in the use of assistive technology (e.g., white cane) and overall apparentness. As with the relationship between environmental context and embodied dis/ability experiences of absences, the relationship between the Environment and Taking Action scales

may be partially accounted for by the ongoing choices participants with sensory dis/abilities had to make regarding disclosure and adaptive equipment use based on changes in the environment.

In Chapter 5, I described the model selection for Environment, which included two latent variables: *interaction* and *perception*. The questions that underlie the Environment scale reflect dis/abled students' navigation of both physical and relational environments. The greatest predictor of variability in Environment scores revealed during regression analysis was self-reported visibility. The correlation between Environment and reported visibility indicates that dis/abled students have a detailed awareness of how particular audiences may perceive them. The relationship between the Environment, Taking Action, and Embodied Dis/ability scales implicates the interactional exchange that occurs (both explicitly and implicitly) between the individual bodymind and the surrounding context, which mirrors the theoretical underpinnings of the social model of dis/ability. As a result, this study extends the conversation about dis/ability as an interaction rather than a stable phenomenon encompassed only by impairment and provides further arguments regarding the limitations of the medical model of dis/ability.

Experiences of Ableism

The higher the mean Ableism score, the more experiences of ableism were reported by the respondent. Lower mean Ableism scores are associated with less reported experiences of ableism. Items retained in the scale to measure Ableism were divided under two latent variables, *communicated* and *enacted*, which indicated the mode through which the experience of ableism was conveyed. Participant experts in the qualitative portion of the study all shared experiences with ableism, with many describing experiences of both communicated ableism (e.g., people implying the participant expert was faking their dis/ability or seeking attention) and enacted ableism (e.g., people mimicking their walking or communication). Of all of the scales, Ableism

was the one I was able to account for the least amount of variation during regression models with the tested variables. The low representation of variance indicates that there may be other significant variables I did not account for that influence variation in ableism. Unlike many of the other scales, self-reported visibility was not a predictor of variance in ableism. I suspect that this is because ableism is experienced by dis/abled people across the spectrum of dis/abling conditions regardless of visibility. Because ableism encompasses not only overt acts like those described in participant expert narratives but also more covert forms of ableism through ablenormativity and dis/abled erasure, dis/abled participants may have reported different types of ableist experiences, but experiencing ableism in some form may be universal for dis/abled students. Kershbaum (2022), in *Signs of Disability,* emphasizes the role that *dis*-attention plays in dis/abled lives. Her theorizing about *dis*-attention combined with the lower amount of variability accounted for by tested variables may indicate that future iterations of the SDAES and exploration of apparentness should take into account the way others enact forms of *dis*-attention.

While the tested variables accounted for only a quarter of the variance, there were specific variables that had individually significant relationships with Ableism. Queerness had a significant relationship with Ableism or said another way, Queer respondents were less likely than their heterosexual peers to endorse frequent experiences with forms of ableism. I want to caution the reader that this does not necessarily mean that Queer dis/abled people are subjected to less ableism. Instead, it could indicate a potential protective factor (e.g., Queer communities may be more inclusive of dis/ability) or that the relationship between experiencing both ableism and homophobia (which was not measured in this study) masks experiences of ableism. It is entirely possible that for Queer dis/abled people, experiences of ableism and homophobia are

intertwined (see Miller et al., 2019) in such a way that participants experience the combination of prejudice and bias as homophobia or attribute experiences of ableism to homophobia.

In addition to Queerness, mental health and learning dis/abilities also had a negative relationship with Ableism mean scores. Participants who had mental health or learning dis/abilities were less likely to report experiences of communicated or enacted ableism than participants without mental health or learning dis/abilities. The Taking Action Scale was positively correlated with Ableism, and the more participants indicated the ability to shift awareness of dis/ability in various environments or across various audiences, the more they reported experiencing forms of ableism. Participant expert narratives in the qualitative portion of the study reflected this finding as those with the most variable experiences with visibility due to shifting impacts and variable use of assistive technology (e.g., Quinn, Amelia, Suzanne, Avatar) reported how their encounters with ableism shifted based on others perception or awareness of their dis/ability.

Impact of Identity

Participants with higher Identity mean scores reported more circumstances of others attributing aspects of another identity to dis/ability or vice versa. These participants experienced greater intertwining of their experiences of dis/ability in combination with at least one other identity. Kershbaum (2022) stated that "what is recognized as 'disability' must be understood as inflected by other dominant and normative valuations of bodies within complex systems of power and domination" (p. 21). Participant expert narratives reflected this phenomenon and can be seen in the latent variables underlying the theme of Identity. As I explained in Chapter 5, the model I selected during confirmatory factor analysis had three underlying latent variables: *genderorient*, *race*, and *age.* However, participant expert narratives also illustrated that standing

out or being one of the only within a particular category (e.g., Black dis/abled student on a PWI campus) contributed to experiences of surveillance. The narratives of Black participant experts were especially representative of this phenomenon and illustrate the additive nature of racism and ableism in contributing to otherness and surveillance on college campuses for Black dis/abled students. Additionally, there was also a significant positive relationship between the Identity mean and Trans* gender identity. The higher Identity mean indicates that Trans* participants were more likely than cisgender participants to have impacts of their dis/ability attributed to another aspect of their identity (e.g., gender) or to have aspects of their identity (e.g., gender expression) attributed to dis/ability.

Agency Through Taking Action

Higher Taking Action scores indicated that participants reported having or exerting greater control over when and how others learned about their dis/ability in a variety of contexts. Those respondents with lower Taking Action scores experienced less variability in how others perceived their dis/ability. Lower Taking Action scores mostly included participants who reported their dis/ability was never visible to others or those who reported their dis/ability was always visible to others. When I selected a model during confirmatory factor analysis, the chosen model had two latent variables: *mask* and *reveal.* It is important to note that the narratives provided by participant experts during interviews encompassed a more dynamic set of actions and behaviors (e.g., concealing and disclosing) and these additional actions are also prevalent in the extant literature. The current iteration of the SDAES does not account for these additional forms of agency employed by dis/abled students.

Participants of Color and Trans* participants both had significantly higher scores in the Taking Action domain than their white and cisgender counterparts. Further research is needed to

confirm, but this could indicate that dis/abled students of Color and dis/abled Trans* students are exerting greater amounts of energy in the process of perception management than white and cis dis/abled students. Students with sensory dis/abilities also had higher scores in the Taking Action domain than dis/abled students without a sensory dis/ability. Additionally, respondents had a higher Taking Action score for each additional assistive device they used beyond one. The relationship with assistive technology was echoed in the narratives of Avatar and Suzanne, both of whom described instances of being able to assert control over when others were aware of their visual impairments based on familiarity with the environment and decision-making regarding when to use adaptive equipment.

Embodied Dis/ability

Higher Embodied Dis/ability mean scores indicate participants reported higher impacts on time and presence and/or a greater likelihood for people to attribute these impacts to dis/ability. Embodied Dis/ability includes two latent variables: *time* and *absence*. All of the targeted demographic categories accounted for in regression modeling (e.g., POC, Trans*, Queer) had significant positive relationships with Embodied Dis/ability. Mental health, learning dis/abilities, and physical dis/abilities also all had positive relationships with Embodied Dis/ability. Respondents across these categories experienced more manifestations of crip time or were more likely to have others attribute their absence in particular spaces or for particular activities to dis/ability.

Qualitative narratives from participants who use adaptive technology indicated that adaptive technology may also be an important component of Embodied Dis/ability. Though adaptive technology was not evaluated as part of the Embodied Dis/ability Scale, participant expert narratives indicate that adaptive technology serves as a form of dis/abled embodiment.

Additionally, adaptive technology use was significant for all domains of apparentness and increased scores in the Environment, Identity, Taking Action, and Embodied Dis/ability domains. Adaptive technology use was only negatively associated with experiences of Ableism. My own experiences with the use of hearing aids and the greater legitimacy afforded to me in requesting access and the willingness of others to assist since I obtained my hearing aids are reflected in this relationship. The role of adaptive tech as an embodied experience is also echoed in the narratives of participant experts who used assistive devices some of the time (e.g., Quinn, Amelia, Avatar, Halk).

Interaction of Demographics and Dis/ability Context

Narratives and statistical analyses both show that dis/abled students with multiple marginalized identities report different experiences with various aspects of dis/abled apparentness compared to their peers from predominant identity categories. This finding is notable because many studies on dis/abled college students have been conducted with a sample that is predominantly white, heterosexual, and cisgender. As a result, the findings from the development of the SDAES indicate that other identity categories can have a significant impact on the way individuals experience dis/ability or dis/abled apparentness and should be included in future research.

Participants of Color in the full sample had higher scores on Taking Action and Embodied Dis/ability, and this effect was heightened for Participants of Color who reported their dis/ability was frequently or always visible to casual contacts. Participants of Color also experienced statistically significant differences in Embodied Dis/ability scores than their white peers when a mental health, learning dis/ability, or sensory dis/ability was present. Participants of Color and white participants with physical dis/abilities reported similar Embodied Dis/ability

scores, but for participants with physical dis/abilities, those who were People of Color experienced significantly higher scores on the Taking Action Scale than white students.

Queer and Trans* students with dis/abilities shared many similar scale scores and most notably reported lower scores on Ableism and higher scores on Identity and Embodied Dis/ability than their heterosexual and cisgender peers. Trans* participants also reported significantly higher scores on Taking Action than those who were cisgender, and this difference was most pronounced for participants with physical dis/abilities.

Dis/ability context variables (e.g., type of dis/ability, use of assistive tech, etc.) also had a substantial impact on scaled scores for participants. Significant differences were present based on the category of dis/ability. The type of dis/ability resulted in meaningful differences for each domain. In the Environment domain, participants with physical dis/abilities had lower scores, while those with sensory dis/abilities had significantly higher scores. As discussed earlier in the discussion of findings, this further indicates that those with sensory dis/abilities may experience the most impact on apparentness based on environment.

Participants with mental health or learning dis/abilities reported lower Ableism scores than those without a mental health or learning dis/ability. In comparison, those with physical or sensory dis/abilities had substantially higher Identity scores than those without. However, Taking Action was the only scale where all four categories of dis/ability experienced significant differences. Participants with mental health and learning dis/abilities reported lower scores and those with sensory or physical dis/abilities reported higher scores. Participants with sensory dis/abilities largely did not experience significant differences based on demographics, with the exception of People of Color with sensory dis/abilities who reported fewer experiences of Ableism and higher Embodied Dis/ability scores than their white peers with sensory dis/abilities.

Importance of Self-Reported Visibility

Dis/abled students involved in the study had detailed and nuanced understanding of the apparentness of their dis/ability when interacting with particular audiences. This was revealed not only through the survey data but also in the verbal and written narratives of participants. Self-reported visibility to various audiences was significant in predicting Ableism, Identity, and Taking Action scale scores. When self-reported visibility was combined with dis/ability type or demographic variables, even greater nuance in scale scores was revealed; for particular groups, significant relationships that were masked in reviewing data for the full sample became evident. This nuance is a further argument for the importance of viewing apparentness as a phenomenon influenced by multiple factors in concert with each other rather than as a static experience.

The relationship with the Environment Scale for participants with mental health dis/abilities became more significant as self-reported visibility increased. This could be a result of the participants reporting greater visibility and also having dis/abilities in other categories that falsely elevate the impact of the environment for mental health dis/abilities. Conversely, it could indicate an underlying difference in the role of environment that would be further revealed if the mental health dis/ability category was further disaggregated. Similarly, while Taking Action was significant in the full sample for individuals with mental health dis/abilities, this significance disappeared when participants reported that their dis/ability was not visible to others.

As with participants with mental health dis/abilities, Environment became significant for participants with learning dis/abilities when combined with self-reported visibility. For participants with learning dis/abilities there was a significant relationship with Environment when self-reported visibility was variable (e.g., sometimes visible to various audiences).

Additionally, Taking Action also lost its significance when participants with learning dis/abilities reported their dis/ability was not visible to others.

When reviewing the full sample data, Ableism was not significant for individuals with physical dis/abilities. However, there was a significant difference in Ableism scores for the small number of participants with physical dis/abilities who reported their dis/ability was never or rarely visible to close contacts (e.g., those whose family and friends were unaware of their dis/ability or its impacts). The discrepancy between the scores for the full sample and this small sub-population of participants with physical dis/abilities may indicate that significant differences exist in experiences of Ableism within the category of physical dis/abilities if the data were further disaggregated. A similar phenomenon for Ableism scores was also present and further supports the need for further disaggregation of data for participants with sensory dis/abilities in order to understand differences within this category. For those participants with sensory dis/abilities, those who reported the least visibility to casual contacts had lower Ableism scores and those who reported fluctuating visibility to any audience experienced significantly higher Ableism scores.

Implications of the Scale of Dis/ability in Education Settings

Apparentness of dis/ability is shown to be a complex and dynamic phenomenon and the SDAES reveals significant relationships between the various domains of apparentness. It also shows that these relationships and experiences of various domains differ meaningfully for sub-groupings of respondents. The SDAES is not intended to definitively define apparentness for any one individual or group but rather to show the complexity of factors that influence apparentness and experiential themes that are represented in the data. The scale captures responses at a moment in time that encompasses experiences and interactions to that point—it does not account for future interactions or the frequent, intermittent, and chronic changes to dis/abled bodyminds.

The SDAES reveals that to assert that a specific diagnosis or dis/ability is always (in)visible is a limited understanding of how dis/abled bodyminds interact with shifting environments and the role of dis/abled agency in influencing apparentness. Two people who experience impacts on mobility, and who may even both be users of the same adaptive equipment (e.g., wheelchair) will experience apparentness differently based on the environment, their agential actions, others within the environment, and interlocking identities that shape how dis/ability is attended or as Kershbaum (2022) asserts *dis*-attended to by others.

It is important to note the differences between the qualitative narratives and quantitative data—examples of apparentness that were significant to individual participant experts (e.g., Amelia's descriptions of her breathing as an embodied experience that revealed her dis/ability or Avatar's observations of her height) did not retain significance in the scales. However, as these examples were no less important for Amelia and Avatar's overall experiences with apparentness, so too is it important to look at dis/abled apparentness both as an individual experience and a collective one with systemic influences. Additionally, items that were mentioned in only one participant expert's interview (e.g., the impact of age, Amelia) were significant in the quantitative data. The variance between the qualitative and quantitative findings reveals that neither quantitative nor qualitative inquiries alone are sufficient for understanding the complexity of dis/abled apparentness.

As I noted in Chapters 1 and 2, a number of policies, processes, and prior research rely on visibility as a form of credential or inclusion criteria. Additionally, research on the role of Ableism in dis/abled students' lives has often relied on categorizing dis/ability as either visible or invisible. Understanding dis/ability apparentness as a spectrum is important not just in considering dis/abled communities but also in understanding the shifting nature of this

phenomenon within individual experiences. In the following two sections, I offer specific implications for practitioners and researchers.

Implications for Practitioners

Practitioners in collegiate settings should reevaluate their approach to supporting dis/abled students. Instead of primarily focusing on accommodations, institutions should prioritize creating an inclusive environment where dis/abled individuals feel valued and can thrive. All of the participants in both the qualitative and quantitative portions of this study reported at least one experience of ableism, and many experienced ableist microaggressions within educational settings. It is important for practitioners to recognize the current universal reality of ableism for dis/abled students regardless of the perceived visibility of their dis/ability. It is also important to recognize the role of compulsory able-bodiedness in erasing dis/abled students from consideration when creating new environments, policies, and processes.

For practitioners in dis/ability resource offices, it is crucial to prioritize the narratives and lived experiences of dis/abled individuals over medical documentation. Practitioners should engage with students to understand their unique challenges, experiences, and needs rather than relying solely on clinical assessments. Centering the narratives and expertise of dis/abled students fosters a more empathetic and person-centered support system, which helps to shift the imbalanced power dynamics in current accommodation practices.

Lastly, both the qualitative and quantitative data highlighted the intertwined impact of race and dis/ability. In particular, Black participant experts at predominantly white institutions (PWIs) noted experiences of hyper-apparentness and surveillance. The additive nature of surveillance was present in all of the individual narratives of Black participants. In the quantitative data, participants of Color had significantly different scores on many of the

individual domains of apparentness compared with their white peers. Practitioners at PWIs should address both the systemic racism and ableism experienced by dis/abled students of Color.

Implications for Researchers

Researchers should refrain from treating dis/ability as a binary experience of visible or invisible. Embracing a more nuanced and multifaceted approach is crucial for advancing the conceptualization of dis/ability. Recognize that dis/ability exists on a spectrum and encompasses a wide range of experiences. Failure to acknowledge dis/ability apparentness as a spectrum limits the depth and accuracy of research in this field. Further steps should be taken to investigate how dis/ability intersects with other aspects of identity, such as race, gender, sexuality, and socioeconomic status. Understanding these complexities is essential for developing more inclusive and effective interventions, policies, and support systems, as educational research related to dis/ability has often treated dis/abled students as a homogeneous group and focused on the narratives of white dis/abled students.

In particular, researchers should recognize the importance of disaggregating dis/ability in their analyses. In order to gain a deeper understanding of the experiences and perspectives of different subgroups within dis/abled communities, it is essential to analyze and report data separately in order to identify disparities, inequalities, or unique patterns that might otherwise remain hidden when examining aggregate data. Disaggregation also challenges the oversimplification of dis/abled experiences and highlights the heterogeneity encompassed under the umbrella of dis/ability.

Researchers should view dis/abled participants as experts in their own experiences and perspectives. When conducting research related to dis/ability, the expertise of dis/abled individuals should be foregrounded by involving dis/abled individuals as active collaborators to

enhance the validity and relevance of research outcomes. Researchers should prioritize participatory approaches and methodologies that empower dis/abled individuals to contribute their expertise and recognize the ways dis/abled bodyminds challenge able-normativity in the research process.

Limitations and Future Research

As I moved through this research project, I became increasingly familiar with the complexities of the data and identified the limitations of this current study. This familiarity with the data used in the development of the SDAES resulted in a long list of additional questions. These questions included both additional questions to examine in this existing data set (e.g., what differences in apparentness experiences are revealed when data within a particular category is disaggregated) and questions to guide future research studies (e.g., what role does socioeconomic status play in experiences of apparentness, how do queer dis/abled students experience ableism on campus).

As I noted in Chapter 5, two instances of faulty skip logic in the instrument I created and tested removed key questions from the analysis. Specifically, I was not able to analyze the role of multiple dis/abling conditions on disclosure or the role of assistive technology as a form of embodied dis/ability. Both oversights should be addressed in future research as initial analysis of data that was tangentially related to these questions (e.g., differential experiences for those who listed dis/abilities in more than one dis/ability category or adaptive devices impact as a dis/ability context variable on the scales) revealed significant differences.

Future iterations of distribution of the SDAES should look to achieve a larger sample size as this would allow for a greater analysis of the additive nature of demographic variables and dis/ability context variables for multiply marginalized students. The current study was able to show significant differences in scale scores between respondents of Color and white participants,

queer respondents and their heterosexual counterparts, and Trans* participants compared with respondents who are cisgender but does not reveal what differences may exist for sub-groups within each of these larger targeted umbrella categories. Additionally, the sample size did not allow for analysis of how the data differed for participants who were participants of Color and Trans* compared with those who were white and Trans*, participants of Color and cisgender, or other permutations of participants with varying intersections of identity.

Even though I looked at sub-groupings of dis/ability types (e.g., mental health, learning dis/abilities, physical dis/abilities, sensory dis/abilities), these sub-categories are still expansive and experiences of individuals within the same grouping are not homogenous. Future research on apparentness should further disaggregate the data to look at differences that emerge within a specific dis/ability category (e.g., physical dis/abilities and differences between those with impacts on mobility and those without).

As noted in Chapter 5, there were also a number of items that were not retained within the respective scale I had categorized them under that I still believe may be significant for the overarching latent variable of apparentness (e.g., e15, e16, a5, t2, t4, t5, t6). Additional analysis should be done to determine if these items are connected to one of the other identified domains or if there is a 6th domain that was not accounted for in the construction of the SDAES. Future research should look at the comprehensive list of items to see if different scales from those identified based on qualitative data emerge. Additionally, the five scales should be evaluated to see if they represent a significant multi-level model under the latent variable of apparentness. A multi-level model is possible, given that each domain has more than one latent variable. Analysis of a multi-level model should be done with a larger sample size to address sampling adequacy concerns with some of the scales (e.g., Taking Action).

This study revealed significant relationships between specific demographic categories and particular domains of the Apparentness Scale (e.g., queerness with Ableism) but did not explore the underlying circumstances that may contribute to this relationship (e.g., interaction of ableism and homophobia). Further qualitative research is warranted to explore these relationships. Additionally, this study did not account for other targeted identities in higher education that may have an influence on apparentness. A future study should specifically include socio-economic status and first-generation status.

Conclusion

Unlike visible and invisible, which linguistically convey a binary experience, *apparentness* offers an opportunity to better discuss dis/ability as an ever-unfolding process. The SDAES offers five key domains that contribute to experiences of apparentness for dis/abled students. Interaction with the physical, informational, and attitudinal environments serves to shape the degree of impact of specific impairments and the reactions of others within the environment reveal the perception and recognition of dis/ability. The systemic forces of ableism influence how others interact with and respond to dis/abled individuals and serve to reveal experiences of apparentness through communicated and enacted microaggressions as well as draw attention to the erasure of dis/abled existence (e.g., *dis*-attention; Kershbaum, 2022) through compulsory able-bodiedness. Individual actions on the part of dis/abled students can shift the impact of both the environment and experiences of ableism. The agential role of dis/abled decision-making to reveal or conceal dis/ability should not be overlooked in discussing experiences of apparentness. Similarly, the role of other social identities and the additive nature of systems of oppression must be included in examinations of apparentness in educational settings. All of these factors work in tandem with embodied experiences and manifestations of dis/ability.

Apparentness, as presented through the SDAES, does not limit the observance of dis/ability to something that others do to (or decide for) dis/abled people and their bodyminds, but rather it asks scholars and practitioners to consider the impact of the environment, systems of oppression, multiple identities, and dis/abled agency in conjunction with the embodiment of dis/ability within and surrounding an individual dis/abled bodymind. *Apparentness*, when understood in this way, becomes something that dis/abled individuals actively do alongside, in reaction to, and in spite of environmental and societal forces.

REFERENCES

Abes, E. S. & Wallace, M. M. (2020). Using crip theory to reimagine student development theory as disability justice. *Journal of College Student Development, 61*(5), 574-592. https://doi.org/10.1353/csd.2020.0056

Acock, A. C. (2022). *A gentle introduction to Stata* (6th ed.). Stata Press.

AHEAD. (2021). *Supporting accommodation requests: Guidance on documentation practices.* AHEAD. https://www.ahead.org/professional-resources/accommodations/documentation

Ahern, S. (2016). *The learning impact of smart pens on students with disabilities.* RESNA https://www.resna.org/sites/default/files/conference/2016/cac/ahern.html

Ahmed, S. (2004). Declarations of whiteness: The non-performativity of anti-racism. *Borderlands, 3*(2). https://research.gold.ac.uk/id/eprint/13911

Akhtar, S. (2016). Respecting embedded disability. *Journal of Applied Philosophy, 33*(4), 363 -378. https://doi.org/10.1111/japp.12121

Americans With Disabilities Act of 1990. Pub. L. No. 101-336. 108th Congress, 2nd Session (July 26th, 1990).

Americans With Disabilities Act Amendments Act of 2008, Pub. L. No. 101-336, 104 Stat. 328 (2008).

Annamma, S. A. (2017). *The pedagogy of pathologization: Dis/abled girls of color in the school-prison nexus.* Routledge. https://doi.org/10.4324/9781315523057

Annamma, S. A., Connor, D. & Ferri, B. (2013). Dis/ability critical race studies (DisCrit): Theorizing at the intersections of race and disability. *Race, Ethnicity, and Education, 16*(1), 1-31. https://doi.org/10.1080/13613324.2012.730511

Annamma, S. & Morrison, D. (2018). DisCrit classroom ecology: Using praxis to dismantle dysfunctional education ecologies. *Teaching and Teacher Education,* 73, 70-80. https://doi.org/10.1016/j.tate.2018.03.008

American Psychological Association. (2020). Publication manual of the American Psychological Association (7th ed.). American Psychological Association. https://doi.org/10.1037/0000165-000

Artiles, A. J. (2013). Untangling the racialization of disabilities: An intersectionality critique across disability models. *Dubois Review, 10*(2), 329-347. https://doi.org/10.1017/s1742058x13000271

Ashmore, J. L., Knettler-Smith, A. S., & Scott, S. S. (2018). Use of student learning outcomes in postsecondary disability offices. *Journal of Postsecondary Education and Disability, 31*(2), 109-119.

Baker, K. Q., Boland, K., & Nowik, C. M. (2012). A campus survey of faculty and student perceptions of persons with disabilities. *Journal of Postsecondary Education and Disability, 25*(4), 309-329.

Ball, S. J. (2008). *The education debate*. The Policy Press.

Bauman, D. & Murray, J. M. (2009). Reframing: From hearing loss to Deaf gain. *Deaf Studies Digital Journal, 1*(1).

Bauman, D. L & Murray, J. M. (Eds.). (2014). *Deaf gain: Raising the stakes for human diversity.* University of Minnesota Press.

Beauchamp, T. (2019). *Going stealth: Transgender politics and U.S. surveillance practices.* Duke University Press. https://doi.org/10.1215/9781478002659

Bell, C (2006). Introducing white disability studies: A modest proposal. In L. J. Davis (Ed.) *The disability studies reader*. Taylor & Francis.

Berne, P. (2015). Disability justice-A working draft. https://www.sinsinvalid.org/blog/disability-justice-a-working-draft-by-patty-berne

Bhattacharya, K. (2017). *Fundamentals of qualitative research: A practical guide.* Routledge/Taylor & Francis Group. https://doi.org/10.4324/9781315231747

Blanchett, W. J. (2010). Telling it like it is: The role of race, class, & culture in the perpetuation of learning disability as a privileged category for the white middle class. *Disability Studies Quarterly, 30*(2). https://doi.org/10.18061/dsq.v30i2.1233

Boda, P. A. (2019). The conceptual and disciplinary segregation of disability: A phenomenography of science education graduate student learning. *Research in Science Education, 51*(1), 1725-1758. https://doi.org/10.1007/s11165-019-9828-x

Braun, V. & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Bricher, G. (2010). Disabled people, health professionals and the social model of disability: Can there be a research relationship? *Disability & Society, 15(*5), 781-793. https://doi.org/10.1080/713662004

Brown, K. R., Wilke, Autumn, A. K., & Peña, M. (2020). Persuasive metrics: Caseload benchmarking and data-driven tools for budgetary advocacy. *Journal of Postsecondary Education and Disability, 33*(3), 291-300.

Bruder, M. B. & Mogro-Wilson, C. (2010). Student and faculty awareness and attitudes about students with disabilities. *Review of Disability Studies: An International Journal, 6*(2).

Bruner, J. (2004). The narrative creation of self. In L.E. Angus & J. McLeod (Eds.), *The handbook of narrative and psychotherapy: Practice, theory, and Research* (pp. 3-14). Sage Publishing. https://doi.org/10.4135/9781412973496.d3

Campbell, F. A (2008). Exploring internalized ableism using critical race theory. *Disability & Society, 2,* 151-162. https://doi.org/10.1080/09687590701841190

Carroll, T. K., Kramer, A., & Dringenberg, E. (2019). Intelligence and smartness in engineering: Gatekeepers to diversity and inclusion. CoNECD—The Collaborative Network for Engineering and Computing Diversity.

Cartwright, R. L. (2020). Out of sorts: A queer crip in the archive. *Feminist Review, 125*(1), 62 -69. https://doi.org/10.1177/0141778920911936

Central Michigan University. (2018). "The interactive process." https://www.cmich.edu/ess/studentaffairs/SDS/Pages/The-Interactive-Process.aspx

Cepeda, M. E. (2021). Thrice unseen, forever on borrowed time: Latina feminist reflections on mental disability and the neoliberal academy. *South Atlantic Quarterly, 120*(2), 301-320. https://doi.org/10.1215/00382876-8916046

Cole, E. V. & Cawthorn, S. W. (2015). Self-disclosure decisions of university students with learning disabilities. *Journal of Postsecondary Education and Disability, 28*(2), 163-179.

Colker, R. (2005). *The disability pendulum: The first decade of the Americans With Disabilities Act*. NYU Press.

Connor, D. J. & Ferri, B. A. (2005). Integration and inclusion—A troubling nexus: Race, disability, and special education. *Journal of African American History, 90*(1-2), 107-127. https://doi.org/10.1086/jaahv90n1-2p107

Connor, D. J. & Gabel, S. L. (2013). "Cripping" the curriculum through academic activism: Working toward increasing global exchanges to reframe (dis)ability and education. *Equity & Excellence in Education, 46*(1), 100-118. https://doi.org/10.1080/10665684.2013.750186

Corker, M. (1999). Differences, conflations, and foundations: The limits to 'accurate' theoretical representations of disabled people's experience? *Disability and Society, 14*(5), 627-642. https://doi.org/10.1080/09687599925984

Cory, R. C. (2011). Disability services offices for students with disabilities: A campus resource. New directions for higher education, 154(154), 27-36. https://doi.org/10.1002/he.431

Crawford, L. & Ketterlin-Geller, L. R. (2013). Middle school teachers' assignment of test accommodations. *Teacher Educator, 48*(1), 29-45. https://doi.org/10.1080/08878730.2012.740152

Creswell, J. W. & Clark, V. L. (2018). *Designing and conducting mixed methods research, 3rd edition.* Sage Publications.

Damiani, M. L. & Harbour, W. S. (2015). Being the wizard behind the curtain: Teaching experiences of graduate teaching assistants with disabilities at U.S. universities. *Innovative Higher Education, 40*(5), 399-413. https://doi.org/10.1007/s10755-015-9326-7

Darling, R. B. (2003). Toward a model of changing disability identities: A proposed typology and research agenda. *Disability & Society, 18*(7), 881-895. https://doi.org/10.1080/0968759032000127308

Davis, N. A. (2005). Invisible disability. *Ethics, 116*(1), 153-213. https://doi.org/10.1086/453151

Davis, L. J. (2006). Constructing normalcy: The bell curve, the novel, and the invention of the disabled body in the nineteenth century. In L. J. Davis (Ed.) *The disability studies reader* (pp. 3-16). Taylor & Francis.

Denzin, N. K. (2016). Critical qualitative inquiry. *Qualitative Inquiry, 23*(1), 8-16. https://doi.org/10.1177/1077800416681864

DeVellis, R. F. (2017). *Scale development: Theory and applications, 4th edition.* Sage Publications.

Dolmage, J. T. (2017). *Academic ableism: Disability and higher education (Corporealities: Discourse of disability.* University of Michigan Press. https://doi.org/10.3998/mpub.9708722

Dunn, M. W. (2006). It was written all over him: Classroom teacher's referral criteria for special education services. *International Journal of Special Education, 21*(2), 124-139.

Dyer, R. (1997). *White: Essays on race and culture.* Routledge.

Evans, N. E., Broido, E. M., Brown, K. R., & Wilke, A. K. (2017). *Disability in higher education: A social justice approach.* Jossey-Bass.

Faucett, H. A., Ringland, K. E., Cullen, A. L. L., & Hayes, G. R. (2017). (In)visibility in disability and assistive technology. *ACM Transactions on Accessible Computing, 10*(4), 1-17. https://doi.org/10.1145/3132040

Fitzgerald, M. & Paterson, K. (1995). The hidden disability dilemma for the preservation of self. *Journal of Occupational Science, 2*(1), 13-21. https://doi.org/10.1080/14427591.1995.9686392

Florian, L. & McLaughlin, M. J. (Eds.). (2008). *Disability classification in education: Issues and perspectives.* Corwin Press.

Forber-Pratt, A. J., Lyew, D. A., Mueller, C., & Samples, L. B. (2017). Disability identity development: A systematic review of the literature. *Rehabilitation Psychology, 62*(2), 198-207. https://doi.org/10.1037/rep0000134

Foucault, M. (1991). *Discipline and punish: The birth of the prison*. Penguin.

Friedman, C. & Owen, A. L. (2017). Defining disability: Understandings of and attitudes towards ableism and disability. *Disability Studies Quarterly, 31*(1). https://doi.org/10.18061/dsq.v37i1.5061

Gething, L. (1991). Generality vs. specificity of attitudes towards people with disabilities. *British Journal of Medical Psychology, 64*(1), 55-64. https://doi.org/10.1111/j.2044-8341.1991.tb01642.x

Gibson, A., Bowen, K., & Hanson, D. (2021). We need to talk about how we talk about disability: A critical quasi-systematic review. *In the Library with the Lead Pipe.* Retrieved from https://www.inthelibrarywiththeleadpipe.org/2021/disability/

Gie Yong, A. & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology, 9*(2), 79 -94. https://doi.org/10.20982/tqmp.09.2.p079

Gillborn, D. (2005). Education policy as an act of white supremacy: whiteness, critical race theory, and education reform. *Journal of Education Policy, 20*(4), 485-505. https://doi.org/10.1080/02680930500132346

Gillborn, D. (2015). Intersectionality, critical race theory, and the primacy of racism: Race, class, gender, and disability in education. *Qualitative Inquiry,21*(3), 277-287. https://doi.org/10.1177/1077800414557827

Gillborn, D. (2016). Softly, softly: Genetics, intelligence and the hidden racism of the new geneism. *Journal of Education Policy, 31*(4), 365-388. https://doi.org/10.1080/02680939.2016.1139189

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity.* Simon & Schuster.

Goffman, E. (1969). *The presentation of self in everyday life.* Allen Lane.

Grech, S. (2015). Decolonising Eurocentric disability studies: why colonialism matters in the disability and global south debate. *Journal for the Study of Race, Nation, and Culture, 21*(1), 6-21. https://doi.org/10.1080/13504630.2014.995347

Greene, J. C. (2007). *Mixed methods in social inquiry*. Jossey-Bass.

Griffin, P., Peters, M. L., & Smith, R. M. (2007). Ableism curricular design. In M. Adams, L. A. Bell, & P. Griffin (Eds.), *Teaching for diversity and social justices* (2nd ed., pp. 335-358). Routledge. https://doi.org/10.4324/9780203940822-26

Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2019). University student perspectives on institutional non-disclosure of disability and learning challenges: reasons for staying invisible. *International Journal of Inclusive Education, 23*(6), 639-655. https://doi.org/10.1080/13603116.2018.1442507

Guevara, A. (2021). The need to reimagine disability rights law because the medical model of disability fails us all. *Wisconsin Law Review, 21*(269), 269-292.

Hahn, H. D. & Belt, T. L. (2004). Disability identity and attitudes toward cure in a sample of disabled activists. *Journal of Health and Social Behavior, 45(*4), 453-464. doi.org/10.1177/002214650404500407

Hamraie, A. (2013). Designing collective access: A feminist disability theory of universal design. *Disability Studies Quarterly, 33*(4). https://doi.org/10.18061/dsq.v33i4.3871

Hamraie, A. (2017). *Building access: Universal design and the politics of disability.* University of Minnesota Press. https://doi.org/10.5749/minnesota/9781517901639.001.0001

Harder, L. M., Scott, J., Novak, D., Leeman, M., & Morris, J. (2006). Freedom through flight: Performing a counter-narrative of disability. *Journal of Applied Communication Research, 34*, 3-29. https://doi.org/10.1080/00909880500420192

Harris, C. I. (1993). Whiteness as property. *Harvard Law Review, 106*(8), 1707-1791.

Hatt, B. (2007). Street smarts vs. book smarts: The figured world of smartness in the lives of marginalized, urban youth. *The Urban Review, 39*(2), 145-166. https://doi.org/10.1007/s11256-007-0047-9

Hatt, B. & Urrieta, L. (2020). Contesting the Alamo and smartness: Theorizing student identities, agency, and learning within the contentious practices of US classrooms. *Theory Into Practice, 59*(2), 202-212. https://doi.org/10.1080/00405841.2019.1705108

Hayman, R. L. (1998). *The smart culture: Society, intelligence, and law*. New York University Press.

Heller, T., Harris, S. P., Gill, C. J. & Gould, R. (Eds.). (2018). *Disability in American life: An encyclopedia of concepts, policies, and controversies.* ABC-CLIO.

Hemmingsson, H. & Jonsson, H. (2005). An occupational perspective on the concept of participation in the International Classification of Functioning, Disability and Health —some critical remarks. *The American Journal of Occupational Theory, 59*(5), 569-576. https://doi.org/10.5014/ajot.59.5.569

Hernandez, M. (2011). *People with apparent and non-apparent physical disabilities: Well-being, acceptance, disclosure, and stigma.* Proquest Dissertations Publishing.

Hindes, Y. & Mather, J. (2007). Inclusive education at the post-secondary level: Attitudes of students and professors. *Exceptionality Education Canada, 17*(1-2), 107-128.

Hitselberger, K. (2013, June 26). How I learned to claim crip [Blog post]. http://www.claimingcrip.com/2013/06/how-i-learned-to-claim-my-crip.html

Hutcheon, E. J. & Wolbring, G. (2012). Voices of "disabled" post secondary students: Examining higher education "disability" policy using an ableism lens. *Journal of Diversity in Higher Education, 5*(1), 39-49. https://doi.org/10.1037/a0027002

Inahara, M. (2009). This body which is not one: The body, femininity and disability. *Body and Society, 15*(1), 47-62. https://doi.org/10.1177/1357034x08100146

Inckle, K. (2015). Debilitating times: Compulsory ablebodiedness and white privilege in theory and practice. *Feminist Review, 111*(1), 42-58. https://doi.org/10.1057/fr.2015.38

Johnson, L. & McRuer, R. (2014). Cripistemologies: Introduction. *Journal of Literary & Cultural Disability Studies, 8*(2), 127-147. https://doi.org/10.3828/jlcds.2014.21

Kafer, A. (2013). *Feminist, queer, crip*. Indiana University Press.

Kamberelis, G. & Dimitriadis, G. (2014). Focus group research: Retrospect and prospect. In P. Leavy (Ed.), *The Oxford handbook of qualitative research* (pp. 315-340). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190847388.013.24

Kanter. A. (2011). The law: What's disability studies go to do with it or an introduction to disability legal studies. *Columbia Human Rights Law Review, 42*(2), 403-480.

Kanter, A. & Ferri, B. A. (Eds.). (2013). *Righting educational wrongs: Disability studies in law and education.* Syracuse University Press.

Kattari, S. K. (2015). Examining ableism in higher education through social dominance theory and social learning theory. *Innovative Higher Education, 40*(5), 375-386.

Keller, R. M. & Galgay, C. E. (2010). Microaggressive experiences of people with disabilities. In D. W. Sue (Ed.), *Microaggressions and marginality: Manifestation, dynamics, and impact* (pp. 241-267). John Wiley & Sons, Inc.

Kershbaum, S. L. (2022). *Signs of disability.* New York University Press. https://doi.org/10.18574/nyu/9781479811175.001.0001

Ketterlin-Geller, L. R., Alonzo, J., Braun-Monegan, J., & Tindall, G. (2007). Recommendations for accommodation: Implications of (in)consistency. *Remedial and Special Education, 28*(4), 194-206.

Kranich, N. (2005). Equality and equity of access: What's the difference. https://www.ala.org/advocacy/intfreedom/equalityequity

Kumbier, A & Starkey, J. (2016). Access is not problem solving: Disability justice and libraries. *Library Trends, 64*(3), 468-491. https://doi.org/10.1353/lib.2016.0004

Leonardo, Z. & Broderick, A. A. (2011). Smartness as property: A critical exploration of intersections between whiteness and disability studies. *Teachers College Record, 113*(10), 2206-2232. https://doi.org/10.1177/016146811111301008

Leonardo, Z. & Zembylas, M. (2013). Whiteness as technology of affect: Implications for educational praxis. *Equity & Excellence in Education, 46*(1), 150-165. DOI:10.1080/10665684.2013.750539

Lett, K., Tamaian, A., & Klest, B. (2020). Impact of ableist microaggression on university students with self-identified disabilities. *Disability & Society*, *35*(9), 1441-1456. https://doi.org/10.1080/09687599.2019.1680344

Lightner, K. L., Kipps-Vaughn, D., Schulte, T. & Trice, A. D. (2012). Reasons university students with a learning disability wait to seek disability services. *Journal of Postsecondary Education and Disability, 25*(2), 145-159.

Lister, K., Coughlan, T., & Owen, N. (2020). Learning needs, barriers, differences and study requirements: How students identify as 'disabled' in higher education. *Widening Participation and Lifelong Learning, 22*(1), 95-111. https://doi.org/10.5456/wpll.22.1.95

Livneh, H. (2012). On the origins of negative attitudes toward people with disabilities. In I. Marini & M. A. Stebnicki (Eds.), *The psychological and social impact of illness and disability* (pp. 13-25). Springer Publishing Company. https://doi.org/10.1891/9780826161628.0002

Lombardi, A. R. & Murray, C. (2011). Measuring university faculty attitudes toward disability: Willingness to accommodate and adopt universal design principles. *Journal of Vocational Rehabilitation, 34*(1), 43-56. https://doi.org/10.3233/jvr-2010-0533

Lombardi, A. R., Murray, C., & Dallas, B. K. (2013). University faculty attitudes toward disability and inclusive instruction: Comparing two institutions. *Journal of Postsecondary Education and Disability, 26*(3), 221-232.

Los Santos, S. B., Kupczynski, L. & Mundy, M. (2019). Determining academic success in students with disabilities in higher education. *International Journal of Higher Education, 8*(2), 16-38. https://doi.org/10.5430/ijhe.v8n2p16

Malecki, C. K., Demary, M. K., Smith, T. J., & Emmons, J. (2020). Disability, poverty, and other risk factors associated with involvement in bullying behaviors. *Journal of School Psychology, 78*, 115-132. https://doi.org/10.1016/j.jsp.2020.01.002

Mauldin, L. & Brown, R. L. (2018). Missing pieces: Engaging sociology of disability in medical sociology. *Journal of Health and Social Behavior, 62*(4), 477-492. https://doi.org/10.31235/osf.io/4bu5f

McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology, 5*(2), 100-122. https://doi.org/10.1037/1089-2680.5.2.100

McRuer, R. (2002). "Compulsory able-bodiedness and queer/disabled existence." In S. L. Snyder, B. J. Brueggemann, & R. Garland-Thomson (Eds.), *Disability studies: Enabling the humanities* (pp. 88-99). Modern Language Association.

McRuer, R. (2006). *Crip theory: Cultural signs of queerness and disability.* New York University Press.

McRuer, R. (2010). Compulsory able-bodiedness and queer/disabled existence. In L. J. Davis (Ed.) *The disability studies reader* (pp. 369-378). Routledge.

Meekosha, H. & Shuttleworth, R. (2009). "What's so 'critical' about critical disability studies?" *Australian Journal of Human Rights, 15*(1), 47-75. https://doi.org/10.1080/1323238x.2009.11910861

Mellard, D. F., Deshler, D. D., & Barth, A. (2004). LD identification: It's not simply a matter of building a better mousetrap. *Learning Disability Quarterly, 27*(4), 229-242. https://doi.org/10.2307/1593675

Merriam, S. B. & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.

Milbrodt, T. (2018). "Today I had an eye appointment, and I'm still blind": Crip humor, storytelling, and narrative positioning of the disabled self. *Disability Studies Quarterly, 38*(2). https://doi.org/10.18061/dsq.v38i2.6163

Miles, A. L., Nishida, A., & Forber-Pratt, A. J. (2017). An open letter to White disability studies and ableist institutions of higher education. *Disability Studies Quarterly, 37*(3). https://doi.org/10.18061/dsq.v37i3.5997

Miller, R. A. (2015). "Sometimes you feel invisible": Performing queer/disabled in the classroom. *The Educational Forum, 79*(4), 377-393. https://doi.org/10.1080/00131725.2015.1068417

Miller, R. A. (2018). Toward intersectional identity perspectives on disability and LGBTQ identities in higher education. *Journal of College Student Development*, *59*(3), 327-346. https://doi.org/10.1353/csd.2018.0030

Miller, R. A., Wynn, R. D., & Webb, K. W. (2019). "This really interesting juggling act": How university students manage disability/queer identity, disclosure, and visibility. *Journal of Diversity in Higher Education, 12*(4), 307-318. https://doi.org/10.1037/dhe0000083

Mingus, M. (2011). Changing the framework: Disability justice. https://leavingevidence.wordpress.com/2011/02/12/changing-the-framework-disability-justice/

Moeller, C. M. (2019). Disability, identity, and professionalism: Precarity in librarianship. *Library Trends, 67*(3), 455-470. DOI: https://doi.org/10.1353/lib.2019.0006

Murray, C., Lombardi, A., Wren, C. T., & Keys, C. (2009). Associations between prior disability-focused training and disability-related attitudes and perceptions among university faculty. *Learning Disability Quarterly, 32*(2), 87-100. https://doi.org/10.2307/27740359

Nachman, B. & Brown, K. R. (2022). Crip places: dismantling disability discourse in the 2-year college literature. *Journal of Diversity in Higher Education.* Advance online publication. https://doi.org/10.1037/dhe0000443

National Joint Committee on Learning Disabilities (2007). The documentation disconnect for students with learning disabilities: Improving access to postsecondary disability services: A report from the national joint committee on learning disabilities. *Learning Disability Quarterly, 30*(4), 265-274. https://doi.org/10.1044/policy.tr2007-00305

NCES. U.S. Department of Education. (2009). National Center for Education Statistics. Digest of Education Statistics.

NCES. U.S. Department of Education. (2021). National Center for Education Statistics. Digest of Education Statistics.

Nearchou, F., Davies, A. & Hennessy, E. (2022). Psychometric evaluation of the multi-dimensional scale of perceived social support in young adults with chronic health conditions. *Irish Journal of Psychological Medicine, 39*, 386-390. https://doi.org/10.1017/ipm.2019.54

Newman, L., Wagner, M., Knokey, A., Marder, C., Nagle, K., Shaver, D., & Wei, X. (2011). The post-high school outcomes of young adults with disabilities up to 8 years after high school: A report from the national longitudinal transition study-2. National Center for Special Education Research.

Newman, L. A., Madaus, J. W., Lalor, A. R. & Javitz, H. S. (2020) Effect of accessing supports on higher education persistence of students with disabilities. *Journal of Diversity in Higher Education, 14*(3), 353-363. https://doi.org/10.1037/dhe0000170

Nielsen, K. E. (2012). *A disability history of the United States.* Beacon Press.

Olkin, R., Hayward, H., Abbene, M. S., & VanHeel, G. (2019). The experiences of microaggressions against women with visible and invisible disabilities. *Journal of Social Issues, 75*(3), 757-785.

Orne, J. (2011). 'You will always have to "out" yourself': Reconsidering coming out through strategic outness. *Sexualities, 14*(6), 681-703. https://doi.org/10.1177/1363460711420462

Osborne, T. (2019). Not lazy, not faking: Teaching and learning experiences of university students with disabilities. *Disability & Society, 34*(2), 228-252. https://doi.org/10.1080/09687599.2018.1515724

Ostiguy, B. J., Peters, M. L., & Shlasko, D. (2016). Ableism. In M. Adams & L. A. Bell (Eds.) *Teaching for diversity and social justice (*pp. 299-337). Routledge. https://doi.org/10.4324/9781315775852-17

Parette, P. & Scherer, M. (2004). Assistive technology use and stigma. *Education and Training in Developmental Disabilities, 39*(3), 217-226.

Patsavas, A. & Danylevich, T. (Eds.) (2022). Crip pandemic life: A tapestry. *Lateral: Journal of Cultural Studies Association.*

Peel, K. L. (2020). A beginner's guide to applied educational research using thematic analysis. *Practical Assessment, Research, and Evaluation, 25*(1).

Peña, E. V., Stapleton, L. D., & Schaffer, L. (2016). Critical perspectives on disability identity. *New Directions for Student Services, 2016*(154), 85-96. https://doi.org/10.1002/ss.20177

Pierce, C. (1974). Psychiatric problems of the Black minority. *American Handbook of Psychiatry*, 2, 512-523.

Pitman, T., Brett, M., & Ellis, K. (2023). Three decades of misrecognition: defining people with disability in Australian higher education policy. *Disability & Society, 38*(2), 323-341. https://doi.org/10.1080/09687599.2021.1937061

Price, M. (2015). The bodymind problem and the possibilities of pain. *Hypatia, 30*(1), 268-284. https://doi.org/10.1111/hypa.12127

Price, M. & Kershbaum, S. L. (2016). Stories of methodology: Interviewing sideways, crooked and crip. *Canadian Journal of Disability Studies, 5*(3), 18-56. https://doi.org/10.15353/cjds.v5i3.295

Price, M., Salzer, M. S., O'Shea, A. & Kerschbaum, S. L. (2017). Disclosure of mental disability by college and university faculty: The negotiation of accommodations, supports, and barriers. *Disability Studies Quarterly, 37*(2). https://doi.org/10.18061/dsq.v37i2.5487

Project Shift Refocus. (2022). Documentation. https://exploreaccess.org/projectshift-refocus/documentation.htm

Puar, J. K. (2017). *The right to maim: Debility, capacity, disability.* Duke University Press. https://doi.org/10.1215/9780822372530

Raterman, K. (2017). *The rhetoric of disability: An analysis of the language of university disability service centers [MA Thesis*, Chapman University]. Digital Commons, https://doi.org/10.36837/chapman.000025

Rauscher, L. & McClintock, M. (1996). Ableism curriculum design. In M. Adams, L. A. Bell, & P. Griffen (Eds), *Teaching for diversity and social justice* (pp. 198-231). Routledge.

Rice, M. F. & Carter, R. A. (2015). "When we talk about compliance, it's because we lived it": Online educators' roles in supporting students with disabilities. *Online Learning, 19*(5), 18-36. https://doi.org/10.24059/olj.v19i5.581

Rice, C., Chandler, E., Harrison, E., Liddiard, K., & Ferrari, M. (2015). Project revision: Disability at the edges of representation. *Disability & Society, 4*, 513-527. https://doi.org/10.1080/09687599.2015.1037950

Rothstein, L. (2018). A primer on disability discrimination in higher education. *Laws, 7*(3), 25. https://doi.org/10.3390/laws7030025

Samuels, E. (2017). Six ways of looking at crip time. *Disability Studies Quarterly, 37*(3). https://doi.org/10.18061/dsq.v37i3.5824

Scambler, G. & Scambler, S. (2010). *New directions in the sociology of chronic and disabling conditions: Assaults on the lifeworld.* Palgrave Macmillan. https://doi.org/10.1057/9780230297432

Schalk, S. (2017). Critical disability studies as methodology. *Lateral: Journal of the Cultural Studies Association, 6*(1). https://doi.org/10.25158/l6.1.13

Schalk, S. (2018). *Bodyminds reimagined: (Dis)ability, race, and gender in Black women's speculative fiction.* Duke University Press. https://doi.org/10.1215/9780822371830

Schneps, M. H., Rose, L. T., & Fischer, K. W. (2007). Visual learning and the brain: Implications for dyslexia. *Mind, Brain, and Education, 1*(3), 128-139. https://doi.org/10.1111/j.1751-228x.2007.00013.x

Scott, S. (2019). The AHEAD biennial survey of disability resource office structures and programs. The Association on Higher Education and Disability.

Section 504 of the Vocational Rehabilitation Act (1973).

Shakespeare, T. (1999). 'Losing the plot'? Medical and activist discourses of contemporary genetics and disability. *Sociology of Health & Illness, 21*(5), 669-688. https://doi.org/10.1111/1467-9566.00178

Shakespeare, T. (2006). *Disability rights and wrongs.* Routledge. https://doi.org/10.4324/9780203640098

Sherry, M. (2007). (Post)colonizing disability. In Intersecting Gender and Disability Perspectives in Rethinking Postcolonial Identities, special issue of *Wagadu: A Journal of Transnational Women's and Gender Studies,* 4.

Siebers, T. (2008). *Disability theory.* University of Michigan Press. https://doi.org/10.3998/mpub.309723

Sins Invalid (2021). Our mission. https://www.sinsinvalid.org/mission

Sins Invalid (2022). 10 principles of disability justice. https://www.sinsinvalid.org/blog/10-principles-of-disability-justice

Sleeter (1987/2010). Why is there learning disabilities? A critical analysis of the birth of the field in its social context. *Disability Studies Quarterly, 30*(2). https://doi.org/10.18061/dsq.v30i2.1261

Smilges , J. (July 6th, 2021). Pride Feelings [Blog post]. https://disabilityvisibilityproject.com/2021/07/06/pride-feelings/

Spade, D. (2011). *Normal life: Administrative violence, critical trans politics, & the limits of law.* Duke University Press. https://doi.org/10.1515/9780822374794

Springfield College. (2018). "Disability accommodations." https://springfield.edu/academic-success-center/disability-accommodation-process

Stapleton, L. (2016). Audism and racism: The hidden curriculum impacting Black d/Deaf college students in the classroom. *The Negro Educational Review, 67*(1-4), 149-168.

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L. & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical

practice. *American Psychologist, 62*(4), 271-286. https://doi.org/10.1037/0003-066x.62.4.271

Tal-Alon, N. & Shapira-Lishchinsky, O. (2019). Ethical dilemmas among teachers with disabilities: A multifaceted approach. *Teaching and Teacher Education, 86*(1), 1-11. https://doi.org/10.1016/j.tate.2019.102881

Taylor, A. (2018). Knowledge citizens? Intellectual disability and the production of social meanings within educational research. *Harvard Educational Review, 88*(1), 1-25. https://doi.org/10.17763/1943-5045-88.1.1

Titchkosky, T. (2011). *The question of access: Disability, space and meaning.* University of Toronto Press.

Vehmas, S. & Watson, N. (2014). "Moral wrongs, disadvantages and disability: A critique of critical disability studies." *Disability & Society, 29*(4), 638-650. https://doi.org/10.1080/09687599.2013.831751

Waterfield, B., Beagan, B. B., & Weinberg, M. (2018). Disabled academics: a case study in Canadian universities. *Disability & Society, 33*(3), 327-348. https://doi.org/10.1080/09687599.2017.1411251

Watkins, M. W. (2022). *A step-by-step guide to exploratory factor analysis with Stata.* Routledge. https://doi.org/10.4324/9781003149286

White, G. W., Simpson, J. L., Gonda, C., Ravesloot, C., & Coble, Z. (2010). Moving from independence to interdependence: A conceptual model for better understanding community participation of centers for independent living consumers. *Journal of Disability Policy Studies, 20*(4), 233-240. https://doi.org/10.1177/1044207309350561

Wilke, A. K. (2023). Constructing smartness and intelligence: A content analysis of postsecondary disability literature. *The Educational Forum*, 1-17. https://doi.org/10.1080/00131725.2023.2228354

Wilke, A. K., Brown, K. R., Evans, N. J., & Broido, E. B. (2023a). Doing my best, being healthy, and creating connections: Disabled students' narratives of collegiate success. *Journal of Diversity in Higher Education.* Advance online publication. https://doi.org/10.1037/dhe0000479

Wilke, A. K., Brown, K. R., Crosby, D., Song-Engler, J. (2023b). Cripping grounded theory: Disabled disability resource providers and disability disclosure in postsecondary education. *International Journal of Qualitative Studies in Education.* Advance online publication. https://doi.org/10.1080/09518398.2023.2258105

Williams, G. (2001). Theorizing disability. In G. L. Albrecht, K. D. Seelman, & M. Bury (Eds.), *Handbook of disability studies* (pp. 123-144). Sage. https://doi.org/10.4135/9781412976251.n5

Williams, J. (2018). Crip theory. https://www.wright.edu/event/sex-disability-conference/crip-theory

World Health Organization. (2019). Disabilities. https://www.afro.who.int/health-topics/disabilities#:~:text=In%20other%20words%2C%20disability%20is,and%20adults%20who%20are%20poor.

APPENDIX A- LIST OF CONDITIONS

Which, if any, of the conditions listed below impact your learning, working or living activities? (Select all that apply.)

- I do not have a disability
- Acquired/traumatic brain injury
- Anxiety
- Depression
- Another mental health/psychological condition
- Attention deficit/hyperactivity disorder (ADD/ADHD)
- Autism spectrum
- Blind/low vision
- Chronic medical condition/health impairment
- Deaf/hard of hearing
- Learning disability
- Physical/mobility condition that affects walking
- Physical/mobility condition that does *not* affect walking
- Speech/communication condition
- Disability not listed above, please specify: [ ]

APPENDIX B – SCREENING SURVEY

Contact Information

What is your name?

What are your pronouns?

What is the best e-mail address at which to contact you?

What institution(s) do you currently attend?

Have you attended any other institutions for postsecondary education? If yes, please list.

Demographics

What is your current age?

What is your gender identity?

What is your sexual orientation?

What is your race and/or ethnicity?

Disability Information

Which, if any, of the conditions listed below impact your learning, working or living activities? (Select all that apply.)

- I do not have a disability
- Acquired/traumatic brain injury
- Anxiety
- Depression
- Another mental health/psychological condition
- Attention deficit/hyperactivity disorder (ADD/ADHD)
- Autism spectrum
- Blind/low vision
- Chronic medical condition/health impairment

- Deaf/hard of hearing
- Learning disability
- Physical/mobility condition that affects walking
- Physical/mobility condition that does *not* affect walking
- Speech/communication condition
- Disability not listed above, please specify: [ ]

Do you identify as a person with a disability?

If yes, what does that mean to you?

If no, why not?

Do you currently use accommodations at a college or university?

If yes, please describe.

If no, please add any additional information you feel is relevant

Do you consider your disabilit(ies) to be apparent in the classroom? Please elaborate on why or why not.

Closing

Do you wish to be entered into a drawing for a $25 amazon gift card?

If you are the winner of the gift card, what e-mail address would you like it to be sent to?

APPENDIX C – INTERVIEW PROTOCOL

Hello, my name is Autumn Wilke and I am a doctoral candidate at Colorado State University in the School of Education focusing on Higher Educational Leadership. I am conducting a research study on influences on and experiences of apparentness of disability in the classroom. The title of my project is [insert title] and I am the co-Principal Investigator.

I would like you to answer several questions regarding your own experiences of disability in the classroom. Participation in this interview will take approximately 45-60 minutes. You will also be invited to participate in a follow-up focus group once all individual interviews have been completed and analyzed (in approximately 3 months) which will take an additional 60-75 minutes of your time. Your participation in this research is voluntary and if you decide to participate, you may withdraw your consent and stop participation at any time without penalty.

You will be asked to choose a name by which you will be identified in the research project. There are no known risks or direct benefits to you, but I hope that your participation will improve the learning environment on college campuses and enhance understandings of the experiences of students with disabilities. As a thank you for your time, you will receive a $25 gift card for participating in this interview. If you choose to participate in the focus group you will receive an additional $25 gift card for your participation.

Would you like to participate in the interview portion of this study?

If yes, proceed to questions.

If no, *Thank you very much for your time.*

1. Tell me about yourself.
2. Could you tell me a little about your disability? (e.g., when were you diagnosed, how does it impact you, etc.)
3. Do you see yourself as a person with a disability? What does this mean to you?
4. What does apparentness (or visibility) of disability mean to you?
5. How would you describe how you experience apparentness of your own disability?
6. What do you believe influences how apparent your disability is to others?
7. How do these influencing factors change based on context (e.g., with family vs. peers in the classroom)?

8. Do other aspects of your identity impact the apparentness of your disability? If yes, please describe.
9. How has the apparentness (or not) of your disability impacted your educational experiences?

APPENDIX D – PPT FOR FOCUS GROUP

Questions for Reflection

- Does this theme resonate with you?
  - For those of you whose experiences I have added under this theme does the way I have categorized fit with how you meant the example?
  - For those of you not represented can you think of experiences you have had that fall under this category?
- What examples would you add?


Ableism

Assumptions/Misattribution (3)

I have wondered if people just think I am trying to get attention because I talk about disability or my disability and queerness. I'm not trying to get attention...I just like talking about these things. --Daniel

It's not for lack of trying and I think that's like, something that gets assumed of me like that. Somehow. I'm not trying and in a lot of ways when I hear what other people are doing, it's like I'm trying like, 8 billion times more than what they're doing. But like the product is seen as a lack of trying. --Bernadette

And so like there was these like assumptions that I was lazy, or that like I was doing this on purpose. I get that quite a bit like there's like, oh, there's spelling mistakes in your stuff. Like you didn't look this over. Well, actually, I had two people look this over like these are the mistakes after someone's looked it over. So I think like there's those kinds of issues of the laziness or the that this is a sign of not doneness. --Bernadette

If I go to the grocery store and I am wearing three masks people are super rude because I think they think I am overreacting. --Amelia

Behavior Towards (10)

I often think of it as being caught, like someone notices something, and then that prompts a question. -- Bernadette

It's something I could experience from other students. I will say the other students really claim that they're trying to make some jokes, but it's something which your intuition or to joke about because it kinda in a way really adds and hurts. -- David

It is apparent because sometimes I get swollen eyes sometimes. What's wrong with you? Why are your eyes swollen? I do want to just try to explain "Oh, it's nothing. It's one of the side effects. It is one of these things..." --Suzanne

At times, it can like feel overwhelming, especially if people are like, who don't know, like new people. They don't know how to act around you. They don't know what you need, and that just sort of all over your face about everything. They're just trying to help but it kind of feels like I don't know, it's too much. -- Avatar

There was an instructor at the front of the class and of course, I had made a request through the disability services office for a note taker. He announced in fact, the class that we needed a note taker, which is fine, but then he chose to give my name and said it was for me, and then asked that I stand up and share with the class about my disability and why I needed a note taker and felt like I have the right to cheat. -- Quinn

Disbelief (3)

I told somebody at work because I was working in a bookstore at the time and they said, Oh, I thought only old men, or I saw on wikipedia only old men get that and so just like comments like that makes you feel. Number one it is rude. It makes you feel weird. But number two, it also makes you feel like people don't believe you as much because if they go on Wikipedia, and it's like, oh 18 year old women don't get this then there's like something weird about it. --Amelia

Other days if I happen to be using my disabled parking permit, I've been stopped and yelled at by people for faking a disability or for illegally using someone else's parking permit. No not the case. I just happen to be having a day where I don't need to use the mobility aid.--Quinn

The biggest thing is getting people to believe you. But like, you know, I feel like I always have to do a lot of like training or getting them to realize no, this is real. --Bernadette

“Legitimacy”/Awareness (6)

it's very interesting how I'm treated out in out in the wild. If I'm using a cane one day, people are much more aware and opening doors and things for me. --Quinn

Yeah, I think, yeah, there's just really a low understanding of chronic illness. --Amelia

When it's peers in the classroom, and I share about my different disabilities, I definitely think they have maybe a more generic view of the disabilities for me like ADHD like oh, just struggles with attention probably. Whereas like, ADHD is so much more than that. Like it's it is as... it's such a spectrum. --Daniel

I think it's because everyone has this one friend who's dyslexic that doesn't seem to affect them much and I don't know who these friends are. --Bernadette

I think I'm starting with ADD because it's also more relatable I think in the sense of you know it relatable I think there's more I don't know, just like an educational sense, like how it can impact you. Maybe I don't want to say that people have more awareness about it, because maybe that's not fair to say but I just think probably for me it's just more the acceptance piece and just easier to talk about. --Irene

I think whenever I'm using a white cane, they just sort of know that I have a disability. --Avatar


Actions (by
disabled person)

Disclosing (5)

I always do an intro meeting. It usually helps them like, you know, I get to frame my disability. I get to frame how this looks like. I really like having a sit down meeting with them and say, Okay, here's the thing, this is what it looks like. This is what I'm going to need. --Bernadette

But it's yeah, people who know me quite well, but it's mostly because I took the initiative to let them know it's most of these people don't know, issues with how people living with disability deal with issues. They're not quite familiar with it. And so it's upon you to to make them aware of such. --Halk

I'll get to lobby and then talk to the teacher. This is what I'm experiencing. Please. Can you move me forward? Please? Can you do this? Can you do that? --Suzanne

I should also say I at the doctoral level I disclosed to my professor that's the first time I really had a positive experience. --Irene

Masking (7)

I genuinely think that most people would have no idea. Most people would have absolutely no idea that I am the way that I am and I struggle with the things that I struggle with because I'm really good at masking, pretending, playing along. You know acting normal. --Daniel

Because I'm an introvert and I think I've had years of experience of covering up, masking, hiding. --Irene

Okay, I would say mostly the setting of the classroom you'll find that most of the time I have to be in front of the classroom, and I try my best to be maybe in class the earliest time possible. So I would say I've tried to create like, I wouldn't like to maybe arrive late so that I could like really get some attention from the class. So it is upon me to really time myself and also schedule myself really well. --David

It's very like I look at the syllabus, okay. There is no in class assignments. I am... there's nothing graded in class. There's no reason to disclose. --Bernadette

In a way you are trying to, like, cut the attention of other people. --David

Revealing (3)

It's so much harder to make it apparent, I think unless you're wearing like a sticker or a button or a shirt or IDing yourself in that way. --Daniel

I would sometimes purposely write about disability. So that I was teaching them because if you... if you're writing about your disability, they have to read it, so they have to learn and so like there's this kind of training process of your professors that usually they are better by the time you leave. --Bernadette

I would sit in the front row and I am not the kind of person who likes to draw attention to myself, but I knew that I had to step outside that box that comfort and be very apparent even at that young age. --Quinn


Adaptive
Tech/Aides

Aides, Adaptive Tech, Medication (3)

I think it's mostly because a wheelchair other times you could be with someone who's trying to push you it's kind of in a way just really draw, draw some attention. It's going I know this is something that you're really moving but there is someone on it. -- David

I've been on prednisone for 12 years. And that causes like, appearance changes and like can cause huge weight changes, which I've experienced. -- Amelia

"oh my gosh, I can't believe people are taking meds it's you know, that's such a crutch". Or, you know, even in college or I've heard a few like even when I taught special ed talking with teachers I never disclosed I think except for one teacher. And again, it was the same stigma "why do students have to take meds?" --Irene

Assistive Technology (8)

I'll say that the wheelchair is weird in a way because most of the time, we'll find that most of the time people try to observe the person with a wheelchair. Unless people be observing and mostly when you're using crutches probably I think because in a wheel chair you are moving while sitting and people try to get your attention. Okay, what's happening here? What going on here? But when you are using crutches I think it's only people who are keen observers. --David

I think using the cane, especially around people, it sort of amplifies the magnitude to which they tend to notice you. Because if you're using a cane, then everyone can see that you, you are blind.. --Avatar

it's not something I like telling people. But once you see me on my glasses, fine. --Suzanne


Other identity or characteristics

Notable Bodies (4)
(e.g., only, stand-out, etc.)

Yeah it is very noticeable because I'm the only one I deal with such kind of disability in school. --Sunny

Also I am quite tall. --Halk

Just being black itself makes you stand out so being black and having a disability, just like makes you stand out even more. And then I feel like you're noticing just because I'm different. I feel like I'm more popular, not like popular in the sense of known to people but just that they know I go to you know, that college. So I become familiar. --Avatar

A black physically disabled person. So I think it's shouts a lot. That but really shouts a lot because apparently in my campus, we only have one more black student who is disabled and for them it's their eyes. --Halk

I am taller than normal people. So I stand out. --Avatar

But during my illness and doctors I think will ignore symptoms attributing something to weight and then if you or ignore because you appear very athletic and I experienced both of these from doctors, and so there's just it seems like there's never a happy medium with that. And so I guess just physical appearance really affects the way in my experience has affected the way doctors have believed if I've been ill or not. --Amelia

Race (5)

I think that people probably saw me as a young cis straight white kid, boy, man, whatever. I don't know I wasn't out of the closet then. I was not aware of anything about myself at that point in time. And I think if people noticed anything, they probably just thought I was being immature slacking off. Not really understanding that I was struggling not really knowing how to help mainly because I couldn't verbalize or vocalize what it is that I needed help with or what was going on. Daniel

I'm also black. And I think that also plays a major role on how noticeable I am because I do like to walk. My friends are most of them are black. So noticing us it's very much easy. Many people will try to look at us and once you look at maybe the crew that I'm walking with, you will definitely notice that there is only a guy walking with a weird kind of gait and that maybe he has a weird kind of big shoe. --Sunny

I think some of the good student kind of stuff I'm sure is affected by like how people are seeing me based on gender and race and those kinds of things. -- Bernadette

Yes, I'd say when I'm with black people Yes, I do stand out with a disability but I feel like it's to a lesser extent. It's not like when I mean, white people place like where most people are white, because, at least with black people, it's like I'm just like them. It's just that I have a disability on top of that. --Avatar

But the race box is a very big aspect of, of why my disability becomes apparent. --Halk

Other identity (5)

So even the fatigue, I so that was post teaching and course work that this really started but every time I went to the doctor, I complained about it, because I see my rheumatologist every six months. She said it was normal for women, and so that just never got addressed. --Amelia

And so I think sometimes like, what someone's stereotypes of that. Then they're like, that's off. And I think there's also like, sometimes I think queerness plays into that, like, they're like, is she queer, or is she disabled? --Bernadette

my identity of queerness and my disability are becoming more prominent together. --Daniel

So yes, socioeconomic status, like really does influence because people judge immediately. We check the quality of what you wear. The quality of the aids you access. --Halk

I think people definitely are less aware and willing to recognize illness in younger people. --Amelia


Embodied
Disability

Absence (6)

I had to miss a lot of classes for treatments because I did infusion therapies. --Amelia

There were a couple times where I wasn't able to go to school because of these issues like I mentioned going back to being put in being put into a psychiatric ward for a couple of weeks. --Daniel

It may not be as apparent, you know, in that just that involuntary sort of disclosure that absences are. --Daniel

Probably you may lack someone to like, move you so it could in a way, take some time. And you will be late for class. --David

There is a lot of stigma from the student perspective, especially if you take a test outside the classroom. I think it's natural, and I remember this from my undergrad. What's everybody else gonna think when I don't show up to class? Are they gonna ask me questions about this? Do I have to explain myself, and that that feels really awkward. --Quinn

My guess is if I can't go watch or shout for my friend, they assume probably it's because of disability. --Halk

I don't think like in high school people necessarily knew. Other than I missed a lot of school, because I chose to put myself in the hospital. --Irene

Movement (3)

Moving. When I'm moving. When I'm sitting it's very hard for you to notice, maybe when you're a new student, but when I'm walking, it's very noticeable. --Sunny

Yeah, so for me is very noticeable because I told you I do have this kind of weird gait because of the huge shoe that I do have. --Sunny

I lost my leg and it is something which really affects my movement and is obvious. --David

When there are days at school, when we have events, we have clubs and societies where we have to be moving around that day, those days, it becomes so apparent that my disability becomes so apparent. The days where I have to stand to give a speech or presentation. It becomes so apparent. --Halk

Fatigue/Pain/Crip Time (5)

I feel like I'm working like 100 times as hard and producing, like, a 10th of what I would normally be able to do. -Amelia

Probably you may lack someone to like, move you so it could in a way, take some time. And you will be late for class. --David

And like even in class, like I'll just record and then listen later and all that so I feel like for me, I have to go an extra mile just to like get what everyone else is getting easily. -Avatar

I was in the lab. In the lab was I was kind of very, very tired after the session. So I told the professors that I was having a bad day there because of my situation. And I needed some, some certain type of accommodation in order for me to be like comfortable and also to be productive. --Sunny

Yeah, it's been a function of pain and also a function of what my mental process is at that moment. And what my experiences have been, but mostly, the pain part plays a big role. Even how active we are in a semester and also, of course, the school engagements, how many units I'm taking this semester and things like that. They play a big role, but I think most part of it is the pain.

Communication (2)

And at different points in my life, something happens that it's so obvious people can't ignore it. But for me, it's always more of like, if you see my writing, especially without someone else seeing my writing first. There is no question. I am dyslexic. You might not know what you're seeing is dyslexia, but you are going to see it. --Bernadette

I sounded like Darth Vader. --Amelia

The professors are kind of like your ideas are sound but what the hell is this? And so like, but in some ways, it an advantage because like, for like my prelims like it kind of helped me get accommodations because all professors have seen me unedited, and they're like, we don't really want to see that. Like, we know we don't want to read that. And, like there's nothing really I can do. With the unedited version. -- Bernadette


What else?

APPENDIX E – FOCUS GROUP PROTOCOL

The focus group will be held via Zoom. Participants will automatically be placed into breakout rooms upon arrival where they will be asked to read a consent form to verbally complete consent to participate.

At the start of the interview students will verbally complete consent to participate in the study.

Hello, my name is Autumn Wilke and I am a doctoral candidate at Colorado State University in the Higher Educational Leadership department. Today I will be conducting a focus group that is a follow up to the interview you previously participated in. As a reminder I am conducting a research study on influences on and experiences of apparentness of disability in the classroom. The title of my project is [insert title] and I am the Principal Investigator. I will be facilitating the focus group today. As part of completing the focus group, you will receive a $25 at the end of the focus group.
During the focus group I engage participants in a discussion of themes that emerged during the interview phase of the study and in reviewing potential domains that influence apparentness. Participation in this focus group will take approximately 60-75 minutes. Your participation in this research is voluntary and if you decide to participate, you may withdraw your consent and stop participation at any time without penalty.
Please feel free to get up at any time (to take a break or move around). You can also leave and withdraw from the focus group at any time. Because we are in focus group setting, we strive to maintain confidentiality and anonymity among all the participants. Therefore, we ask that you do not use each other's real names during the interview. [Participants will be asked to change their name to their pseudonym prior to being placed in the main room]. *All participants in the study will refer to you by this pseudonym moving forward and until the focus group is complete. We also ask that you keep what was said in this focus group private and do not share any information outside of the group.*

Would you like to participate?

If yes,

Do you consent to being recorded?

Do you consent to keeping the information in this focus group confidential?

Do you consent to not using your real name or the names of others during the interview?

If yes to all of the above, place into the main Zoom room.

If no to any of the above, *Thank you very much for your time.*

APPENDIX F – POOL OF ITEMS FOR PARTICIPANT REVIEW

Perception of Own Apparentness

Domain	Number	Question
Self	s1	How apparent do you believe your disability is to strangers?
	s2	How apparent do you believe your disability is to casual contacts?
	s3	How apparent do you believe your disability is to close contacts?
Others	o1	How do you believe strangers would describe the apparentness of your disability?
	o2	How do you believe casual contacts would describe your disability?
	o3	How do you believe close contacts would describe your disability?
Environments/Interactions	e1	How apparent is your disability in environments you are in daily and have significant control over?
	e2	How apparent is your disability in environments you are in frequently but have minimal control over?
	e3	How apparent is your disability in an environment you have never encountered before?
	e4	How apparent is your disability in an environment or activity that requires you to communicate with others?
	e5	How apparent is your disability in an environment or activity that does not require you to communicate with others?
	e6	How apparent is your disability in an environment or activity that requires you to move around?
	e7	How apparent is your disability in an environment or activity that requires you to be stationary?
	e8	How apparent is your disability in an environment where you know all of the other people present?
	e9	How apparent is your disability in an environment where you know only a few of the people present?
	e10	How apparent is your disability in an environment where you do not know any of the people present?
	e11	My disability is not visible to others in any setting or context.
	e12	My disability is visible in some settings and contexts.
	e13	My disability is visible in all settings and contexts.
	e14	Most people who meet me are immediately aware of my disability.
	e15	It is rare for someone I am meeting for the first time to be aware of or notice my disability.
	e16	People who know me well are able to recognize the impacts of my disability.
	e17	Even people who know me well are unaware of my disability.

Indicators of/Contributors to Apparentness

Domain	Number	Item
Ableism	a1	Actions taken by my faculty have impacted the visibility of my disability.
	a2	The design or structure of my classes has an impact on the visibility of my disability.
	a3	My disability is apparent to all of my faculty in all of my classes.
	a4	My classmates are never aware of my disability.
	a5	People who have greater knowledge of or experience with disability are more likely to notice my disability than those who do not have prior knowledge or experience.
	a6	People assume that impacts of my disability are due to a lack of effort or care on my part.
	a7	When I describe the impacts of my disability people assume that I am overreacting or exaggerating.
	a8	When I advocate for my access needs people assume that I am trying to get attention or special treatment.
	a9	I experience people making assumptions about the impact or the cause of my disability.
	a10	People make jokes about the way I move or communicate.
	a11	People who I do not know well do not know how to act around me.
	a12	People offer me assistance or do things for me without being asked.
	a13	People ask me if something is wrong or if I am ok even when the situation does not warrant it.
	a14	People have implied that I am faking my disability to receive benefits or accommodations.
	a15	People's behavior towards me changes after they learn about my diagnosis.
	a16	I have been told my disability is not real.
	a17	I have been accused of faking my disability.
	a18	I have had someone tell me that they know a person with my same disability and it is not that bad.
	a19	I encounter people who have never heard of my disability.
	a20	People I do not know or do not know well notice something about my disability and comment on it.
Taking Action	t1	When disclosing I share all of my disabilities/diagnoses with the other person.
	t2	I intentionally share my disability with my faculty.
	t3	I will share some of my disabilities/diagnoses but not others.
	t4	I receive formal accommodations (e.g. approved by the disability office) that I inform my faculty of.

	t5	I use informal accommodations/adjustments that I ask my faculty to support.
	t6	I only disclose my disability after I have experienced or identified an access issue.
	t7	I am able to choose when people are aware of my disability.
	t8	I can take actions to hide my disability.
	t9	I have learned ways to mask or conceal the impacts of my disability.
	t10	I am able to hide my disability from others.
	t11	I take steps to keep people from noticing my disability.
	t12	I am able to change how aware people are of my disability in most environments.
	t13	I take actions to make people aware of my disability.
	t14	I am able to make my disability more visible to those around me.
	t15	People know I am disabled even if they do not know what my specific disabilities/diagnoses are.
	t16	I participate in clubs or activities for people with disabilities.
	t17	I wear clothing or items (buttons, stickers) that reveal my disabled identity.
Surveillance/Identity	i1	I am frequently the only person in the room with my disability.
	i2	People notice another aspect of my identity (race, gender, sexual orientation, etc.) and attribute aspects or impacts of my disability to that identity.
	i3	My physical appearance (e.g., height, weight, skin color, etc.) makes people less likely to notice my disability.
	i4	People notice another aspect of my identity (race, sexual orientation, gender, etc.) and it draws attention to my disability.
	i5	I stand out in any room I enter.
	i6	People attribute impacts of my disability to my race.
	i7	My age makes people overlook my disability.
	i8	My disability stands out more because of my race.
	i9	People do not recognize my disability as a possibility in people my age.
	i10	Aspects of my disability have been ignored because of my gender.
	i11	People attribute aspects of my disability to my sexual orientation.
	i12	My physical appearance (e.g., height, weight, skin color, etc.) makes people more likely to notice my disability.
Embodied Disability	d1	My disability is visible to others regardless of what academic activity I am participating in.

	d2	All academic settings impact my disability in the same way.
	d3	My disability is only visible to others when I am moving.
	d4	My disability impacts how I spend my time on academics.
	d5	My disability makes routine academic tasks (e.g. homework, writing, exams, etc.) take longer to complete.
	d6	People are aware when my disability causes things to take me more time to complete.
	d7	My disability frequently leads to me missing class or other activities.
	d8	My disability requires me to not be present for specific activities that occur in class.
	d9	My disability alters the way I am able to participate in some academic environments or activities.
	d10	My disability has caused health issues that have led to extended or repeat absences from academics.
	d11	I am often late as the result of my disability
	d12	People notice when I am not in class and attribute it to disability.
	d13	I rarely have to tell others I am disabled because they already know.
	?	I use an aide or adaptive tech that is noticeable to others.
	?	People's treatment of me changes depending on if they see me using a mobility aid or access tool.
	?	My adaptive tech is widely used for a variety of reasons (including reasons other than disability) and does not draw attention to my disability.
	?	I never have to use an access tool (including medication) in a public setting.
	?	The adaptive tech or access tool I use is widely known to be a device used by disabled people.
	?	I use an access tool that makes the impacts of my disability less noticeable to other people.

APPENDIX G – ITEMS INCLUDED IN FIRST ITERATION OF INSTRUMENT

Perception of Own Apparentness

Domain	Number	Question
Self	s1	How apparent do you believe your disability is to strangers?
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	e5	How apparent is your disability in an environment or activity that does not require you to communicate with others?
	e6	How apparent is your disability in an environment or activity that requires you to move around?
	e7	How apparent is your disability in an environment or activity that requires you to be stationary?
	e8	How apparent is your disability in an environment where you know all of the other people present?
	e9	How apparent is your disability in an environment where you know only a few of the people present?
	e10	How apparent is your disability in an environment where you do not know any of the people present?
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	e13	My disability is visible in all settings and contexts.
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	e17	Even people who know me well are unaware of my disability.

Indicators of/Contributors to Apparentness

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	a2	The design or structure of my classes has an impact on the visibility of my disability.
	a3	My disability is apparent to all of my faculty in all of my classes.
	a4	My classmates are never aware of my disability.
	a5	People who have greater knowledge of or experience with disability are more likely to notice my disability than those who do not have prior knowledge or experience.
	a6	People assume that impacts of my disability are due to a lack of effort or care on my part.
	a7	When I describe the impacts of my disability people assume that I am overreacting or exaggerating.
	a8	When I advocate for my access needs people assume that I am trying to get attention or special treatment.
	a9	I experience people making assumptions about the impact or the cause of my disability.
	a10	People make jokes about the way I move or communicate.
	a11	People who I do not know well do not know how to act around me.
	a12	People offer me assistance or do things for me without being asked.
	a13	People ask me if something is wrong or if I am ok even when the situation does not warrant it.
	a14	People have implied that I am faking my disability to receive benefits or accommodations.
	a15	People's behavior towards me changes after they learn about my diagnosis.
	a16	I have been told my disability is not real.
	a17	I have been accused of faking my disability.
	a18	I have had someone tell me that they know a person with my same disability and it is not that bad.
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	a20	People I do not know or do not know well notice something about my disability and comment on it.
Taking Action	t1	When disclosing I share all of my disabilities/diagnoses with the other person.
	t2	I intentionally share my disability with my faculty.
	t3	I will share some of my disabilities/diagnoses but not others.
	t4	I receive formal accommodations (e.g. approved by the disability office) that I inform my faculty of.
	t5	I use informal accommodations/adjustments that I ask my faculty to support.

	t6	I only disclose my disability after I have experienced or identified an access issue.
	t7	I am able to choose when people are aware of my disability.
	t8	I can take actions to hide my disability.
	t9	I have learned ways to mask or conceal the impacts of my disability.
	t10	I am able to hide my disability from others.
	t11	I take steps to keep people from noticing my disability.
	t12	I am able to change how aware people are of my disability in most environments.
	t13	I take actions to make people aware of my disability.
	t14	I am able to make my disability more visible to those around me.
	t15	People know I am disabled even if they do not know what my specific disabilities/diagnoses are.
	t16	I participate in clubs or activities for people with disabilities.
	t17	I wear clothing or items (buttons, stickers) that reveal my disabled identity.
Surveillance/Identity	i1	I am frequently the only person in the room with my disability.
	i2	People notice another aspect of my identity (race, gender, sexual orientation, etc.) and attribute aspects or impacts of my disability to that identity.
	i3	My physical appearance (e.g., height, weight, skin color, etc.) makes people less likely to notice my disability.
	i4	People notice another aspect of my identity (race, sexual orientation, gender, etc.) and it draws attention to my disability.
	i5	I stand out in any room I enter.
	i6	People attribute impacts of my disability to my race.
	i7	My age makes people overlook my disability.
	i8	My disability stands out more because of my race.
	i9	People do not recognize my disability as a possibility in people my age.
	i10	Aspects of my disability have been ignored because of my gender.
	i11	People attribute aspects of my disability to my sexual orientation.
	i12	My physical appearance (e.g., height, weight, skin color, etc.) makes people more likely to notice my disability.
Embodied Disability	d1	My disability is visible to others regardless of what activity I am participating in.
	d2	All academic settings impact my disability in the same way.
	d3	My disability is only visible to others when I am moving.

	d4	My disability impacts how I spend my time on academics.
	d5	My disability makes routine academic tasks (e.g. homework, writing, exams, etc.) take longer to complete.
	d6	People are aware when my disability causes things to take me more time to complete.
	d7	My disability frequently leads to me missing class or other activities.
	d8	My disability requires me to not be present for specific activities that occur in class.
	d9	My disability alters the way I am able to participate in some academic environments or activities.
	d10	My disability has caused health issues that have led to extended or repeat absences from academics.
	d11	I am often late as the result of my disability
	d12	People notice when I am not in class and attribute it to disability.
	d13	I rarely have to tell others I am disabled because they already know.
	d14	I use an aide or adaptive tech that is noticeable to others.
	d15	People's treatment of me changes depending on if they see me using a mobility aid or access tool.
	d16	My adaptive tech is widely used for a variety of reasons (including reasons other than disability) and does not draw attention to my disability.
	d17	I never have to use an access tool (including medication) in a public setting.
	d18	The adaptive tech or access tool I use is widely known to be a device used by disabled people.
	d19	I use an access tool that makes the impacts of my disability less noticeable to other people.

Apparentness of Disability In Higher Education (for distribution)

Start of Block: Informed consent/study overview

Page Break

Q26 Apparentness of Disability in Higher Education

Q1 My name is Autumn Wilke and I am a doctoral student at Colorado State University. I am the Co-principal investigator along with my advisor Dr. Dockendorff who serves as the primary investigator. The title of our project is Complicating Understandings of Dis/ability Apparentness.

This research study is focused on the experiences of disabled students in higher education related to apparentness of disability within educational settings. Apparentness is most often discussed using language that refers to disability being visible or invisible. The purpose of this research is to better understand what influences apparentness of disability and to explore how apparentness of disability is constructed and expressed within higher education. The goal of the research is to create an understanding of disability that goes beyond viewing disability as either visible or invisible.

I would greatly appreciate it if you would assist me in my research by completing this confidential online survey. For most people participation should take less than 20 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty by exiting the survey. The survey will not collect your name or personal identifiers and when I report and share the data with others, I will combine the data from all participants. While there are no direct benefits to you, I hope this research will improve the experiences of students with disabilities on college campuses. In appreciation for your time, after completing the survey you are invited to provide your e-mail address for entry into a drawing for 1 of 3 $50 amazon gift cards.

A note on survey accessibility: The survey is optimized to work on a computer or mobile device but users may have the best experience taking this survey on a computer screen. This survey is designed to be navigable by keyboard and compatible with screen readers, however, if you encounter any access issues or would like assistance in completing the survey (including completing the survey verbally) please contact me at autumn.wilke@colostate.edu.

Note on future use: The confidential data collected in this survey could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from the subject.

 If you have questions or would like additional information, please contact me (Autumn Wilke) at autumn.wilke@colostate.edu or my adviser Dr. Kari Dockendorff at kari.dockendorff@colostate.edu. You can also contact the Colorado State University IRB at CSU_IRB@colostate.edu or by phone 970-491-1553.

By hitting next you consent to participating in this research and confirm your participation in the study. If you begin the survey but do not finish it in one setting your responses should be saved and you are able to return to the survey on the same device for up to 2 weeks.

End of Block: Informed consent/study overview

Start of Block: Open ended questions

*

Q3 In your own words, please describe your disability or disabilities.

_____

_____

_____

_____

_____

*

Q4 How would you describe the apparentness of your disability or disabilities (e.g. how visible or invisible your disability is to others)? If the apparentness of your disability changes day to day, based on the environment you are in, based the activity you are participating in, or for any other reason please describe.

_____

_____

_____

_____

_____

Page Break

End of Block: Open ended questions

Start of Block: Block 13

Q30 Due to infiltration by bots I have added an automated check. If you encounter difficulties in completing this check due to accessibility please e-mail the researcher at autumn.wilke@colostate.edu

End of Block: Block 13

Start of Block: Verifying eligibility to participate

Q2 Which, if any, of the conditions listed below impact your learning, working, or living activities? (select all that apply.)

*Note if you select "None" it will end the survey without showing the rest of the questions.

- [ ] Acquired/traumatic brain injury
- [ ] Anxiety
- [ ] Attention deficit/hyperactivity disorder (ADHD)
- [ ] Autism
- [ ] Blind/low-vision
- [ ] Chronic medical health condition/health impairment
- [ ] Deaf/hard of hearing
- [ ] Depression
- [ ] Learning disability
- [ ] Mental health/psychological condition (not including anxiety, depression or PTSD)
- [ ] Physical/mobility condition that affects walking
- [ ] Physical/mobility condition that does not affect walking
- [ ] PTSD
- [ ] Speech/communication disorder
- [ ] Disability or condition not listed above, please specify _____
- [ ] None

Info For the purposes of the following questions when it asks for you to designate the apparentness of your disability or to respond based on your experience, if you have more than one disability or health condition please respond considering your holistic experience with disability rather than a singular diagnosis or condition.

For example, I have anxiety, OCD, and chronic migraines. When responding I would consider all three rather than answering only in relation to anxiety.

End of Block: Verifying eligibility to participate

Start of Block: Beliefs About Apparentness

Q5 Please select the answer that best describes your experience.
How apparent do you believe your disability is to...

	Never apparent	Unlikely to be apparent in most contexts	A mix of apparent and non-apparent depending on the context	Likely to be apparent in most contexts	Always apparent
Strangers	○	○	○	○	○
Casual Contacts (coworkers, supervisors, classmates, etc.)	○	○	○	○	○
Close Contacts (friends, family, significant other, etc.)	○	○	○	○	○

Page Break

Q7 Please select the answer that best describes you or your experience.
How apparent is your disability in the following environments?

	Never apparent	Rarely apparent	Sometimes apparent	Frequently apparent	Always apparent
Environments I am in daily and have significant control over (e.g. home, etc.)	○	○	○	○	○
Environments I am in frequently but have minimal control over (e.g. local grocery store, college library, etc.)	○	○	○	○	○
An environment I have never encountered before.	○	○	○	○	○
An environment or activity that requires me to communicate with others.	○	○	○	○	○
An environment or activity that requires me to move around.	○	○	○	○	○
An environment or activity that requires me to be stationary.	○	○	○	○	○

An environment where I know all of the other people present.	○	○	○	○	○
An environment where I know only a few people present.	○	○	○	○	○
An environment where I know none of the people present.	○	○	○	○	○

End of Block: Beliefs About Apparentness

Start of Block: Interactions with others

Q8 Please select the degree to which you agree or disagree with each of the following statements about interactions with others.

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
My disability is not visible in any setting or context.	○	○	○	○
Most people who meet me are immediately aware of my disability.	○	○	○	○
People who know me well are able to recognize subtle impacts of my disability.	○	○	○	○
My close friends are unaware of my disability.	○	○	○	○
People are unlikely to notice my disability when meeting me for the first time.	○	○	○	○

End of Block: Interactions with others

Start of Block: Apparentness in academic settings

Q9 Please select the degree to which you agree or disagree with each of the following statements about apparentness of your disability in academic settings.

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Actions taken by my faculty have impacted the visibility of my disability.	○	○	○	○
The design or structure of my classes has an impact on the visibility of my disability.	○	○	○	○
My disability is apparent to all of my faculty in all classes.	○	○	○	○
My classmates are never aware of my disability.	○	○	○	○
My disability is visible to others regardless of what activity I am participating in.	○	○	○	○
All academic settings impact my disability in the same way.	○	○	○	○

End of Block: Apparentness in academic settings

Start of Block: Behaviors

Q10 Please select how often you have experienced the following behaviors.

	Never	Rarely	Frequently	Always
People assume that impacts of my disability are due to a lack of effort or care on my part.	○	○	○	○
When I describe the impacts of my disability people assume that I am overreacting or exaggerating.	○	○	○	○
When I advocate for my access needs people assume that I am trying to get attention or special treatment.	○	○	○	○
I experience people making assumptions about the impact or cause of my disability.	○	○	○	○
People make jokes about the way I move or communicate.	○	○	○	○
People who I do not know well do not know how to act around me.	○	○	○	○
People offer me assistance or do things for me without being asked.	○	○	○	○
People ask me if something is wrong or if I am ok even when the	○	○	○	○

situation does not warrant it.				
People have implied that I am faking my disability to receive benefits or accommodations.	○	○	○	○
People's behavior towards me changes after they learn about my diagnosis.	○	○	○	○
I have been told my disability is not real.	○	○	○	○
I have been accused of faking my disability.	○	○	○	○
I have been told my disability is not that bad.	○	○	○	○
I encounter people who have never heard of my disability.	○	○	○	○
Strangers or people I do not know well, notice something about my disability and comment on it.	○	○	○	○

End of Block: Behaviors

Start of Block: Assistive/Adaptive Technology

Q11 Do you use any of the following aids or assistive/adaptive technologies because of your disability? Please select all that apply.

- [ ] Assistive Listening Device
- [ ] Brace
- [ ] Crutches
- [ ] Epi-Pen
- [ ] Glucose monitor/insulin pump
- [ ] Hearing Aid/Cochlear Implant
- [ ] Interpreter/Communication Facilitator
- [ ] Recording Device
- [ ] Rescue Medication (e.g., for migraines, seizures, anxiety, etc.)
- [ ] Service Dog
- [ ] Speech to Text
- [ ] Text to Speech
- [ ] Walking Cane
- [ ] Wheelchair/Scooter
- [ ] White Cane
- [ ] Other (please specify)

_____

- [ ] None

Q13 Please indicate how frequently the following statement is true for you.

	None of the time	Some of the time	Most of the time	All of the time
My aide or adaptive tech is noticeable to others.	○	○	○	○
I use my adaptive tech.	○	○	○	○
I use an access tool (including medication) in public settings.	○	○	○	○
My aid or access tool makes the impacts of my disability less noticeable.	○	○	○	○
I avoid using my adaptive tech around other people.	○	○	○	○

Q13a Please indicate the degree to which you agree or disagree with the following statements

	Strongly disagree	Disagree	Agree	Strongly agree
My adaptive tech is widely used for a variety of reasons (including reasons other than disability).	○	○	○	○
My adaptive tech does not draw attention to my disability.	○	○	○	○
The adaptive tech or access tool that I use is widely known to be a device used by disabled people.	○	○	○	○

End of Block: Assistive/Adaptive Technology

Start of Block: Impacts of disability

Q14 Please indicate how frequently the following statement is true for you.

	None of the time	Some of the time	Most of the time	All of the time
I miss class or activities due to my disability.	○	○	○	○
My disability requires me to be absent for specific in-class activities.	○	○	○	○
My participation in class is the same as my peers.	○	○	○	○
Things take me longer to complete than my classmates because of my disability.	○	○	○	○
I am late as the result of my disability.	○	○	○	○
My disability impacts how I spend my time on academics.	○	○	○	○
I need to allocate more time for coursework because of my disability.	○	○	○	○

Q14a Please indicate the degree to which you agree or disagree with the following statements about impacts of your disability.

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
My disability alters the way I am able to participate in some academic environments or activities.	○	○	○	○
My disability has caused health issues that have led to extended or repeat absences from academics.	○	○	○	○
People notice when I am not present in class and attribute it to my disability.	○	○	○	○
My disability is only visible to others when I am moving.	○	○	○	○
My disability impacts how I spend my time on academics.	○	○	○	○
My disability makes routine academic tasks (e.g. homework, writing, exams, etc.) take longer to complete.	○	○	○	○

End of Block: Impacts of disability

Start of Block: Actions by disabled person

Q15 Please indicate the frequency with which the following statement is true for you.

	Never True	Rarely True	Frequently True	Always True
I intentionally share my disability with my faculty.	○	○	○	○
I receive formal accommodations (e.g. approved by the disability office) that my faculty are aware of.	○	○	○	○
I use informal accommodations/adjustments that I ask my faculty to support.	○	○	○	○
I only disclose my disability after I have experienced or identified an access issue.	○	○	○	○
I am able to choose when people are aware of my disability.	○	○	○	○
I am able to mask or conceal the impacts of my disability.	○	○	○	○
I take steps to keep people from noticing my disability.	○	○	○	○
I am able to change how aware people are of my disability in most environments.	○	○	○	○
I am able to make my disability more visible to those around me.	○	○	○	○
People know I am disabled even if they do not know what my specific disabilities/diagnoses are.	○	○	○	○
I participate in clubs or activities for people with disabilities.	○	○	○	○
I wear clothing or items (buttons, stickers) that reveal my disabled identity.	○	○	○	○

Q16 Please indicate the frequency with which the following statement is true for you

	None of the time	Some of the time	Most of the time	All of the time
When disclosing, I share all of my disabilities/diagnoses with the other person.	○	○	○	○
When disclosing, I share some of my disabilities/diagnoses but not others.	○	○	○	○

Q17 Please select (one or more) of your disabilities or conditions that you are MOST likely to share with others?

- [ ] Acquired/traumatic brain injury
- [ ] Anxiety
- [ ] Attention deficit/hyperactivity disorder (ADHD)
- [ ] Autism
- [ ] Blind/low-vision
- [ ] Chronic medical health condition/health impairment
- [ ] Deaf/hard of hearing
- [ ] Depression
- [ ] Learning disability
- [ ] Mental health/psychological condition (not including anxiety, depression or PTSD)
- [ ] Physical/mobility condition that affects walking
- [ ] Physical/mobility condition that does not affect walking
- [ ] PTSD
- [ ] Speech/communication disorder
- [ ] Disability or condition not listed above, please specify

_____

Q18 Please select one (or more) of your disabilities or conditions that you are LEAST likely to share with others?

- [ ] Acquired/traumatic brain injury
- [ ] Anxiety
- [ ] Attention deficit/hyperactivity disorder (ADHD)
- [ ] Autism
- [ ] Blind/low-vision
- [ ] Chronic medical health condition/health impairment
- [ ] Deaf/hard of hearing
- [ ] Depression
- [ ] Learning disability
- [ ] Mental health/psychological condition (not including anxiety, depression or PTSD)
- [ ] Physical/mobility condition that affects walking
- [ ] Physical/mobility condition that does not affect walking
- [ ] PTSD
- [ ] Speech/communication disorder
- [ ] Disability or condition not listed above, please specify

_____

End of Block: Actions by disabled person

Start of Block: Other identity/noteable

Q19 Please indicate the degree to which you agree or disagree with the following statements.

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
I am frequently the only person in the room with my disability.	○	○	○	○
My physical appearance (e.g. height, weight, skin color, etc.) makes people less likely to notice my disability.	○	○	○	○
People notice another aspect of my identity (race, sexual orientation, gender) and it draws attention to my disability.	○	○	○	○
People attribute aspects or impacts of my disability to another identity.	○	○	○	○
I stand out in any room I enter.	○	○	○	○
People attribute impacts of my disability to my race.	○	○	○	○
My age makes people overlook my disability.	○	○	○	○
My disability is ignored or overlooked because of my race.	○	○	○	○

People do not recognize my disability as a possibility in people my age.	○	○	○	○
Aspects of my disability have been ignored because of my gender.	○	○	○	○
People attribute aspects of my disability to my sexual orientation.	○	○	○	○
My physical appearance (e.g. height, weight, skin color, etc.) makes people more likely to notice my disability.	○	○	○	○

End of Block: Other identity/noteable

Start of Block: Demographic Data

Q20 What is your current age?

- ○ Under 18
- ○ 18 - 24
- ○ 25 - 34
- ○ 35 - 44
- ○ 45 - 54
- ○ 55 - 64
- ○ 65 - 74
- ○ Over 74

Q21 Please select one or more options that most accurately describes your gender?

- ☐ Agender
- ☐ Gender-Queer
- ☐ Man
- ☐ Non-binary
- ☐ Transgender
- ☐ Woman
- ☐ Write In Option (Please Specify) _____

Q23 Please select one or more options that most accurately describe your sexual orientation?

- [ ] Asexual
- [ ] Bisexual
- [ ] Gay
- [ ] Heterosexual
- [ ] Lesbian
- [ ] Pansexual
- [ ] Queer
- [ ] Questioning
- [ ] Write In Option (Please Specify) _____

Q25 What is your race or ethnicity? (if you are multi-racial or multi-ethnic, please check all that apply).

- [ ] African American/Black
- [ ] African
- [ ] Afro-Latino/a/x
- [ ] Asian American
- [ ] Caribbean
- [ ] Central American
- [ ] East Asian (Chinese, Japanese, Korean, Taiwanese)
- [ ] Hispanic/Latino/a/x
- [ ] Indigenous/Native American/Alaska Native
- [ ] Mexican American/Chicano/a/x
- [ ] Middle Eastern
- [ ] Native Hawaiian/Pacific Islander
- [ ] Puerto Rican
- [ ] South Asian (Indian, Pakistani, Nepalese, Sri Lankan)
- [ ] Southeast Asian (Cambodian, Vietnamese, Hmong, Filipino)
- [ ] White
- [ ] Multi-racial

☐ Write In Option (Please Specify) _____

Q27 What institution do you currently attend?

This information will be used to determine the type of institution (e.g. 4-year HBCU research insitution, 2-year predominantly white technical college, etc.) in order to compare responses by institution type. Once institution name is replaced by an institutional category, institution name will be removed and will not be stored with the associated data to preserve and protect the identity of respondents.

_____

End of Block: Demographic Data

Start of Block: Incentives

Q28 Respondents who complete this survey are eligible for entry into a drawing for one of three $50 amazon gift cards. If you would like to be entered into the drawing please follow the link at the end of the survey to enter the drawing. A separate link is used to separate potentially identifiable information from the associated data to preserve and protect the identity of respondents. Confirmation that you have completed the survey will be attained through use of a unique identifier.

Q29 Please select a unique identifier that will be used to confirm your completion of the survey when completing the drawing for amazon gift cards. Your unique identifier can be any combination of 6 letters and numbers but should be entered the same on this survey and the following survey for the drawing.

_____

Q29 If you would like to enter the drawing for an amazon gift card please copy the following link into a new tab and complete your entry.
https://colostate.az1.qualtrics.com/jfe/form/SV_dgtVmkAFudi9FCC or http://bit.ly/3ypiUqM

If you encounter any difficulty with accessing the drawing please e-mail the researcher at autumn.wilke@colostate.edu for assistance.

End of Block: Incentives

APPENDIX I – DATA GUIDE AND CODING DOCUMENT

Domain	PCF Item	SEM Item	Item Wording	Coding
Environment				
	e1		How apparent is your disability in environments you are in daily and have significant control over (e.g., home)?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e2	env1	How apparent is your disability in environments you are in frequently but have minimal control over (e.g., local grocery store, college library, etc.)?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e3	env2	How apparent is your disability in an environment you have never encountered before?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e4	env3	How apparent is your disability in an environment or activity that requires you to communicate with others?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e5		How apparent is your disability in an environment or activity that requires you to move around?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e6	env4	How apparent is your disability in an environment or activity that requires you to be stationary?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e7		How apparent is your disability in an environment where you know all of the other people present?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e8	env5	How apparent is your disability in an environment where you	1 (Never) 2 (Rarely)

Domain	PCF Item	SEM Item	Item Wording	Coding
			know only a few of the people present?	3 (Sometimes) 4 (Frequently) 5 (Always)
	e9	env6	How apparent is your disability in an environment where you know none of the people present?	1 (Never) 2 (Rarely) 3 (Sometimes) 4 (Frequently) 5 (Always)
	e10*		My disability is not visible to others in any setting or context.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e11	env7	Most people who meet me are immediately aware of my disability.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e12*	env8	People are unlikely to notice my disability when meeting me for the first time.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e13		People who know me well are able to recognize the impacts of my disability.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e14*		My close friends are unaware of my disability.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e15		Actions taken by my faculty have impacted the visibility of my disability.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)

Domain	PCF Item	SEM Item	Item Wording	Coding
	e16		The design or structure of my classes has an impact on the visibility of my disability.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e17	env9	My disability is apparent to all of my faculty in all of my classes.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e18*	env10	My classmates are never aware of my disability.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e19	env11	My disability is visible to others regardless of what activity I am participating in.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
	e20		All academic settings impact my disability in the same way.	1 (Strongly Disagree) 2 (Disagree) 3 (Agree) 4 (Strongly Agree)
Ableism	a1*	able1	People assume that impacts of my disability are due to a lack of effort or care on my part.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a2*	able2	When I describe the impacts of my disability people assume that I am overreacting or exaggerating.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a3*	able3	When I advocate for my access needs people assume that I am trying to get attention or special treatment.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)

Domain	PCF Item	SEM Item	Item Wording	Coding
	a4	able4	I experience people making assumptions about the impact or the cause of my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a5		People make jokes about the way I move or communicate.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a6		People who I do not know well do not know how to act around me.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a7		People offer me assistance or do things for me without being asked.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a8*		People ask me if something is wrong or if I am ok even when the situation does not warrant it.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a9*	able5	People have implied that I am faking my disability to receive benefits or accommodations.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a10*		People's behavior towards me changes after they learn about my diagnosis.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a11*	able6	I have been told my disability is not real.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a12*	able7	I have been accused of faking my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a13	able8	I have been told my disability is not that bad.	1 (Never) 2 (Rarely)

Domain	PCF Item	SEM Item	Item Wording	Coding
				3 (Frequently) 4 (Always)
	a14		I encounter people who have never heard of my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	a15		Strangers or people I do not know well, notice something about my disability and comment on it.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
Taking Action	t1		When disclosing, I share all of my disabilities/diagnoses with the other person.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	t2		I intentionally share my disability with my faculty.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t3		When disclosing, I share some of my disabilities/diagnoses but not others.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	t4		I receive formal accommodations (e.g. approved by the disability office) that my faculty are aware of.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t5		I use informal accommodations/adjustments that I ask my faculty to support.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t6		I only disclose my disability after I have experienced or identified an access issue.	1 (Never) 2 (Rarely) 3 (Frequently)

Domain	PCF Item	SEM Item	Item Wording	Coding
				4 (Always)
	t7	take1	I am able to choose when people are aware of my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t8	take2	I am able to mask or conceal the impacts of my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t9	take3^	I take steps to keep people from noticing my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t10	take4	I am able to change how aware people are of my disability in most environments.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t11		I am able to make my disability more visible to those around me.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t12	take5	People know I am disabled even if they do not know what my specific disabilities/diagnoses are.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t13	take6	I participate in clubs or activities for people with disabilities.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	t14	take7	I wear clothing or items (buttons, stickers) that reveal my disabled identity.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
Identity	i1		I am frequently the only person in the room with my disability.	1 (Strongly Disagree) 2 (Somewhat Disagree)

Domain	PCF Item	SEM Item	Item Wording	Coding
				3 (Somewhat Agree) 4 (Strongly Agree)
	i2		My physical appearance (e.g. height, weight, skin color, etc.) makes people less likely to notice my disability.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i3	iden2	People notice another aspect of my identity (race, sexual orientation, gender) and it draws attention to my disability.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i4	iden1	People attribute aspects or impacts of my disability to another identity.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i5		I stand out in any room I enter.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i6	iden5	People attribute impacts of my disability to my race.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i7	iden8	My age makes people overlook my disability.	1 (Strongly Disagree)

Domain	PCF Item	SEM Item	Item Wording	Coding
				2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i8	iden6	My disability is ignored or overlooked because of my race.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i9	iden9	People do not recognize my disability as a possibility in people my age.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i10	iden3	Aspects of my disability have been ignored because of my gender.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i11	iden4	People attribute aspects of my disability to my sexual orientation.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	i12	iden7^	My physical appearance (e.g. height, weight, skin color, etc.) makes people more likely to notice my disability.	1 (Strongly Disagree) 2 (Somewhat Disagree)

Domain	PCF Item	SEM Item	Item Wording	Coding
				3 (Somewhat Agree) 4 (Strongly Agree)
Embodied Disability				
	d1	embody1	My disability makes routine academic tasks (e.g. homework, writing, exams, etc.) take longer to complete.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d2		My disability is only visible to others when I am moving.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d3	embody2	My disability impacts how I spend my time on academics.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d4	embody3	I need to allocate more time for coursework because of my disability.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d5	embody4	Things take me longer to complete than my classmates because of my disability.	1 (Never) 2 (Rarely) 3 (Frequently) 4 (Always)
	d6	embody5	I miss class or activities due to my disability.	1 (None of the Time)

Domain	PCF Item	SEM Item	Item Wording	Coding
				2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d7	embody6	My disability requires me to be absent for specific in-class activities.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d8		My participation in class is the same as my peers.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d9	embody7	My disability has caused health issues that have led to extended or repeat absences from academics.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d10	embody8	I am late as the result of my disability.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d11	embody9	People notice when I am not present in class and attribute it to my disability.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)

Domain	PCF Item	SEM Item	Item Wording	Coding
	d12		My disability alters the way I am able to participate in some academic environments or activities.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d13		My aide or adaptive tech is noticeable to others.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d14		I use my adaptive tech.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d15		My adaptive tech is widely used for a variety of reasons (including reasons other than disability).	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d16		My adaptive tech does not draw attention to my disability.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d17		I use an access tool (including medication) in public settings.	1 (None of the Time)

Domain	PCF Item	SEM Item	Item Wording	Coding
				2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d18		The adaptive tech or access tool that I use is widely known to be a device used by disabled people.	1 (Strongly Disagree) 2 (Somewhat Disagree) 3 (Somewhat Agree) 4 (Strongly Agree)
	d19		My aid or access tool makes the impacts of my disability less noticeable.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)
	d20		I avoid using my adaptive tech around other people.	1 (None of the Time) 2 (Some of the Time) 3 (Most of the Time) 4 (All of the Time)

Note: *indicates items that are reverse coded
^indicates items removed during SEM