

Connecticut College

Digital Commons @ Connecticut College

Psychology Honors Papers

Psychology Department

2021

Invisible Chronic Illness in College: Faculty Perspectives and Student Narratives Surrounding Accommodations

Andra Gurley-Green

Connecticut College, andragg@gmail.com

Follow this and additional works at: <https://digitalcommons.conncoll.edu/psychhp>



Part of the [Psychology Commons](#)

Recommended Citation

Gurley-Green, Andra, "Invisible Chronic Illness in College: Faculty Perspectives and Student Narratives Surrounding Accommodations" (2021). *Psychology Honors Papers*. 83.

<https://digitalcommons.conncoll.edu/psychhp/83>

This Honors Paper is brought to you for free and open access by the Psychology Department at Digital Commons @ Connecticut College. It has been accepted for inclusion in Psychology Honors Papers by an authorized administrator of Digital Commons @ Connecticut College. For more information, please contact bpancier@conncoll.edu.

The views expressed in this paper are solely those of the author.

Invisible Chronic Illness in College:
Faculty Perspectives and Student Narratives Surrounding Accommodations

A thesis presented by
Andra E. Gurley-Green
to the Department of Psychology
in partial fulfillment of the requirements
for the degree of
Bachelor of Arts

Connecticut College
New London, CT

May 5, 2021

Abstract

The objectives of this study were to explore faculty perceptions of accommodations for students with Invisible Chronic Illness (ICI), understand what may influence accommodation perceptions in the case of Chronic Migraine, and gain insight into the experiences of students with ICI. Faculty and students at Connecticut College responded to a hypothetical accommodation letter for a student with Chronic Migraine that varied as follows: standard letter (no illness information), diagnosis, illness education from accessibility office, illness education from student. All participants responded to questions about four approved accommodations (distraction-free testing, extended test time, deadline flexibility, attendance flexibility) asking how “most faculty” would judge accommodation appropriateness, feasibility, justifiability, disruptiveness to students and teaching, reduction in class rigor, compromise of an essential element of the class, and sufficiency of information. All student participants were either registered with Student Accessibility Services or were judged to be eligible. Analyses revealed less positive and more negative impressions of the rarer accommodation, attendance flexibility, compared to the other accommodations. More illness information in the accommodation letter than is typically given resulted in more favorable accommodation impressions, especially for attendance flexibility. Analyses of student narratives suggested that illness disclosure and education are challenging, but thought to result in more accommodating and empathic faculty responses. While navigating college accommodations, students with ICI must deal with stigma and illness identity construction which are heavily impacted by the messages they receive from faculty. Results suggest that faculty education about illness impacts and empathic responding to student disclosures, as well as student support for identity-affirming conversations with faculty about their ICI, would be helpful.

Acknowledgements

I would first like to thank my advisor, Audrey Zakriski, for her guidance and support throughout my honors thesis. I would also like to thank my readers, Jefferson Singer and Patrick Rich, for their time providing me insightful and impactful feedback. I also would not have been able to complete this thesis without the cooperation of the Office of Student Accessibility Services.

I would like to acknowledge the teachers and professors who have shown me empathy, compassion, and acceptance. Those few who showed me genuine support without it being contingent upon me proving my legitimacy due to my illness inspired me to find my voice. I was able to see my worth as a student, a researcher, and an advocate because of those who believed in me.

Table of Contents

Abstract	ii
Acknowledgements	iii
Table of Contents	iv
List of Tables	v
List of Figures	vi
Introduction	1
Chronic Migraine: Effects on Functioning	2
Illness Identity	5
Invisible Chronic Illness	6
Invisible Chronic Illness and the College Experience	10
Disability Policy	16
Interacting with Disability Services: The Student Experience	22
Interacting with Disability Services: Accommodations	25
The Present Study	29
Methods	31
Participants	31
Methods	33
Experimental Vignette Questions	33
Inclusive Teaching Strategies Inventory	35

Qualitative Questions	35
Procedure	36
Results	37
Descriptive Analysis of Inclusive Instructional Practices	37
Experimental Assessment of Responses to Accommodations	42
Analysis of Positive Accommodation Impressions	44
Analysis of Negative Accommodation Impressions	51
Analyses of “Not enough information” Question	57
Follow-Up Analyses Focusing Only on Faculty	61
Relationships Between Inclusive Teaching and Accommodation Perceptions for Faculty...	63
Positive/Negative Impressions by Accommodation Type	63
Specific Impressions Collapsed over Accommodation Type	66
Student Disclosure Practices and Preferences	69
Exploratory Qualitative Analyses of Student Disclosure Reasons	70
Discussion	73
References	86
Appendices	93

List of Tables

Table 1. Correlations of ITSI Subscales for Faculty Participants	39
Table 2. Correlations of ITSI Subscales for Student Participants	41
Table 3. Correlations of ITSI Scales with Accommodation Impression Factors	64
Table 4. Correlations of ITSI Scales with Accommodation Impression Factors	67

List of Figures

Figure 1. Accommodation Type Means	46
Figure 2. Accommodation by Communication Type Means	48
Figure 3. Communication Type Means.....	50
Figure 4. Accommodation Type Means	52
Figure 5. Accommodation Type by Role Means	54
Figure 6. Communication Type Means	56
Figure 7. Accommodation by Communication Type Means	58
Figure 8. Communication Type Means	60

Navigating College with Invisible Chronic Illness: Addressing Bias and Barriers

Chronic illness is the leading cause of death in the United States; six out of 10 adults in the United States have a chronic illness; four out of 10 adults have two or more chronic illnesses (“Chronic Diseases in America,” 2020). Millions of Americans experience chronic illness and feel its impact on their lives. According to the Centers for Disease Control and Prevention (CDC), chronic illnesses can be defined “broadly as [illnesses] that last 1 year or more and require ongoing medical attention or limit activities of daily living or both” (“About Chronic Diseases,” 2019). As suggested by the definition, the nosology of “chronic illness” is broad and loosely defined but diagnoses that are commonly referred to under this category are heart disease, stroke, and diabetes (“Chronic Diseases in America,” 2020). Chronic illnesses vary widely in their symptomatology, body systems affected, and visibility. The focus of this literature review is on invisible chronic illnesses (ICI) using chronic migraine as an example, focusing on the experience of navigating college and the academic accommodations process with ICI. The introduction to this thesis will first explore the impact of chronic illnesses on everyday functioning, as seen through the example of chronic migraine as well as the important concept of “illness identity” for young adults living with chronic illness. The experience of illness invisibility and its unique stigma will then be discussed. The literature review will then focus on the experiences of college students with ICI and the very limited research available to understand the intricately complicated situation of navigating college with an ICI, again using chronic migraine as an example. Students’ with ICI experiences interacting with disability services, policy, and accommodations will be presented. Lastly, existing research on student experiences with ICI within college, specifically student interactions with disability services offices and faculty, will be discussed to lead into the purpose and design of the present study.

Chronic Migraine: Effects on Functioning

With acute illness or injury, the timeframe of illness experience is usually finite. Individuals with chronic illness, however, must come to face the reality that their illness may not heal or go away. For the purposes of further understanding the distinction of acute versus chronic illness, this thesis will focus on chronic migraine, a pain disorder, due both to the volume of research done on this chronic health condition and to the many people experiencing *acute* headache and pain.

While migraine dates back over 6,000 years, what exactly underlies an individual's susceptibility to this illness is still unknown (Goadsby et al., 2017). There is, however, extensive research on the symptoms and neuronal mechanisms of migraine. To properly understand chronic migraine, one must first understand the difference between a headache and a migraine. There are several types of headaches, the most common being tension, sinus, and cluster headaches ("Migraine vs. headache," 2019). Each type varies in the location and sensation of pain and can be chronic or acute. Migraine, however, is a complex neurological disorder of which headache is a symptom or phase. Migraine can also be understood as episodic or chronic. An individual with episodic migraine can experience anywhere from fewer than 10 to 14 headache days in a month whereas an individual with chronic migraine is considered to experience 15 or more headache days per month, eight of which meeting migraine criteria, for over three months ("Chronic migraine," 2016). Individuals can also transition from no migraines to episodic migraine to chronic migraine while others are diagnosed lacking a transition.

A migraine consists of four phases that make up what is called an attack: the premonitory phase; the aura phase; the headache phase; and the postdrome phase (Goadsby et al., 2017). These phases are not completely distinct, and an individual can experience aspects of two phases

at once. Additionally, not everyone may experience all the phases. A typical migraine attack can last for a few hours to several days, but the premonitory symptoms may be present up to 72 hours before the onset of pain (Goadsby et al., 2017). Symptoms of the premonitory stage include irritability, fatigue, food cravings, repetitive yawning, changes in mood and activity, stiff neck muscles, and phonophobia (sound sensitivity) (Goadsby et al., 2017). The aura phase consists of temporary transient neurological deficits and is experienced by about one-third of migraine sufferers (Goadsby et al., 2017). Visual aura is the most common, either experienced as visual hallucinations or as a loss of vision. Other types of aura include deficits of the senses, motor function, speech, brain stem, and retinas (Goadsby et al., 2017). In this way, symptoms in the aura phase can be like those of a stroke.

The headache phase of a migraine usually lasts anywhere from four to 72 hours and nausea, photophobia, or light sensitivity, and phonophobia may be experienced simultaneously. Frequent cognitive complaints expressed during this phase include impaired thinking, difficulties with speech, and feeling distracted (Gil-Gouveia & Martins, 2019). The postdrome phase is often neglected in research and unlike the other phases, does not have a strict definition. However, the common symptoms reported after the headache phase include tiredness, difficulties in concentrating, and muscle or neck stiffness.

Triggers of migraine are not well understood as migraines often occur spontaneously and it can be difficult to accurately note the duration or onset of the attack. Commonly understood triggers include chemical and environmental triggers, skipping meals, sleep disruption, and stress. During acute stress, a neurotypical brain should be able to adjust to functioning in the new environment. However, people with migraines seem to be more affected by environmental changes than are those without migraines (Goadsby et al., 2017). Altered chemical responses to

environmental changes in migraine brains, like stress, help to explain why people with migraines have low stress resilience when compared to healthy peers. While symptoms of migraine must be largely recorded through self-report, Gil-Gouveia and Martins (2019) cite that studies have documented objective cognitive decline during a migraine attack. Neuropsychological tests administered during an attack show declines in areas such as processing speed, working memory, visual-spatial processing, attention, and verbal learning (Gil-Gouveia & Martins, 2019).

Risk factors for developing chronic migraine include depression, anxiety, comorbid pain disorders, stress, caffeine, and acute medication overuse (“Chronic migraine,” 2016). A person usually experiences a first migraine in their adolescence or young adulthood and chronic migraine is most common between the ages of 30 to 40 (“How migraine evolves,” n.d.; “Migraine later in life,” n.d.). Migraines have also shown to decrease in frequency around 50 or 60 years of age with research showing that 40% of people with chronic migraine experience many fewer to no attacks after the age of 65, although this is not true of all people with migraines (“Migraine later in life,” n.d.). Children whose parents have chronic migraines are twice as likely to experience migraine throughout their life as are those whose parents do not experience migraines (“How migraine evolves,” n.d.). Interestingly, a sign that a child may develop chronic migraines is if they experience certain types of abdominal pain or gastrointestinal issues (“How migraine evolves,” n.d.). Migraine triggers can change throughout one’s life; for adolescents, triggers are more often associated with coffee overuse, irregular sleep, and increased stress whereas migraine triggers in adulthood may more often be induced by hormonal changes, pain, smoking, or alcohol use (“How migraine evolves,” n.d.).

Understanding the intricacies of a pain condition like migraine is crucial to begin to frame the experience of individuals with similar pain conditions or other chronic illnesses.

Knowing how a chronic illness like migraine affects all parts of an individual's capacity to function is essential to fully understanding the experiences of college students living with similar conditions. As illustrated previously, a migraine attack is not just when the individual experiences pain, it is the collective experience of a complex neurological disorder. Migraine is also a much more complicated and involved experience than is an acute headache. The effects of a chronic illness, like migraines, are much more global than are those of an acute injury or illness. Even without the sensation of pain, a person with migraines can be disoriented, tired, and have reduced focus for days before and days after pain. Additionally, even during the period between attacks, when the brain is thought to function normally without symptoms, migraine brains seem to process sensory information differently (Gil-Gouveia & Martins, 2019). During the interictal period, the time between attacks without symptoms, a person with migraines is more sensitive to light, sound, certain visual stimuli, and painful thermal stimuli (Gil-Gouveia & Martins, 2019).

Illness Identity

An important concept unique to people with chronic illness is *illness identity*, or “the degree to which a chronic illness becomes integrated into one's identity” (Oris et al., 2018). As with other aspects of identity, illness identity is often conceptualized within life-span development and the processes through which individuals unify aspects of themselves into a sense of self that guides behavior, values, and choices (Oris et al., 2018). Individuals living with chronic illness are confronted with the task of integrating illness into their identity to create or re-establish a sense of self (Oris et al., 2018). There are different ways of integrating illness into one's identity and it is often considered an ongoing process. Oris et al. (2018) and others have conceptualized illness identity in four states: *engulfment*, or one's identity being dominated by

illness; *rejection*, a refusal to accept illness into sense of self; *acceptance*, integrating illness into sense of self without overwhelming it; and *enrichment*, or positive changes in reaction to negative life experiences, also referred to as stress-related growth. How an individual chooses to relate to their illness, and therefore their sense of self, can impact psychological and physical functioning (Oris et al., 2018). This struggle of integration is a clear way in which chronic illness is experienced differently than is acute illness, especially in developing persons.

Marko (2012) explored how people with migraines construct their illness identity through analyzing thousands of online discussion posts on forums for headaches and migraines. A theme that emerged was that some people with migraines adopted the medicalized illness identity and associated language imposed by medical professionals and the field as a whole. The results revealed that:

Headache sufferers seem to conceive of themselves, in relation to their condition and to their environment, in terms imposed by medicine and institutional health care rather than offering alternatives highlighting the subjective experience of the condition and an agentive approach to it (Marko, 2012, p. 270).

While this is a specific and narrow study focusing largely on the language used to situate migraine sufferers' health identity, it offers an interesting perspective on how some integrate their illness into their daily language and communication with others.

Invisible Chronic Illness

The category of "chronic illness" encompasses many different diagnoses including those with externally visible symptoms. Illnesses that present visibly, for example, those that require the use of a wheelchair or other assistive device, are not exempt from harmful, negative stigma. A common assumption about individuals with visible disabilities is that they require help and

must be treated especially kindly (Akin & Huang, 2019). While to many this response may not seem like a “negative” reaction (i.e., when compared to bullying, name-calling, etc.), acting in this way can be patronizing to the individual by enforcing the stereotype that an individual with disabilities is inherently helpless and must always require assistance. It is also interesting to note the impact of perceived permanence on the stigma of physically visible disabilities. For example, someone with a crutch or cast is often perceived as having an acute, less permanent injury and is therefore treated more closely to a “normal” non-disabled person than is true of those with an invisible disability (Akin & Huang, 2019). Perceptions of individuals who have lost a limb or are paralyzed, for example, garner more of this notion of helplessness and identified to be treated in a different or special way than are those without visible impairments (Akin & Huang, 2019). Understanding the proximity an illness has to chronicity or permanence and how that impacts not only others’ perceptions but also the individual experience is relevant to this literature review. Along with considering the implications of illness chronicity, one must consider the element of illness invisibility.

Termed invisible, hidden, or non-visible illnesses are those that do not have external visible cues indicating ill health. Invisible *chronic* illnesses (ICIs) have the added element of being ongoing and persistent while invisible. Common examples include, but are not limited to, diabetes, cancer, fibromyalgia, migraines, and depression. Although all of these can be considered “invisible chronic illnesses,” the illness experience and symptomatology of, for example, cancer and depression are vastly different and exist in different medical spheres than do the others. Commonly researched types of ICIs, as related to the focus of this study, particularly stigma, perceptions, and higher education, include mental illnesses and learning disabilities.

Masana (2011) provides an interesting exploration into the experiences of invisible illness that go beyond traditional biomedical conceptualization and nosology. Masana (2011) asserts that illness invisibility extends beyond the absence of physical symptoms and includes social, medical, and political invisibility. The author utilizes an anthropological lens to understand that “illness visibility or invisibility does not only depend on a visual verification of observable evidence, but on a social gaze that combines illness cultural means and beliefs” (Masana, 2011, p. 130). The author offers a unique approach to understanding the process of invisibility from a medical anthropology perspective. She sees this process as a “sequence of combined steps/actions: to see or not, to know or not, to recognize or not, and to accept or reject” illness (Masana, 2011, p. 130).

Firstly, an individual or society must see or not see the illness, dealing with the physical realm of illness (in)visibility. Humans make meaning through categorization and as humans rely heavily on sight, these categories are often based on physical characteristics. In psychology, these categories are called schemas, which can include categories as simple as “four-legged animals,” to, at a more complex level, what certain societal roles look like. In society, humans often make meaning through social schemata, or “cognitive structure[s] of organized information, or representations, about social norms, and collective patterns of behavior within society” (“Social Schema,” n.d.). Within the context of disability, physically abled bodies are considered to be “normal,” or the standard in society. Deviations from this standard create the schema of a disabled person. The most visibly obvious deviation from the standard of able-bodied individuals is when individuals have visible physical limitations. Invisible illnesses subvert this immediate categorization because a person with an ICI can “pass” as fitting into the socially acceptable able-bodied schema.

Conceivably, since one's illness is not visible, it is entirely up to that individual to make their illness known or not, to disclose or not to disclose, giving them control over Masana's second step: to know or not to know. Choosing not to disclose can be viewed as "deliberately invisibilizing" one's illness, which is a conscious act to avoid stigmatization and social rejection, a potentially positive consequence of invisibility (Masana, 2011, p. 131). However, control over disclosure is often a fallacy and the choice to disclose is often taken away from the individual if they want to be legitimized, recognized, or receive support. This idea is specifically relevant when considering academic accommodations in college. If an individual is able to pass and blend in with their work or school environment, they are able to avoid stigmatization and align themselves with a "healthy narrative" (Kreider et al., 2015; Spencer et al., 2018). However, if they eventually need accommodations to help them at work or school, they must prove that they are ill enough to receive aid; thus, the choice to disclose is removed. Disclosure is an exigent decision that individuals with ICI must consider because often after disclosure comes delegitimization and/or stigma. As Masana (2011) defines delegitimization, one's illness is now known through disclosure but is not recognized nor accepted so one's illness identity is not truly "seen" or believed. For an illness to be acknowledged, it must be accepted socially, culturally, *and* biomedically. Thus, the legitimization of illness does not solely rest on the shoulders of a diagnostic label but rather exists as a social construct (Masana, 2011).

Consider, for example, the diagnosis of chronic migraine. If legitimacy were inherently tied to a diagnosis, then individuals who disclose their diagnosis would be immediately seen and not subject to stigma. This result is, however, not the case. A 2016 market research survey of 4024 American adults requested on behalf of Excedrin® polled people with migraines "about the types of head pain they experience, how frequently that pain causes them to miss work or school

and how they explain that absence to a boss or instructor” (Parikh & Young, 2019; “Employees hide headaches,” n.d.). Among the results was evidence that after disclosure in the workplace, “half of all managers surveyed did not consistently accept headache as a reason to call off of work, suggesting endorsed and enacted stigma toward migraine;” this outcome indicates that the disclosure of a diagnostic label does not always inherently engender trust and legitimacy (Parikh & Young, 2019). Biomedical models of illness, on which diagnoses are based, focus on individual physical impairments but a shifting focus in disability research is the idea that disability is “socially constructed and identified” (Spencer et al., 2018, p. 632). To fully capture the complexity of invisible illness experience, one must step outside of a purely biomedical conceptualization of illness and explore the broader implications of living with chronic illness, especially invisible chronic illness, in society.

Invisible Chronic Illness and the College Experience

There is a lack of research on the intersection of chronic illness and its impacts on college-aged adults as the majority of research relevant to the topic of this thesis has either been focused on chronic pain in young children, kindergarten through 12th grade, or adults (Chan et al., 2005; Dick & Riddell, 2010; Gorodzinski et al., 2011; Guite et al., 2000; Logan et al., 2007a; Logan et al., 2007b; Logan et al., 2009; Olson et al., 2004). This gap in the literature is widened when focusing on chronic migraine experience in college students. While many aspects of life with chronic illness may be shared regardless of age, there is a uniqueness to the experience of young adults with chronic illness (Houman & Stapley, 2013). Young adulthood is an immensely transformative and transitional part of one’s life, entirely independent of the decision to attend college. Biological and psychosocial change during this period is influenced by changing social roles and social groups as young people begin to create and solidify their values, beliefs, and

identity. Navigating college with an invisible chronic illness, however, is compounded with difficult choices and considerations.

Students with invisible chronic illness (ICI) not only face the expected difficulties of college, but they must also face social, medical, and political invisibility largely on their own. They must also navigate the bureaucracy that comes with accessing and negotiating accommodations. Additionally, students with chronic illness may see going to college as a chance to create their own narrative and escape stigma they may have experienced in years previous (Houman & Stapley, 2013). Especially for students with ICI who can “pass,” not revealing their illness may be a crucial aspect of wanting to construct a healthy narrative for themselves in college. Non-disclosure could also be a choice to assist the integration of illness identity to one’s sense of self in a particular way (Oris et al., 2018). While this may have advantages, this may also mean forgoing the legally afforded academic support (Kreider et al., 2015; Spencer et al., 2018).

The implications of a lack of understanding about the broad impact of invisible chronic illness in college are explored by Kreider et al. (2015). They interviewed 13 university students, one parent of a student registered with the Disability Services Office, and nine university personnel. Twelve of 13 of the student participants chose to disclose their illness in the researchers’ interview process. These illnesses included Attention Deficit Disorder, an auditory or sensory processing disorder, Autism Spectrum disorder, Cystic Fibrosis, learning disabilities, reduced vision, traumatic brain injury, or an autoimmune disorder. The students expressed how the support they had access to in college did not consider the broad impacts of their chronic illness. The impact of their disability on attentional, organizational, or processing challenges made the time constraints of assignments, cooperative assignments, and engaging with campus

life more difficult overall (Kreider et al., 2015). Students also expressed how the impact of their invisible chronic illness on their day-to-day function was not understood holistically by faculty, student support services, or the administration as a whole. For example, one student voiced the complexity and broad impact of invisible illness: “I have to pick and choose because I have a [disability/health] priority. I cannot have everything done because I have no energy to do it” (Kreider et al., 2015 p. 431). This comment was echoed by other participants who similarly were frustrated by the perceived “disproportionate emphasis on classroom supports” (Kreider et al., 2015, p. 431). The support systems readily available to the students were therefore not adequate to support their unique concerns.

Another theme highlighted by Kreider et al. (2015) was disability identity. Many of the student participants spoke of struggling to accept a disability-related identity. Their search for their own disability identity led some to neglect the management of their illness, sometimes to the point of actively choosing to eschew accommodations either due to not wanting to accept their need for additional help or to prove their ability to be successful on their own (Kreider et al., 2015). Not wanting to accept an illness label may be a step towards illness identity integration into a sense of self but may have negative implications for students in college. One student recounts: “You at the beginning are like, ‘I am going to do this [without accommodations], let's see how the first test is.’ And then...[I] didn't do well” (Kreider et al., 2015, p. 433). The students wanted to succeed without accommodations everywhere they could but if students realized they needed support later, like this student, they felt that they faced criticism from their instructors:

He made me feel inferior... he yelled at me... I didn't say this, but I am thinking... ‘I know I chose to come in late and I am sorry, but I thought I could do this without it

and now I realize I can't (Kreider et al., 2015, p. 434).

What was notable in these students' narratives was the clear and present stigma they anticipated and reported facing. Another theme in the interviews was that the faculty and other students these students interacted with seemed to perceive accommodations as an unfair advantage. For example, one student participant expressed this view as follows:

The faculty and [other] students almost hold it against me because I am getting special treatment. They can't see disabilities so they don't see something broken... (Kreider et al., 2015, p. 434).

With invisible illness seems to come illegitimacy and incredulity. While there may be legal supports in place to accommodate students, their decisions to pursue accommodations are often influenced by the perceived stigma, perceptions of unfairness, and disbelief in an accepted disability (Kreider et al., 2015).

Understanding why some students may choose not to disclose their illness and forgo accommodations is critical to understanding how colleges can better support students with ICI. Spencer et al. (2018) explored how the decision to disclose illness status impacts how college students with largely invisible chronic illnesses contextualize their health narratives. It is important to note that this study was done at a university in Australia and while those universities are not held to the same laws as in the United States, the qualitative data gathered is pertinent to understanding student illness experience. The study consisted of in-depth interviews with 16 students with invisible chronic illnesses including but not limited to: Type 1 diabetes, autoimmune diseases, chronic migraines, and chronic pain resulting from comorbid conditions causing joint or gastrointestinal swelling. Three main themes emerged from these interviews: the struggle between maintaining a "normal healthy self" and distancing themselves from labels that

connote disability or ill health; difficulties in managing fluctuating health and how that could interrupt their preferred health narratives; and challenges that come with navigating university structures to access academic support (Spencer et al., 2018).

The effort that it takes these students to define their own (ill) health identity actively and daily is present in these interviews. How these students defined “health” and positioned themselves within that definition involved highlighting their positive healthful activities while distancing themselves from ill health by minimizing the severity and daily impact of their illness (Spencer et al., 2018). Two students specifically highlight their eating and exercise habits in order to situate their (ill) health narratives: Vanessa cites her healthy eating habits and says she is “probably as healthy as [she] could make [her]self right now” (Spencer et al., 2018, p. 636)). Other students distance themselves from “severe” disabilities like Dylan who says, “I mean I’m sure you have been speaking to people who have like actually serious chronic illnesses” (Spencer et al., 2018, p. 636)). Another example is Vanessa, who says:

[I] never really thought of it as a disability. I would never classify it as one, like if someone asked me, ‘do you have a disability?’ I would say no. I have health problems, but I’m not disabled. (Spencer et al., 2018, p. 636)

Having invisible symptoms becomes an advantage when wanting to align with a “healthy” illness identity but puts significant strain on students. The difficulties of managing both the demands of a medical condition and those of attending university were compounded by illness invisibility. Gina who has Type 1 diabetes voices the struggle with invisibility and its pervasive toll:

This is obvious to everyone with a chronic illness; it’s hard sometimes, cos it’s there all the time, you always have to think about it, it does get in the way of life sometimes.

Always having to think about it is a little exhausting, but there's no alternative. (Spencer et al., 2018, p. 637)

The participants also referenced the concerns that come with a lack of awareness and understanding about the broad impact of chronic health conditions. One participant with chronic migraines said:

Most people consider migraines just like headaches, and I don't think they understand the extent they can affect your day. You honestly just lose the rest of whatever day you had and the next day you[re] very groggy and not really yourself. (Spencer et al., 2018, p. 637)

Faced with this lack of understanding, a decision must be made: disclose one's illness in order to prove and legitimize the need for help or stay invisible and delegitimized but have the power to define one's own ill health identity. This decision is further complicated when interacting with disability services to receive academic support. Wrestling with this decision in the face of disability services brought up feelings of shame, stigma, guilt, and the unworthiness of support (Spencer et al., 2018). The students who were able to get academic support did recognize that the legitimacy they gained from disclosure made managing the ebbs and flows of their illness more manageable. However, in gaining legitimacy, validation, and understanding, "participants had to push to one side their preferred narrative of positive health and uphold a sickness identity" (Spencer et al., 2018, p. 640). To be understood and properly supported, students no longer had power over their own health narrative. The implications of disability laws in the United States on students' decisions to disclose are discussed further later in this paper.

The stress of managing illness is itself a difficult and nebulous task with many contributing factors but the academic pressures of college magnify that stress. Along with the

decision to disclose come difficulties like having to advocate for oneself, potentially for the first time (Lynch & Gussel, 1996). There are significant differences between obtaining academic support in K-12 versus postsecondary schools, which will be discussed further in the policy section of this paper. Working through the bureaucratic process of support services can be daunting and confusing for many students. Even when, or if, they are granted academic support, it is also the duty of the student to relay their needs accurately and effectively to their instructors as letters from the support services department do not disclose the reason for accommodations to protect confidentiality. This privacy protection falls under the Family Educational Rights and Privacy Act (FERPA) that protects, among other things, the student's "right to have control over the disclosure of personally identifiable information" with some conditions ("The family and education rights and privacy act," 2011). As evidenced by Spencer et al. (2018), the control over disclosure is essentially taken away from students with invisible chronic illness; a need for legitimacy and support often necessitates disclosure. Understanding the interactions between stigma and lack of understanding about ICI and how disability laws and policies impact the student illness experience is the focus of this thesis.

Disability Policy in the United States

Colleges are obligated to follow several laws that protect individuals with disabilities; what is required of colleges by these laws dictates what types of accommodations college disability services offices grant to students. Firstly, the differences between the law governing Kindergarten through 12th grade (K-12) schools and those that govern postsecondary schools will be discussed. Understanding how these laws differ will elucidate the transition that students with disabilities face when entering college. The three main disability laws that will be discussed are the Americans with Disabilities Act of 1990 (ADA), Individuals with Disabilities Education

Act (IDEA), and the Rehabilitation Act of 1973. Both the Rehabilitation Act of 1973 and the ADA are broad civil rights laws that cover a wide range of rights. For the purposes of focusing on the topic of this literature review, just Section 504 of the Rehabilitation Act and Titles II and III of the ADA will be addressed as those are the specific sections that pertain to colleges and universities. For reference, the Rehabilitation Act of 1973 will henceforth be referred to as Section 504 and the Americans with Disabilities Act of 1990 will be referred to as the ADA. As well as a general overview of these laws, an analysis of how each applies to secondary schools versus postsecondary institutions will be given.

The ADA is civil rights legislation that prevents discrimination based on ability in areas including employment, transportation, public accommodations, communications, and access to state and local government programs (Katsiyannis et al., 2002). The two sections of the ADA that apply to non-discrimination in colleges and universities are Titles II and III. Title II covers state-funded programs under which public universities would fall. Private colleges would fall under Title III. Outlined in this legislation are ways in which public and private institutions cannot discriminate on the basis of ability, for example, by excluding someone from participation in programs or services or benefits because the person has a disability. Institutions must adhere to the ADA and if they are found in violation must answer to the US Department of Education Office for Civil Rights.

IDEA, passed in 1975, was groundbreaking civil rights legislation for students with disabilities. The legislation allowed these students who had previously been barred from public school to be included and receive appropriate and integrated education (“About IDEA,” n.d.). While IDEA only applies to early childhood, primary, and secondary education, comparing the schools’ responsibilities to students with disabilities under IDEA to postsecondary institutions’

responsibilities is critical to understanding the student experience in college. As previously mentioned, IDEA only applies from early childhood through high school graduation and delineates the school's legal responsibilities for students who may require special education (deBettencourt, 2002). The jurisdiction of IDEA includes all K-12 special education programs in the U.S and provides some federal funding to these programs. IDEA also has a specific set of 13 disability categories in which a student must fit to be considered eligible: autism, specific learning disability, speech or language impairments, emotional disturbance, traumatic brain injury, visual impairment, hearing impairment, deafness, mental retardation, deaf-blindness, multiple disabilities, orthopedic impairment, or other health impairment (deBettencourt, 2002). Although not explicit in a category, a diagnosis of Attention Deficit/Hyperactivity Disorder (ADD/ADHD) can be covered under IDEA if it meets specific criteria.

The core purpose of IDEA is securing the right to “free and appropriate education,” commonly referred to as FAPE. This is the idea that the unique needs of students with disabilities will be met at no additional cost beyond that given to students without disabilities. This concept is also tied into the fact that K-12 schooling is considered a free right in the United States. In practice, FAPE means that schools and teachers are required to identify students who may be eligible for special education, evaluate their specific needs, and craft an educational plan called an Individualized Education Plan (IEP). What is addressed through this plan is what must be modified to make the child *successful*. The key factors that make IDEA distinct from Section 504 and the ADA is that it is the duty of schools to identify students who may qualify for special education and that the goal is to design for success.

Section 504 is designed to prevent discrimination of individuals with disabilities although with the added intent to provide “qualified handicapped persons” with equal opportunities to

access program benefits. This statement means that Section 504 is outcome neutral, or the goal is to make equal access to opportunities and not discriminate on the basis of ability (Madaus & Shaw, 2004). This purpose is different from the purpose of IDEA, which strives to make individual students *succeed* academically. Two subsections of Section 504 cover education spanning kindergarten through college. The two sections are Subpart D, applying to preschool through secondary and adult education, and Subpart E, applying to postsecondary institutions (Madaus & Shaw, 2004). Subpart D mandates many of the same responsibilities as IDEA but the criteria for who legally qualifies as “handicapped” differ. IDEA has more strict criteria and requires more specific requirements for compliance. As illustrated earlier, IDEA has 13 disability categories that delineate who is to be considered eligible. Section 504, however, defines a “handicapped person” as “any person who (i) has a physical or mental impairment which substantially limits one or more major life activities, (ii) has a record of such impairment, or (iii) is regarded as having such an impairment” (§104.3 (j), as cited in Madaus & Shaw, 2004). Examples of “major life activities” include walking, seeing, hearing, speaking, breathing, learning, and working. The following is a listing of what is considered “physical or mental impairment” under Section 504:

(i) Physical or mental impairment means (A) any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular, reproductive, digestive, genito-urinary; hemic and lymphatic; skin; and endocrine; or (B) any mental or psychological disorder such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities (§104.3 (j)(2)(i)(ii), as cited in Madaus & Shaw, 2004).

These categories are intentionally vaguer than the categories in IDEA for purposes of inclusivity (Madaus & Shaw, 2004). Additionally, with IDEA there are clear guidelines for determining if a student's disability warrants eligibility under the law. The broader-sweeping categories of affected body systems, rather than specific disabilities, in Section 504 allow either the K-12 school district or college disability services to determine if a disability warrants eligibility within the confines of the law. Within this further delineation between K-12 and postsecondary institutions, the definitions of a *qualified*, or eligible, individual differs from both each other and a broader definition given in Subpart A of Section 504. Subpart D, for K-12 schools, defines a "qualified handicapped person" as someone:

- (i) of any age during which nonhandicapped persons are provided such services, (ii) of any age during which it is mandatory under state law to provide such services to handicapped persons, or (iii) to whom a state is required to provide a free appropriate public education... (§104.3(k)(2), as cited in Madaus & Shaw, 2004).

However, under Subpart E governing postsecondary institutions, a "qualified handicapped person" is someone "who meets the academic and technical standards requisite to admission or participation in the [college's] education program or activity" (§104.3 (k)(3), as cited in Madaus & Shaw, 2004). An important distinction between IDEA and Section 504 is that Section 504 is only designed for students with a mental or physical impairment that substantially limits major life activities. This definition means that a student who has academic difficulties, but no disability could be covered under IDEA but not under Section 504 (Madaus & Shaw, 2004).

There are two components of Subparts D and E of Section 504 that are particularly important in understanding what is legally afforded to students in secondary versus postsecondary schools. The first is the responsibility of identifying students who may qualify for

special education. Subpart D covering K-12 schools, like IDEA, requires that the institutions that fall under its purview annually take steps to identify and locate “every qualified handicapped person” in their jurisdiction (Madaus & Shaw, 2004, p. 83). This goal is related to how the specific requirements of FAPE shape K-12 versus postsecondary schools’ responsibilities. Under Subpart D for K-12, FAPE looks similar to that under IDEA including the requirement to identify qualified students, except it results in what is called a “504 plan,” as opposed to an IEP. Section 504 also has less narrow criteria for who qualifies as disabled, which can therefore result in less assistance or monitoring for 504 eligible students as opposed to students granted an IEP (Madaus & Shaw, 2004). FAPE still applies under Subpart E for postsecondary institutions, but as postsecondary education is *not considered a free right*, unlike K-12th grades, it has different requirements. Firstly, FAPE lacks the mandate for institutions of higher education to identify qualified students; the onus to seek services falls on the student to self-identify and self-advocate. The main goal of FAPE under Subpart E is to ensure the postsecondary institution does not charge a student with disabilities more than they would a student without disabilities.

The second pertinent component of Subparts D, for K-12, and E, for higher education, are the proceedings for evaluation and placement of qualified students. As previously stated, Subpart D includes the requirement for K-12 schools to identify students with disabilities and are also required to evaluate the student. This evaluation has specific requirements for tests and types of individuals involved in the process. In Subpart E, there is no language outlining the evaluation or assessment processes mainly because it is *not the postsecondary institution’s legal responsibility to identify students*. The burden of evidence for assessment and evaluation is on the student and the only listed qualification for professional present in the decision process is a “responsible employee” as opposed to Subpart D which requires a team of professionals with knowledge of

the student (§104.7(a), as cited in Madaus & Shaw, 2004). Additionally, there is no plan like an IEP or 504 that results from disability assessment proceedings in postsecondary institutions, rather the institution is required to provide *reasonable* academic adjustments or auxiliary aids. It is important to note, however, that if the institution can demonstrate that the requested accommodation fundamentally alters an “essential” element of the class or causes undue financial or administrative burden, then they can refuse said accommodation and it will not be considered discriminatory under the law. It is up to the institution to determine whether an accommodation goes beyond what is considered *reasonable*.

Interacting with Disability Services: The Student Experience

As the legal responsibilities required of K-12 institutions shift for those required of institutions of higher education, so do the responsibilities of the student. There are two key elements that change for a student with disabilities in their transition to college: (1) the need to self-advocate and (2) the need to self-identify. These two core components can also be barriers to seeking accommodations in college. The following section will delve into what must be considered by such students during this difficult transition and the implications of their decisions.

Self-advocacy within this context can be defined as “the ability to communicate one’s needs and wants and to make decisions about the supports needed to achieve them” using “knowledge of self, knowledge of rights, [and the] ability to communicate” (Daly-Cano et al., 2015, p. 215). The skills involved in self-advocacy also rely on the students’ executive functioning to manage tasks like planning and organizing (Daly-Cano et al., 2015). Learning how to effectively self-advocate can have a large impact on how students with disabilities adapt to college and can be influenced by messages from family, educators, and peers. Daly-Cano et al. (2015) isolated from a larger study the narratives from eight university students who self-

identified as students with disabilities. For this smaller study, these eight students' narratives were analyzed for themes of self-advocacy. The disabilities of these participants were diverse including Asperger's, bipolar disorder, obsessive compulsive disorder, retinopathy of prematurity, irritable bowel disease, and various learning disorders (Daly-Cano et al., 2015). The narratives revealed that their process in learning to self-advocate was heavily influenced by support from their family members and K-12 personnel. Positive feedback about the importance of self-advocacy from these sources gave the students confidence to do so in college (Daly-Cano et al., 2015).

From these narratives, three types of self-advocacy in college emerged: proactive, reactive, and retrospective. Proactive refers to the choice to seek resources before any problems arose in college. Proactive self-advocacy behaviors included approaching disability services and professors at the onset of the semester, making appointments with a therapist, and doing preparatory work in the summer before classes started (Daly-Cano et al., 2015). Reactive self-advocacy arose when students, even if they engaged in proactive self-advocacy, had to respond to challenges of their established supports. Situations requiring reactive self-advocacy often were when professors refused to enact afforded accommodations like, for example, a professor refusing to allow double time on a test even if that were the student's accommodation (Daly-Cano et al., 2015). Lastly, retrospective self-advocacy occurred when students realized, after an incident or experience, that they needed accommodations and subsequently sought resources and support.

The ability to self-advocate is an integral step in receiving accommodations in college and is a skill that must be learned. However, it is not all that is required of students with disabilities; with self-advocacy comes self-identification and possibly disclosure. Research

shows that disclosing a hidden facet of one's identity, including disability, sexual orientation, and mental health issues, can promote a sense of self-acceptance, self-esteem, and self-efficacy, create the opportunity to connect with a community, and improve physical and psychological health and well-being (Corrigan et al., 2013; Corrigan et al., 2016; Elliot & Doane, 2015; Taniguchi, 2020). Within the context of college students, disclosure can lead to increased participation in academic and social activities, reduced stress resulting from actively hiding one's illness, and understanding from faculty and peers (Lynch & Gussel, 1996; Masana, 2011). However, there are many reasons students with ICI choose non-disclosure including not wanting to be labeled as "disabled," not wanting to undertake the institutional process of requesting accommodations, and in an effort to avoid stigma surrounding invisible illnesses (Grimes et al., 2018; Kreider et al., 2015; Marshak et al., 2010; Lynch & Gussel, 1996; Spencer et al., 2018).

Stigma can be so powerful as to reduce someone "from a whole and usual person to a tainted, discounted one" now to be perceived as having a "spoiled identity" (Goffman, 1963, p. 3). An invisible force, stigma expressed by others can have great and equally unseen effects on an individual. For a college student, faculty are a focal point of interaction and can often be influential in students' college career. A consistent theme seen across the literature is the powerful influence of faculty perceptions on students' decisions to disclose (Akin & Huang, 2019; Baker et al., 2012; Lynch & Gussel, 1996; Marshak et al., 2010; Murray et al., 2008; Sniatecki et al., 2015). Specifically, faculty who lack knowledge not only about disability policy and rights in higher education, but also about the effects of disability tend to have a more negative perception of students with disabilities and are less likely to be willing to accommodate than are faculty who possess that knowledge (Akin & Huang, 2019; Baker et al., 2012; Lynch &

Gussel, 1996; Marshak et al., 2010; Murray et al., 2008; Sniatecki et al., 2015). These perceptions are often created through and perpetuated by stigma.

The influence of faculty attitudes on students is especially visible when those attitudes are expressed through negative behavior or responses (Baker et al., 2012; Lynch & Gussel, 1996). Should a student experience negative feedback from a faculty member when disclosing their ICI, this experience could reinforce disability stereotypes of helplessness, make it difficult for the student to disclose their illness in the future, or even dissuade students from seeking support (Hartman-Hall & Haaga, 2016; Lynch & Gussel, 1996). Due to confidentiality laws like FERPA, part of managing the accommodations process for students is interacting with faculty and negotiating the practical implementation of their accommodations. When these interactions can have such a profound impact on the students' perception of themselves and their future in higher education, knowing how to bolster faculty knowledge of disabilities in order to prevent negative perceptions is crucial (Baker et al., 2012). An integral part of the present study is understanding the student-professor relationship, faculty perceptions of students with ICI, and whether education about the impact of invisible chronic illness can influence those perceptions. Understanding how these interactions or fears about these interactions influence students' decisions to seek accommodations in the first place, is also a focus of this study.

Interacting with Disability Services: Accommodations

As previously discussed, the language outlining postsecondary institutions' legal responsibilities towards students with disabilities is considerably less defined than what is required of K-12 schools. These legal differences between high school and college add an additional stressful element to the transition to higher education for students with disabilities, the most salient of which is that the responsibility to seek academic support now falls solely on the

student. The process of academic accommodation in high school involved a team of qualified individuals working with the student's legal guardians on behalf of the student. As soon as that student enters college, the student must advocate for themselves and the law does not require a team of professionals working on the student's behalf. Additionally, a student entering college is usually at least 18 years old and therefore is legally an adult so schools cannot automatically involve parents in processes like accommodations proceedings. A student can request that their parents be involved in the process. Many schools encourage parents, if they are to be involved, to take on a solely supportive role rather than a directive role. Some schools highlight the differences in parental responsibilities from high school to college and emphasize the importance of students learning self-advocacy skills as discussed in the previous section ("*Frequently asked questions*", 2020; "*Guide for parents of students*", 2018).

Another consequence of the less specific legal responsibilities required of disability services outlined in Section 504 is that what a student can expect when interacting with college's disability services vary widely. This variability is true of the types of accommodations the college is willing to grant, although there are commonly used ones as well as some that are rare. Some common accommodations include assigning a note taker or scribe, several test taking accommodations like testing in a distracting reduced environment and extra time to complete the test, adding assistive listening devices to the classroom, and removing architectural barriers (Katsiyannis et al., 2002). Less common accommodations include flexibility in deadlines and attendance. How attendance factors into grades and its importance in learning in college is controversial and highly debated, and quite relevant to the experience of chronic illness.

Due to the unpredictable nature of chronic illness, attendance can be a significant barrier in many students' college experiences. What contributes to an attendance accommodation being

rare is the clause that allows colleges to refuse an accommodation if it compromises an essential element of the class. Especially at small liberal arts colleges, discussion with peers about course topics is often a large part of the curriculum and is therefore often considered an essential element of the class. How much emphasis should be given to physically showing up to class is often based upon each professor's preference. There are cases to be made for making punitive attendance policies, where the student's grade is negatively affected for missing class, and cases to be made for not taking attendance at all (Credé et al., 2010; Moore, 2006; St. Clair, 1999).

Many colleges give professors freedom to make the rules for their own classes so there is often no institution-wide attendance policy. From the perspective of accommodations, this means there is a wide variation regarding the role of attendance in a class. When determining if an attendance accommodation fundamentally alters an essential element of a course the following questions are often considered: (1) Is there regular classroom interaction between the instructor and students and among the students themselves?; (2) Do student contributions in class constitute a significant component of the learning process?; (3) Does the fundamental nature of the course rely upon student participation as an essential method of learning?; (4) To what degree does a student's failure to attend class constitute a significant loss of the educational experience of other students in class?; (5) What does the course description and syllabus say regarding attendance?; and (6) What is the method by which the final course grade is calculated? ("Flexibility in attendance," 2016).

What accommodations are commonly given versus those that are rarer is an important consideration for students with any disabilities but particularly for students with ICI. The following is an exhaustive list of recommended college accommodations from a student with chronic migraine, as cited by the National Headache Foundation:

General accommodations: Allowed to take fewer classes or take classes part-time; Extra breaks to walk, meditate, or rest in a dark, quiet room; Access to a note taker; Access to a tutor; Access to plenty of snacks and water; Access to textbooks at school and at home to avoid carrying a heavy load; Can leave loud or bright environments as needed; Avoid or modify physical activity that may increase pain.

Accommodations for light sensitivity: Allowed to install blue-light reducing program (e.g., F.lux) on computer; Allowed to lower computer brightness; Permission to wear sunglasses and a hat indoors.

Accommodations for sound and scent sensitivity: Headphones and ear plugs to reduce noise; Allowed to listen to calming music (e.g.: binaural beats) while working; Extra time to travel between classes to avoid noisy hallways. Reduced exposure to chemical odors; Access to a mask or aromatherapy in an environment with a triggering scent.

Accommodations for exams or quizzes: Administer exams in a quiet, dark room with limited distractions; 50% extra time on exams; Access to a white noise machine during exams; Headphones and ear plugs to reduce noise; Allowed to listen to calming music (e.g.: binaural beats) during exam; Extra breaks during AND between exams in a dark room.

Accommodations for an acute migraine attack: Excused absences or tardiness during an acute attack; Flexible deadlines for assignments; Access to a quiet, dark room with a place to lie down during a migraine attack; May leave class to use restroom whenever necessary for nausea and vomiting; Allowed to carry required medications OR

access to medication through school nurse; Allowed to work from home when possible (M, 2019; “Migraine University,” n.d.).

Some of these listed accommodations may be more or less applicable to certain situations or universities, however they illustrate the breadth of facets affected among college students with chronic migraine. Also, it is important to note that a facet of many invisible illnesses, including migraine, is acute attacks that may require different accommodations. As an example, the nature of chronic migraines means there are unpredictable illness flare-ups that cannot be controlled by the student. Especially during a migraine attack, but also in the period afterwards, it is important for an individual to prioritize managing pain and minimizing more triggers so the attack can end as quickly as possible. Also, in the period after a migraine attack, a person with migraines is more sensitive to triggers and should take care to avoid them so as to not bring on an attack. With some professors using punitive attendance policies as a general practice, a student’s grade will be negatively impacted after they miss a certain number of classes. This outcome means that students with chronic illness often must choose between illness management and attendance responsibilities.

The Present Study

The literature review provided important context in which to situate the current study. The previous research on the global nature of chronic illnesses and its effect on functioning provides an understanding of the added challenges with which a college student must contend in addition to expected college-related challenges. Exploring the unique impact of invisible illnesses on identity development and experienced stigma provides context for college students with ICI in college, especially as they mature into adults and develop their own sense of self. A critical focus of the present study is not only the student-professor relationship but the how the

student interacts with their college's disability services office and the laws and policies that govern it. An in-depth analysis of disability laws in the United States, the differences between K-12 schools' legal responsibilities and those of postsecondary institutions, and how that is put into practice in regard to accommodations provides useful background information for the student-policy interaction.

While much pertinent and salient information has been gleaned from the current research on these intersecting topics of chronic illness, illness invisibility, stigma, disclosure, and disability laws and policy, there is a dearth of research done on the specific experiences of college students with invisible chronic illnesses, their beliefs about perceptions of disability, the faculty perspective on accommodations and students with ICI, and with a specific focus of chronic migraine. The following study uses an experimental paradigm to examine faculty perceptions and behavior regarding disability, student beliefs about faculty perceptions and behavior, and both faculty and student perceptions of the acceptability and perceived acceptability of different types of accommodations applicable for an invisible chronic illness like chronic migraine. Focusing on the roles of education and disclosure, the study offers four different types of communications about the disability and accommodation needs of a hypothetical gender-neutral student. The first is a standard accommodation request letter from an Office of Accessibility Services with no mention of the student's disability-related illness. The second, names the illness. The third, names the illness and offers education about the illness. The fourth names the illness in the accommodation letter, and illness education is provided in a follow-up email from the student. Thus, disclosure, education, and self-advocacy are explored as possible sources of influence on faculty attitudes about both common (extended test time and testing in a distraction-free environment) and less common (flexibility for deadlines and

attendance) accommodations. Overall, this study is focused on understanding the student-professor-policy relationships that influence the experiences of students with chronic invisible illness with the aim being able to identify points in these interactions that create barriers as well as strategies for mitigating them.

There were four specific hypotheses: (1) Participants would have more positive impressions of common accommodations (extended test time and distraction-free testing) than rare accommodations (deadline and attendance flexibility); (2) More information about the disability and its impact would positively influence accommodation impressions and increase faculty acceptance and perceived faculty acceptance; (3) Receiving illness information directly from the student would have a greater impact on positive faculty impressions than receiving the same illness information from the Office of Student Accessibility Services; and (4) Students would anticipate less acceptance of accommodations and less positive attitudes towards accommodations from faculty than faculty would report having.

Methods

Participants

The main component of the study was an experimental vignette. The two main participant pools, faculty and students, took the same survey. Students were asked to answer questions based on how they thought faculty might respond, while faculty were asked to answer based on how most faculty would respond. All faculty were invited to participate to maximize sample size. One student participant pool was registered with the Office of Student Accessibility Services (SAS), as they have already been approved for accommodations and can therefore be categorized as having an illness. Other participants were also recruited from the general student body. Students

who would likely qualify to register with SAS (ie., they had a medical condition that impacted their academic or daily functioning) were invited to complete the study.

Out of 94 total participants, there were four African American or Black identifying participants, 66 white identifying participants, six Asian identifying participants, six biracial or multiracial participants, and 17 participants did not answer. Five participants identified as Hispanic, 79 participants identified as not Hispanic, nine participants preferred not to answer, and five participants did not answer. There were 59 female or woman identifying participants, 22 male or man identifying students (one participant cited “male (but not exclusively)”), 3 non-binary identifying participants, and 14 participants did not answer. Student participants had an average age of 20.28 ($SD = 1.250$). Seven students were first-years, 12 students were sophomores, 12 students were juniors, and 23 students were seniors. Faculty positions ranged from instructor to full professor with the majority being assistant professors. Out of 40 faculty participants, the majority of faculty were affiliated with the sciences or Biology ($N = 14$), 21 had taught a First-Year Seminar (FYS), and faculty members received FYS training.

Fifty-four participants provided complete or nearly complete data and five participants were not included in analyses due to incomplete data. Thirteen students reported not being registered with SAS. Student participants registered with SAS were recruited with the help of the SAS office. Direct access to the emails of registered SAS students was not available to the researcher for confidentiality purposes. The recruiting email was sent internally by the SAS office and no identifying information was collected or stored with survey responses. Student participants not registered with SAS were recruited through Facebook posts put on each Connecticut College class page (see Appendix A). An administrator of the Connecticut College Facebook account posted the recruiting message to the accounts on behalf of the researcher.

Forty faculty provided complete or nearly complete data and four participants were not included in analyses due to incomplete data. Faculty participants were recruited by accessing email addresses available on each departments' website. The survey was emailed to all professors at Connecticut College and a second round of emails was sent as a follow-up reminder (see Appendix A).

Instruments

Experimental Vignette Conditions

The survey consisted of four experimental vignette conditions, not including the qualitative questions. The passages in each condition were modeled after an official notification letter from the Office of Student Accessibility Services (SAS) concerning a hypothetical student, Jaime Harris. Conditions 1-3 showed the notification letter, but specific details varied by condition. Condition 4 showed the notification letter but also included a personal email correspondence from the hypothetical student (Guite et al., 2000; Hartman-Hall & Haaga, 2016; Logan et al., 2007a; Logan et al., 2007b).

The first condition was the control condition. It is the same notification letter with the same information that is currently given to professors at Connecticut College from SAS (see Appendix B). This notification letter explained that Jaime Harris has been approved for registration with SAS and has been granted the following four accommodations: (1) testing in a distraction-reduced environment; (2) 50% extended time for tests, quizzes, and in class assignments; (3) deadline flexibility due to illness flare ups; and (4) attendance flexibility due to the chronic/episodic nature of the illness. Each of these are accommodations that Connecticut College has previously granted to students or that are potential accommodations that could be granted for a student.

The second condition had the same information as the first condition except that it named the medical condition that Jaime Harris has: Chronic Migraines (see Appendix C). The third experimental condition had the same information as the second except that it also included general illness educational information about Chronic Migraines (see Appendix D). Lastly, the fourth condition was the same as the *second* experimental condition (the SAS notification letter names the disability but does not give illness education in the body of the letter) but with the addition of a follow-up email from the hypothetical student Jaime Harris in which they deliver the illness education in the first person to the professor (see Appendix E).

Following each condition, the participant was asked nine questions pertaining to each of the four accommodations for which Jaime Harris has been approved and each of these questions were asked of each accommodation for a total of 36 short questions (see Appendix F). These were designed to gauge how participants judged accommodation appropriateness, feasibility, justifiability, fairness, disruptiveness to students and teaching, whether it would reduce the rigor of the class, compromise an essential element of the class, or if there was enough information to judge. These questions were constructed based on the literature in which students have voiced concerns about perceived legitimacy from professors (Grimes et al., 2018; Kreider et al., 2015; Lynch & Gussel, 1996; Marshak et al., 2010; Spencer et al., 2018). Participants were asked to answer the questions based on “how [they] think most professors at Conn would respond.” This distanced the questions to try and prevent self-presentation bias and allowed the student participants to express their beliefs about professors’ attitudes.

Inclusive Teaching Strategies Inventory

The next measure that was given to participants was the Inclusive Teaching Strategies Inventory (ITSI) developed by Lombardi et al. (2015) (see Appendix G). This measure was

included to gauge the faculty's awareness of disability and inclusive teaching strategies based on Universal Design (UD). The ITSI not only measures what faculty members are actually doing in their classrooms but also measures their attitudes towards certain aspects of UD and students with disabilities. Attitudes and actions about UD are differentially assessed using different question stems. For example, questions aimed at participants' actions have the stem, "I do...", and questions aimed at participants' attitudes have the stem "I believe it's important to..." For the purposes of relevance to the current study and the length of the survey, only the Attitudes stems were used (Dallas et al., 2014). Responses to these stems were in the form of a 6-point Likert scale ranging from "Strongly disagree" to "Strongly agree." The ITSI is segmented into seven frameworks based on the tenets of UD: (1) Accommodations; (2) Accessible Course Materials; (3) Course Modifications; (4) Inclusive Lecture Strategies, (5) Inclusive Classroom; (6) Inclusive Assessment; and (7) Disability Laws and Concepts. The ITSI consists of 39 short questions. All ITSI subscales were deemed to have good reliability with Cronbach's alphas $\geq .82$ with the exception of one that was just below, Inclusive Assessment for faculty ($n = 4$, $\alpha = .78$), and one that had insufficient scale reliability, Accessible Course Materials for faculty ($n = 4$, $\alpha = .57$). Caution will be used in any interpretations of these two ITSI scales.

Qualitative Questions

The qualitative questions asked of faculty (see Appendix J) and students (see Appendix N) were designed to gain an understanding of specific faculty and student experiences. Much of the current relevant literature on the subject of ICI, chronic illness, or other disabilities in college students is qualitative. The goal of this study was not only to ascertain faculty attitudes about accommodations but also professor-student-policy relationships, and therefore it was important to include qualitative questions (Grimes et al., 2018; Kreider et al., 2015; Lynch & Gussel, 1996;

Marshak et al., 2010; Spencer et al., 2018). The questions for student participants were geared toward understanding their (non)disclosure practices and beliefs and their perspective on what information might be useful in accommodation letters. The questions for faculty participants were designed to understand their policies around class attendance, and their perspective on the information they get from SAS.

Procedure

The survey was sent through email using an anonymous link to a Qualtrics survey. Faculty participants first read the Informed Consent Form (see Appendix I). After the participants read a short introduction, they were randomly assigned to one of four conditions using the Qualtrics randomization function (see Appendices B-E). Participants answered nine short questions about each of the four accommodations for a total of 36 short questions (see Appendix F). Participants then answered two questions that served as manipulation checks on the experimental condition (see Appendix H). Participants answered the ITSI survey (see Appendix G) which consisted of 39 short questions. Participants then answered three short answer questions and six demographic questions (see Appendix J). The Debriefing Form (see Appendix K) was then shown. Participants were finally given the option to enter in a gift card raffle. If they chose to, they were sent to an external link where they could enter in their email.

Student participants first read the Informed Consent Form (see Appendix L). Participants were asked if they are registered with SAS or not (see Appendix M). If yes, they were approved to continue with the study. If they are not registered with SAS, the participants were asked to answer two questions that determined if they could qualify to register with SAS (see Appendix M). If they could qualify, they continued with the study. If a student did not meet criteria for qualifying to register with SAS, they were directed to the end of the study. All participants

approved to continue the study were asked to broadly categorize their illness. After the participants read a short introduction, they were randomly assigned to one of four conditions using the Qualtrics randomization function (see Appendices B-E). Participants then answered the same nine short questions about each of the four accommodations as faculty did for a total of 36 short questions (see Appendix F). Students were asked to rate how they thought most faculty at Conn would respond. Participants then answered two questions that served as manipulation checks on the experimental condition (see Appendix H). Then participants answered the ITSI (see Appendix G) survey which consisted of 39 short questions. When answering the ITSI students were asked to answer the questions based on how they believed most professors at Connecticut College would respond. Participants then answered three short answer questions and five demographic questions (see Appendix N). The Debriefing Form (see Appendix O) was then shown. The participants were finally given the option to enter in a gift card raffle. If they chose to, they were sent to an external link where they could enter in their email.

Results

Descriptive Analysis of Inclusive Instructional Practices

A primary goal of this research was to compare faculty responses to accommodations with student perceptions of faculty responses. Comparisons are made on a standard measure of inclusive teaching practices (ITSI) and in the context of an experimental vignette study. Results from the ITSI are presented first. Higher scores on the ITSI indicate participants valuing more inclusive classroom behaviors.

Means for the ITSI subscales and intercorrelations among subscales for faculty participants are presented in Table 1. There were numerous significant correlations among ITSI subscales for faculty participants. Means for faculty participants were generally high, $M \geq 4.3$ on

a 6-point Likert scale (1 = Strongly Disagree to 6 = Strongly Agree with no anchor labels in between), with the exception of the Course Modifications (CMod) subscale, $M = 2.7$. Higher scores on the ITSI indicate that participants believe the inclusive behavior is important. As most other studies that used the ITSI measure as a self-report and participants in this study were asked to rate how most faculty think, direct comparisons of means from other studies are not meaningful. The strongest intercorrelation for faculty ITSI subscales was observed between Inclusive Lecture Strategies (ILStrat) and Accessible Course Materials (ACMat), $r(38) = .676, p < .001$. Disability Laws and Concepts (DisLaw) had weak correlations with all other subscales, with the strongest being with Inclusive Classroom (IncCla), $r(37) = .447, p = .004$. Overall, the ratings on the ITSI survey among faculty participants were moderately and sensibly correlated across the subscales.

Table 1*Correlations of ITS-I Subscales for Faculty Participants*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Accommodations	40	5.3	0.9	—						
2. Accessible Course Materials	40	5.1	0.9	.62**	—					
3. Course Modifications	40	2.7	1.4	.25	.29	—				
4. Inclusive Lecture Strategies	40	5.3	0.8	.64**	.68**	.38*	—			
5. Inclusive Classroom	39	5.2	0.8	.59**	.48**	.38*	.64**	—		
6. Inclusive Assessment	39	4.7	1.1	.59**	.44**	.67**	.42**	.58**	—	
7. Disability Laws and Concepts	39	4.3	1	.11	.17	.42**	.22	.45**	.34*	—

** . Correlation is significant at the .001 level (2-tailed)

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

Means for the ITSI subscales and intercorrelations among subscales for student participants are presented in Table 2. Means for student perceptions of faculty attitudes, knowledge, and behavior on the ITSI were moderate to high with the lowest being the Course Modification subscale, $M = 3.3$. The highest means were for the Accommodation (Accom) and Accessible Course Materials subscales, $M = 4.7$. Generally, intercorrelations among subscales for student participants were generally high. This was especially true with Inclusive Lecture Strategies and Inclusive Classroom, which shows a strong positive correlation, $r(54) = .871, p < .001$. Again, Disability Law had overall weak correlations with the other subscales, with the strongest correlation being with Accommodations, $r(52) = .350, p = .009$.

Table 2*Correlations of ITSI Subscales for Student Participants*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Accommodations	58	4.7	1	—						
2. Accessible Course Materials	58	4.7	1.1	.77**	—					
3. Course Modifications	58	3.3	1.2	.64**	.72**	—				
4. Inclusive Lecture Strategies	58	4.4	1.1	.67**	.79**	.70**	—			
5. Inclusive Classroom	56	4.5	1	.78**	.81**	.72**	.87**	—		
6. Inclusive Assessment	54	4.1	1.3	.71**	.78**	.68**	.77**	.82**	—	
7. Disability Laws and Concepts	54	3.6	1.3	.35**	.14	.02	.11	.11	.20	—

** Correlation is significant at the .001 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

Comparing the patterns of intercorrelations for faculty and students revealed that correlations between subscales for faculty participants were generally lower than those for student participants. Thus, there was more variability in how faculty responded to the different dimensions of the ITSI than there was in how students reported faculty would respond.

To understand how faculty and student ITSI responses differed, a MANOVA analysis was conducted with participant role (student vs. faculty) as the independent variable. This revealed a significant multivariate test result for role, Wilks' Lambda = .569, $F(7, 85) = 9.205$, $p < .001$. Follow-up univariate tests showed that there was significant role effect for all subscales, except Accessible Course Materials and Course Modifications, with faculty scoring higher (more accommodating) than students reported about faculty. Significant F-values ranged from 7.01-20.76, with p-values ranging from .000 to .010 (see Tables 1 and 2 for means).

Experimental Assessment of Responses to Accommodations

This section examines how faculty responded to specific accommodation requests that varied in the information provided, and how students expected faculty would respond to these requests. All requests included four specific accommodations: 1) distraction-free testing; 2) extra test time; 3) deadline flexibility; and 4) attendance flexibility. Accommodation request letters included one of the following four communication types: 1) a standard accommodation communication with no extra information; 2) a standard communication plus the diagnosis of chronic migraines; 3) a standard communication plus the diagnosis of chronic migraines and illness education from the Student Accessibility Office; or 4) a standard communication plus the diagnosis of chronic migraines and identical illness education provided from the hypothetical student.

To assess the influence of communication type on faculty impressions of accommodations, a series of repeated measures 2 x 4 x 4 ANOVAs was conducted with role (faculty vs. student) and communication type (control, diagnosis, diagnosis with explanation, diagnosis with student explanation) as between-subjects variables and accommodation type (distraction free testing, extra test time, deadline flexibility, and attendance flexibility) as a within subject variable.

The raw level dependent measures were judgments of appropriateness, feasibility, justifiability, not enough information, disruptiveness to students, unfairness, disruptiveness to teaching, reduction of rigor, and accommodation compromises an essential element of the class. A principal component factor analysis with a varimax rotation of eight of the nine dependent variables (all but “not enough information”) was conducted to determine if dependent measures could be reduced. A 2-factor solution produced the best result, with the 2 factors accounting for 84.2% of the variance. Factor 1 (negative impressions) accounted for 43.8% of the total variance and Factor 2 (positive impressions) accounted for 40.4% of the total variance. Four items loaded on a factor that described “positive impressions” with factor loadings between .68 and .88, and four items loaded on a factor that described “negative impressions” with factor loadings between .74 and .85. Items were assigned to one factor or another based on factor loadings, with a clearly stronger loading for one factor versus the other present for each item. Simple scale scores were then created without weightings by factor loadings. The positive impressions of accommodations factor included: appropriateness, feasibility, justifiability, and fairness. The perceived fairness of accommodations was originally posed to participants as how *unfair* the accommodation was. However, the principal component factor analysis revealed that the *unfairness* factor was more highly associated with the other three positive factors with a negative loading. Therefore, the

unfairness factor was reverse coded, included in the positive impression factor, and is henceforth referred to as “fairness.” The negative impressions of accommodations factor included: disruptiveness to students, disruptiveness to teaching, reduction of rigor, and compromises an essential element of the class. Subsequent analyses use these factors and “not enough information” as a single item.

Overall, the positive and negative factors were highly correlated ($r = -.851, p < .001$), but the strength of the positive/negative correlation varied somewhat over type of accommodation. The negative impressions factor for distraction-free testing was moderately negatively correlated with the positive impressions factor for the same accommodation, $r(97) = -.510, p < .001$. The negative impressions factor for the extra test time accommodation was strongly negatively correlated with the positive impressions factor for the same accommodation, $r(97) = -.745, p < .001$. The negative impressions factor for deadline flexibility accommodation was also strongly negatively correlated with the positive impressions factor for the same accommodation, $r(97) = -.751, p < .001$. The negative impressions factor for the attendance flexibility accommodation had the strongest negative correlation with the positive impressions factor for the same accommodation, $r(97) = -.830, p < .001$.

Analysis of Positive Accommodation Impressions

A repeated measures ANOVA of the positive impression factor (appropriate, justified, fair, and feasible) was conducted, corrected with Greenhouse-Geisser as Mauchly’s test of sphericity was significant, $p < .001$. The analysis showed an accommodation type main effect, $F(2.52, 223.92) = 27.35, p < .001, \eta_p^2 = .235$. There was also a significant accommodation type by communication type interaction, $F(7.55, 223.92) = 2.87, p = .005, \eta_p^2 = .09$. There were no other significant within-subjects interactions. There was one significant between-subjects main effect

for communication type, $F(3, 89) = 2.98$, $p = .036$, $\eta_p^2 = .091$. There were no significant effects involving role (faculty vs. student).

To examine the accommodation type main effect, pairwise comparisons were conducted using Bonferroni corrections. A test of the positive impression factor for accommodation type revealed that the distraction-free testing accommodation was rated more positively than the extra test time, $p = .001$, and the deadline flexibility, $p < .001$, accommodations. All other accommodation types (distraction-free testing, extra test time, and deadline flexibility) were rated more positively than the attendance flexibility accommodation (all p 's $< .001$ see Figure 1). There was no significant difference between the extra test time and deadline flexibility accommodations.

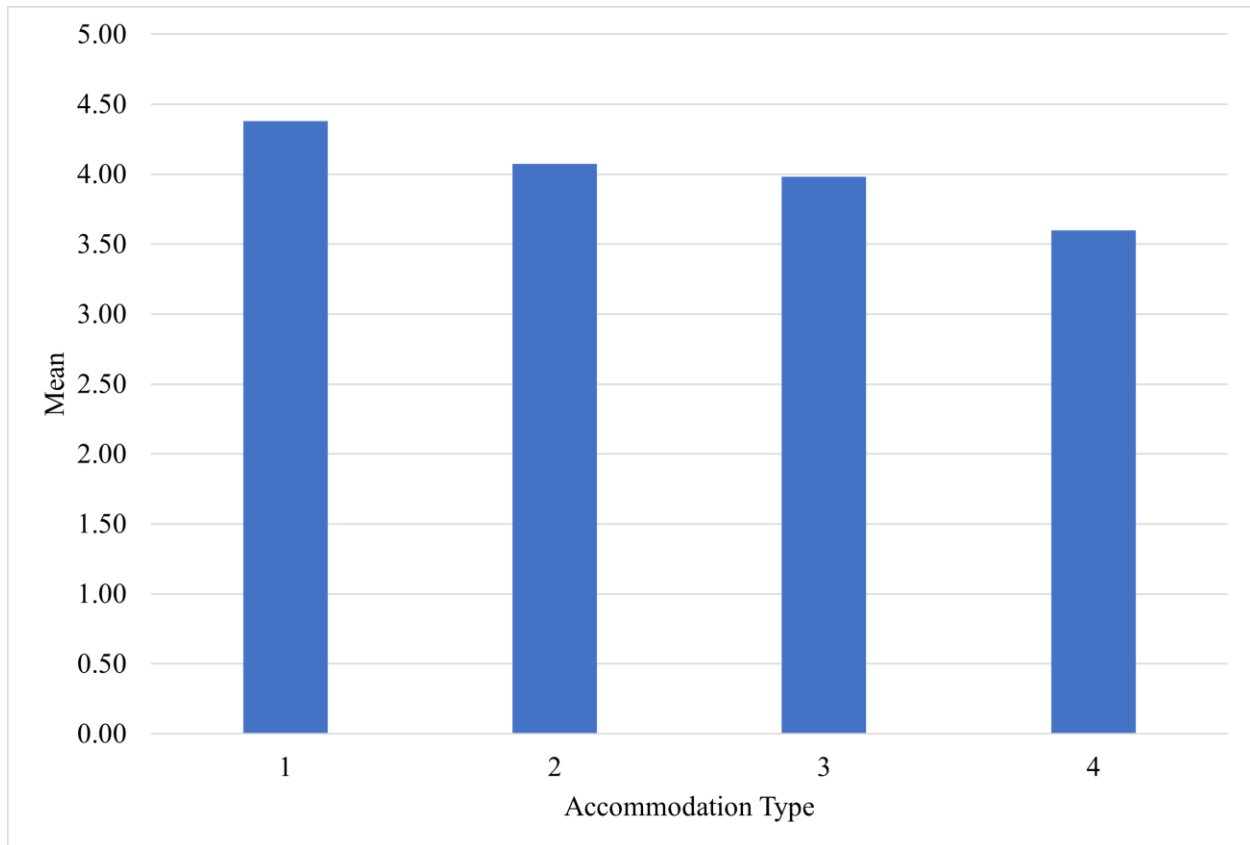


Figure 1. Accommodation Type Means. This figure represents the reported means for each accommodation type in the Positive Accommodation Impressions factor.

To understand the significant accommodation type by communication type interaction, pairwise comparisons were conducted using Bonferroni corrections. This analysis showed no significant differences for communication type for distraction-free testing or for extra test time accommodations, the more common of the four accommodations evaluated. There were, however, significant differences for communication type within the deadline flexibility and attendance flexibility accommodations (see Figure 2). Participants given the control communication type (standard accommodation letter) rated the deadline flexibility accommodation less positively than participants given the diagnosis in the communication letter, $p = .024$. There were no other significant differences of perceived positivity by communication type for the deadline flexibility accommodation. For the attendance flexibility accommodation, there was a significant difference between ratings from participants given the control communication type and those given the diagnosis in the accommodation letter and those given the diagnosis and illness information from SAS in the letter. Pairwise comparisons revealed that both experimental communication types (diagnosis, $p = .003$, and diagnosis with illness information, $p = .016$) significantly and positively impacted participants' ratings of the attendance flexibility accommodation. This means participants given the diagnosis communication type or the diagnosis with illness information communication type rated the rare attendance flexibility accommodation more positively than participants given the standard accommodation letter.

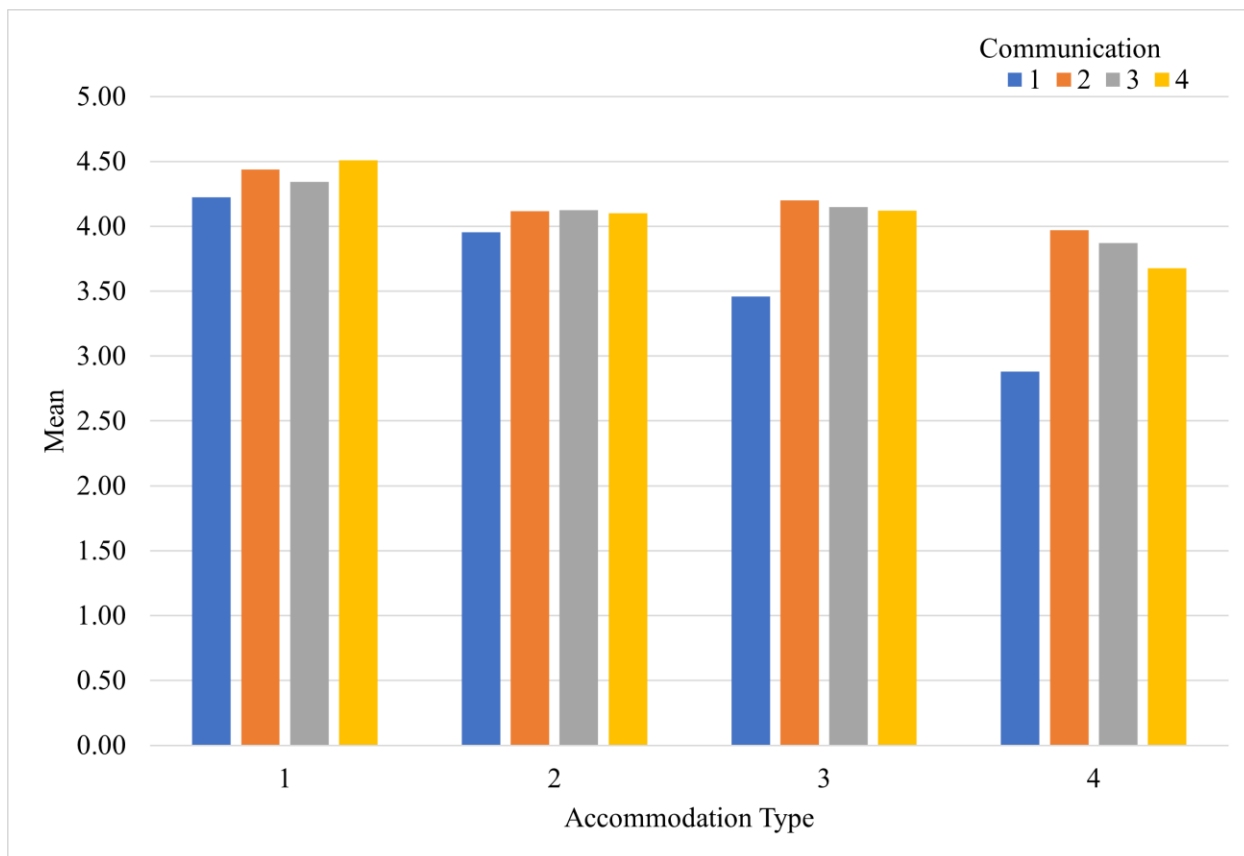


Figure 2. Accommodation by Communication Type Means. This figure represents the reported means for each communication type by each accommodation type in the Positive Accommodation Impressions factor.

There was one marginally significant difference for the between-subjects condition main effect. Participants given the control communication type rated all accommodations less positively than those given the diagnosis only communication type, $p = .051$ with a Bonferroni correction (see Figure 3).

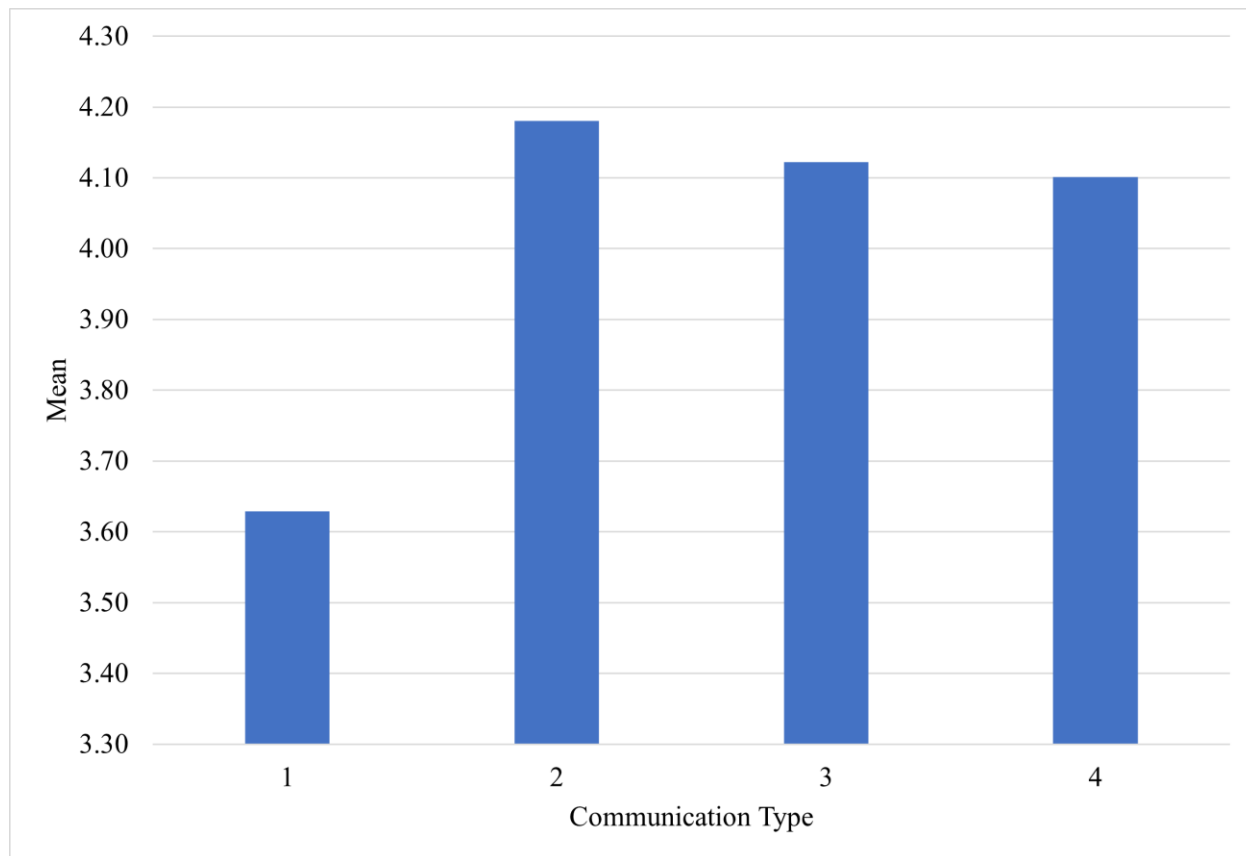


Figure 3. Communication Type Means. This figure represents the reported means for each communication type in the Positive Accommodation Impressions factor.

Analyses of Negative Accommodation Impressions

A repeated measures ANOVA of the negative impression factor (disruptiveness to students, disruptiveness to teaching, reduces rigor, and compromises an essential element) was conducted, corrected with Greenhouse-Geisser as Mauchly's test of sphericity was significant, $p < .001$. This analysis showed an accommodation type main effect, $F(2.53, 225.09) = 82.5$, $p < .001$, $\eta_p^2 = .48$. There was also a significant interaction between accommodation type and participant role (faculty or student), $F(2.53, 225.09) = 3.85$, $p = .015$, $\eta_p^2 = .041$. There was one significant difference between-subjects main effect for communication type, $F(3, 89) = 4.41$, $p = .006$, $\eta_p^2 = .13$.

To elucidate the significant main effect of accommodation type, pairwise comparisons with Bonferroni corrections were conducted. These revealed that the distraction-free testing accommodation was perceived to be the least negative when compared to all other accommodation types (all p 's $< .001$ see Figure 4). The rare attendance flexibility accommodation had the highest negative rating when compared to all other accommodation types (all p 's $< .001$ see Figure 4). There was no significant difference between the extra test time and the deadline flexibility accommodation.

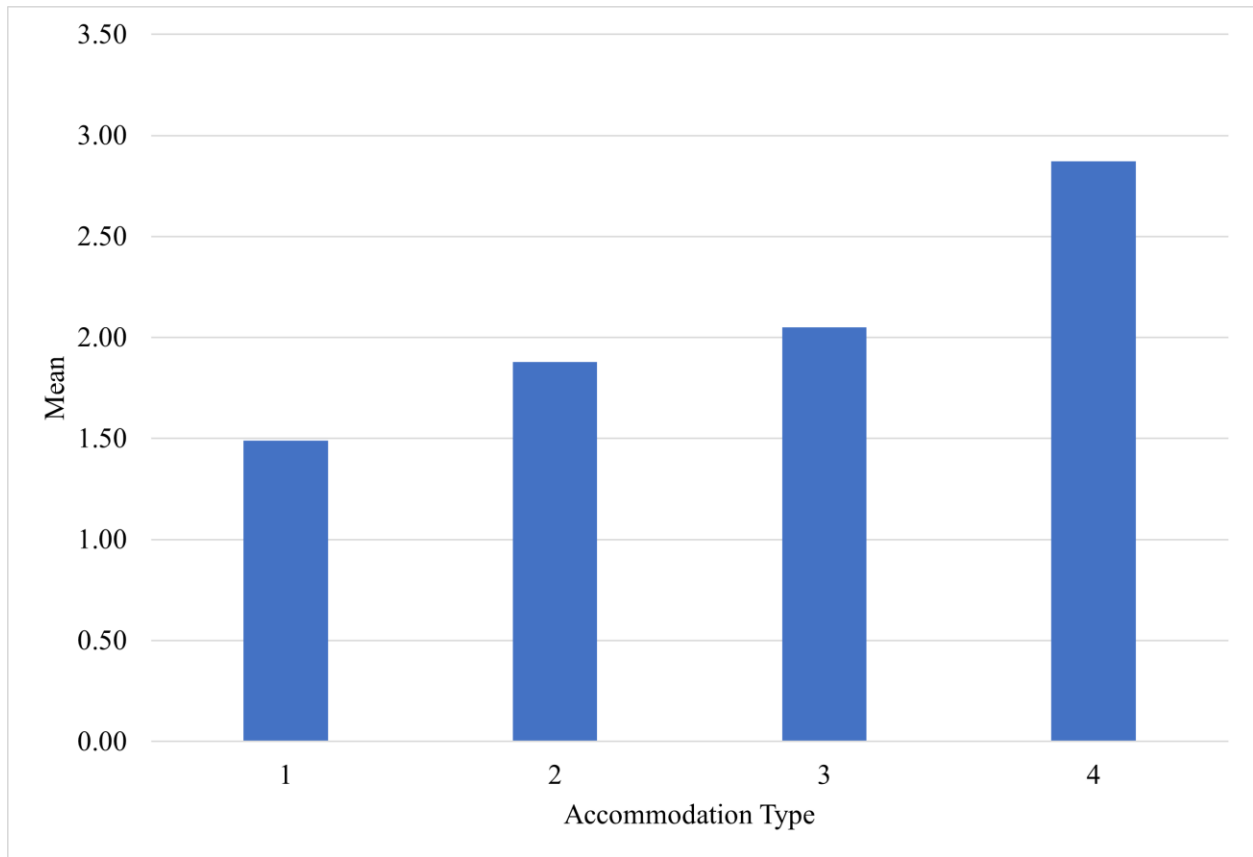


Figure 4. Accommodation Type Means. This figure represents the reported means for each accommodation type in the Negative Accommodation Impressions factor.

A test of pairwise comparisons with Bonferroni corrections was used to understand the significant interaction of accommodation type and role. This revealed that student participants reported a more negative rating of the distraction-free testing accommodation when compared to the faculty participants, $p = .031$ (see Figure 5). This finding suggests that students believed faculty would have more negative attitudes towards this accommodation than faculty themselves reported. There were no other significant differences between role and other accommodation types.

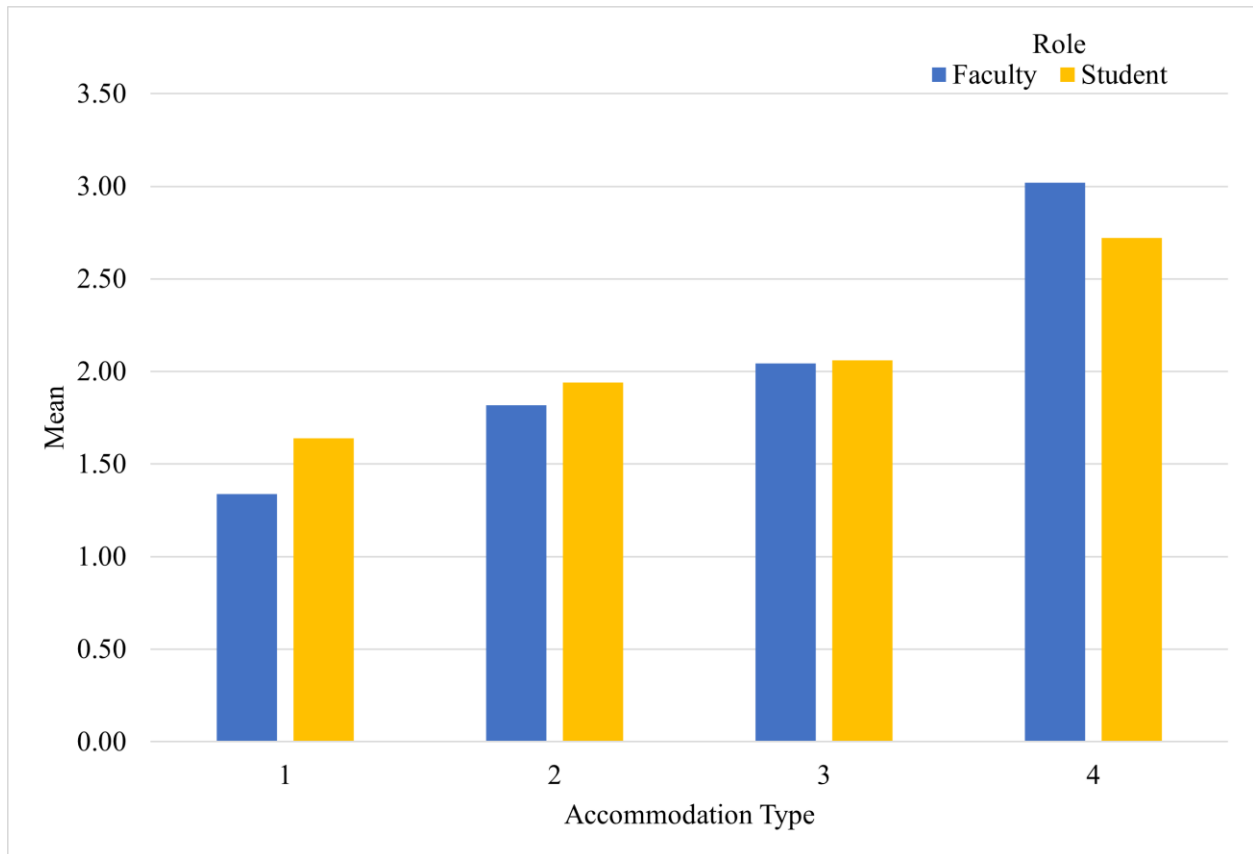


Figure 5. Accommodation Type by Role Means. This figure represents the reported means for each accommodation type by role in the Negative Accommodation Impressions factor.

In order to further investigate the significant between-subjects communication type main effect, $F(3, 89) = 4.41, p = .006, \eta_p^2 = .13$, pairwise corrections with Bonferroni corrections were conducted. These revealed that participants given the control communication type (standard accommodation letter) rated accommodations more negatively than participants given either the accommodation letter naming the diagnosis, $p = .007$, or those given the accommodation letter that was followed up by an email from the hypothetical student containing illness information, $p = .046$ (see Figure 6). This suggests that the addition of the diagnosis and also illness information from the student positively impacted participants' attitudes towards any accommodation compared to the information given in the standard accommodation letter. There were no other significant differences between other communication types.

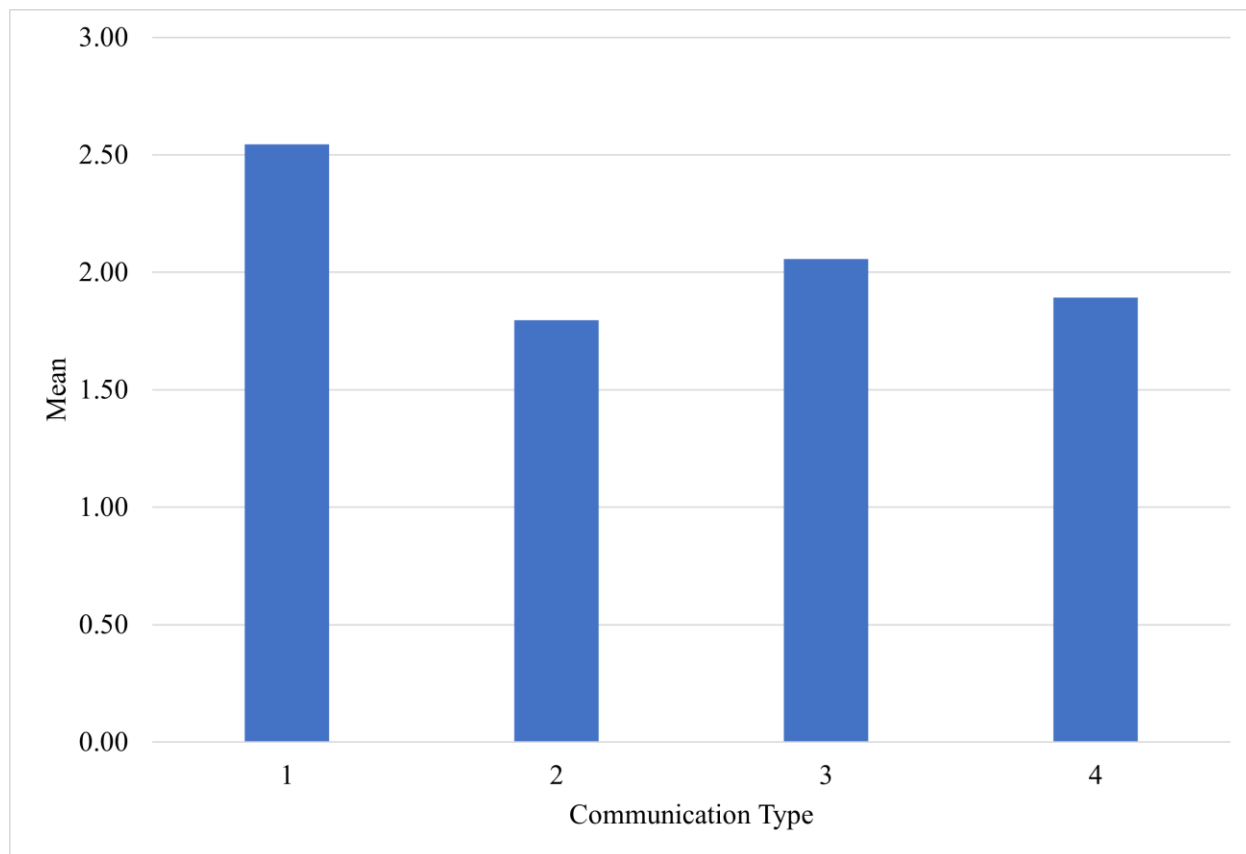


Figure 6. Communication Type Means. This figure represents the reported means for each communication type in the Negative Accommodation Impressions factor.

Analyses of “Not enough information” Question

A repeated measures ANOVA of the accommodation question assessing if participants thought there was enough information provided to judge the accommodation was conducted, corrected with Greenhouse-Geisser as Mauchly’s test of sphericity was significant, $p = .010$. There was a significant accommodation type by communication type interaction, $F(8.1, 234.8) = 1.98$, $p = .049$, $\eta_p^2 = .064$, and a significant between-subjects communication type main effect $F(3, 87) = 4.59$, $p = .005$, $\eta_p^2 = .137$.

Pairwise comparisons were conducted, using Bonferroni corrections, in order to further understand the accommodation type by communication type interaction. These revealed significant differences between communication types for the two more rare accommodation types, deadline flexibility and accommodation flexibility. When compared to the control communication type (standard accommodation letter), participants felt better equipped to judge the deadline flexibility accommodation when given illness information presented by SAS, $p = .005$, or by the hypothetical student, $p = .005$ (see Figure 7). A similar pattern can be seen for the attendance flexibility accommodation. When compared to the control communication type (standard accommodation letter), participants felt better equipped to judge the attendance flexibility accommodation when given illness information presented by SAS, $p = .005$, or by the hypothetical student, $p = .005$.

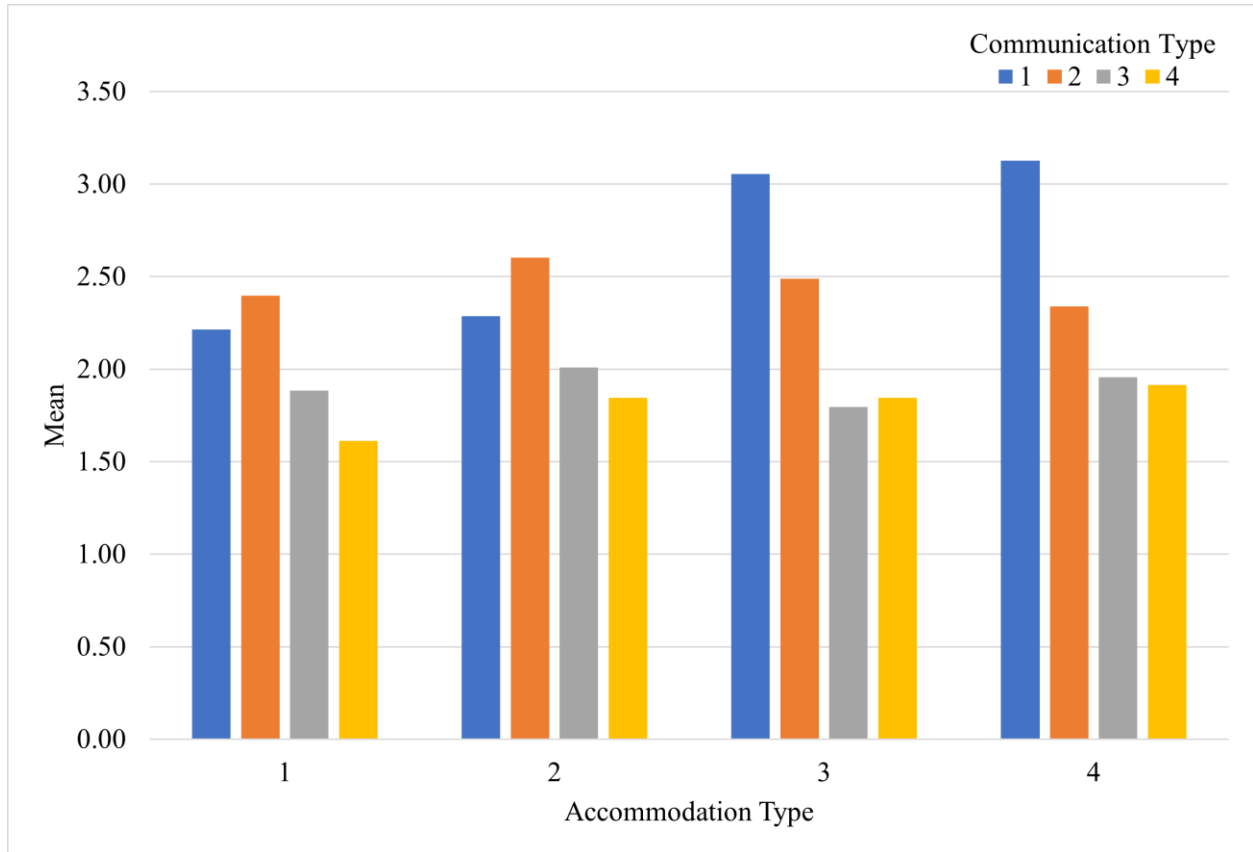


Figure 7. Accommodation by Communication Type Means. This figure represents the reported means for each communication type by each accommodation type for the “Not Enough Information” analysis.

To understand the between-subjects main effect of communication, pairwise comparisons with Bonferroni corrections were conducted. These revealed that when compared to the control communication type (standard accommodation letter), participants who were given illness information from the hypothetical student felt better equipped to judge all accommodations combined, $p = .014$ (see Figure 8). Both this finding and those of the accommodation type by communication type interaction suggest that the addition of illness information in general made participants feel more equipped to judge accommodations.

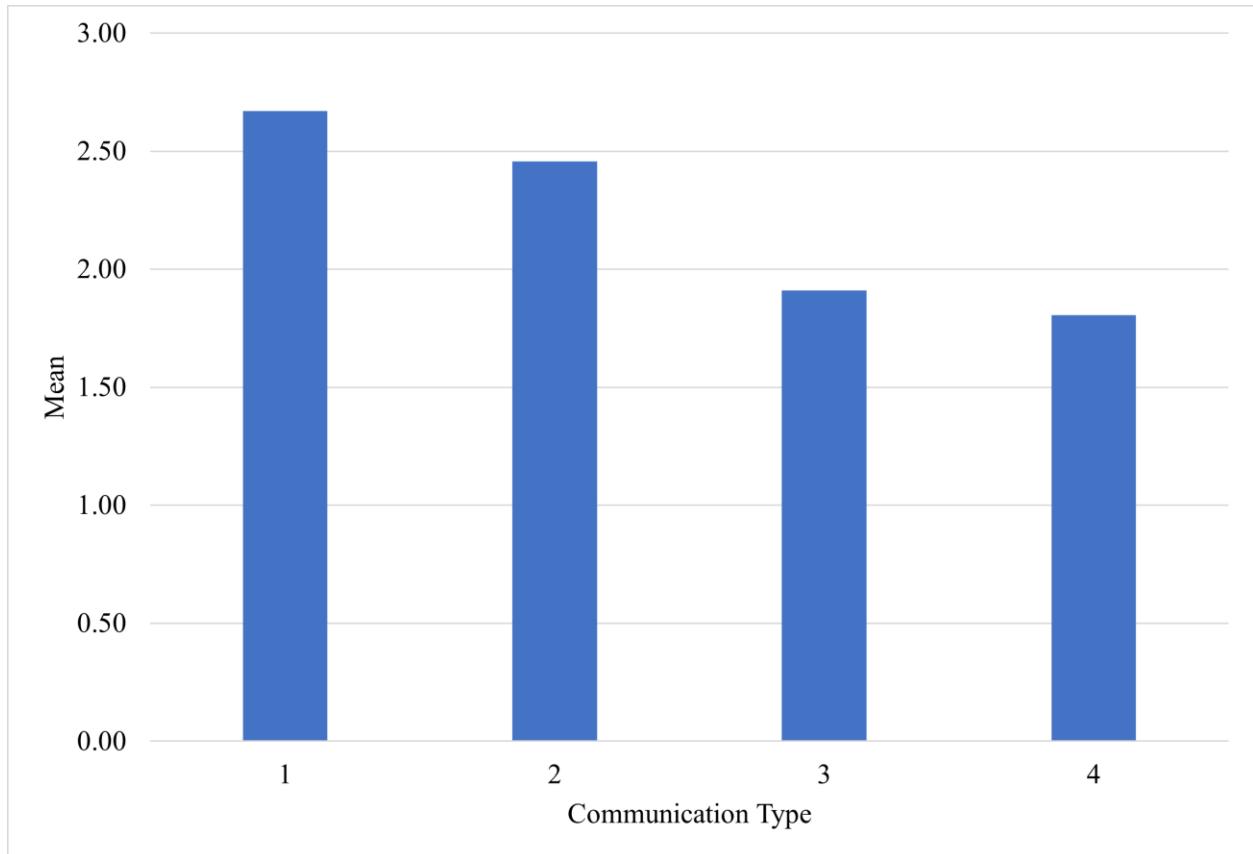


Figure 8. Communication Type Means. This figure represents the reported means for each communication type for the “Not Enough Information” analysis.

Follow-up Analyses Focusing Only on Faculty

There were both faculty participants and student participants included in the prior analyses, but few effects and interactions including role (faculty vs. student) emerged. In fact, there was only one significant effect in the prior analyses involving role (accommodation type by role interaction for the negative impression factor). Because there were many more student than faculty participants, the next analyses focus only on faculty to be sure that student impressions are not the only (or primary) driving factor in prior results. The lack of interactions in prior analyses suggests that faculty and students had similar patterns of results, but the study was underpowered to detect 2-way and 3-way interactions of interest. To avoid overinterpretation of findings, ANOVAs were repeated using only faculty participants. These results were then compared to the results of the analyses run with both faculty and student participants.

The analyses using only faculty participants revealed several significant findings shared with the prior analyses run with both faculty and student participants. For the Positive Accommodation Impressions factor, there was a significant accommodation type main effect, $F(2.16, 75.47) = 16.46, p < .001, \eta_p^2 = .320$, and a significant accommodation type by communication type interaction, $F(6.47, 75.47) = 2.28, p = .041, \eta_p^2 = .163$. These findings followed the same pattern as the findings from the analyses conducted with all participants. From the faculty only analysis of the Negative Accommodation Impressions factor, there was a significant accommodation type main effect $F(2.40, 84.15) = 40.39, p < .001, \eta_p^2 = .536$. These findings also followed the same pattern as the findings from the analyses conducted with all participants.

There were two non-significant but trend findings for the “Not Enough Information” accommodation question analysis for faculty only. The trend limit for a non-significant p value

in these follow-up analyses was .14. There was an accommodation type by communication type interaction, $F(8.81, 87.46) = 1.61, p = .139, \eta_p^2 = .121$ and a between-subjects communication type main effect, $F(3, 35) = 2.20, p = .105, \eta_p^2 = .159$, both of which were observed in the analyses including both faculty and students. For these findings, there were subtle differences in the pattern of the means when compared to the analyses with all participants. Comparing communication type means, faculty who were given the control communication ($M = 2.556$) or the accommodation letter with the diagnosis ($M = 2.864$) felt they needed more information than when given illness education plus a diagnosis (either in the accommodation letter: $M = 1.875$; or from the student $M = 1.841$). In the prior analysis with all participants, the reported need for more information decreased more systematically from communication type one, a standard accommodation communication with no extra information, to communication type four, a standard communication plus the diagnosis of chronic migraines and illness education from the student.

The means for accommodation ratings collapsed over all conditions in the faculty-only analysis had a similar pattern as the analyses using all participants. The accommodation means from the “Not Enough Information” question analysis run with all participants increased systematically as the accommodation became increasingly more controversial or rare (1) distraction-free testing; 2) extra test time; 3) deadline flexibility; and 4) attendance flexibility). For the faculty-only analysis, distraction-free testing was similarly noncontroversial and needed the least additional information ($M = 1.952$), especially compared to deadline flexibility ($M = 2.474$) and attendance flexibility ($M = 2.423$). Extra test time accommodations ($M = 2.287$) fell in between the control condition and the rarer deadline and attendance flexibility accommodations in perceived need for accommodations.

Two original findings from the analyses run with all participants did not replicate at all in the faculty-only analyses. These were the between-subjects communication type main effects for the Positive and Negative Accommodation Impression factors. This suggests that the influences on faculty impressions of communication type (what was disclosed) was dependent on accommodation type (what was asked for) with no overall effect from communication type when all accommodation types were collapsed. Students may have anticipated an overall impact of communication type, but impacts on faculty were more nuanced. These particularities from the faculty-only analyses will be kept in mind when discussing implications and recommendations.

Relationships Between Inclusive Teaching and Accommodation Perceptions for Faculty

Positive/Negative Impressions by Accommodation Type. To better understand what may be influencing faculty attitudes towards accommodation requests in the experimental part of the study, we next focus only on faculty and explore the relationship between ITSI scales and accommodation perceptions. Correlations of the ITSI subscales and Positive/Negative Accommodation Impressions are presented in Table 3. General faculty attitudes towards accommodations as measured by the Accommodations ITSI subscale were neither strongly nor significantly correlated with faculty responses, positive or negative, to the distraction-free testing accommodation questions. An explanation for this may be that the distraction-free testing accommodation is fairly common and not very controversial.

Table 3*Correlations of ITSI Scales with Accommodation Impression Factors*

	Distraction Negative	Distraction Positive	Extended Negative	Extended Positive	Dline Flex Negative	Dline Flex Positive	Attend Flex Negative	Attend Flex Positive
Accom	-.12	.13	-.34*	.14	-.56**	.42**	-.28	.34*
ACMat	-.32*	.14	-.35*	.04	-.43**	.38*	-.39*	.41**
CMod	.01	.10	-.09	.06	-.20	.23	-.12	.14
ILStrat	-.18	.07	-.37*	.25	-.45**	.38*	-.34*	.43**
IncCla	-.13	.07	-.29	.22	-.27	.11	-.19	.14
IncAssmt	.23	.07	-.10	-.07	-.22	.21	-.16	.07
DisLaw	-.05	-.07	-.15	.09	-.16	.00	-.05	.03

** . Correlation is significant at the .001 level (2-tailed)

* . Correlation is significant at the .05 level (2-tailed)

Faculty responses on the Accommodation ($r(37) = -.339, p = .035$), Accessible Course Materials ($r(37) = -.354, p = .027$), and Inclusive Lecture Strategies ($r(37) = -.366, p = .022$) ITSI subscales were all significantly negatively correlated with negative faculty attitudes about the extra test time accommodation. In context, low faculty ITSI scores on these three subscales predicted higher negative scores for the extra test time accommodation; faculty with more negative attitudes towards accommodations requests from students, using electronically accessible course materials, and using inclusive practices within a typical lecture-style class reportedly had more negative attitudes toward the implementation of the extra test time accommodation. There were no significant correlations between the ITSI subscales and positive attitudes towards the extra test time accommodation.

The Accommodation (ACCOM), Accessible Course Materials (ACMat), and Inclusive Lecture Strategies (ILStrat) ITSI subscales were predictive of both positive and negative faculty impressions of the two more rare or controversial accommodations. These subscales were moderately negatively predictive of negative impressions of the deadline flexibility accommodation ($r(37) = -.559, p < .001$; $r(37) = -.432, p = .006$; $r(37) = -.447, p = .004$, respectively) and weakly to moderately positively predictive of positive impressions for the same accommodation ($r(37) = .415, p = .009$; $r(37) = .382, p = .016$; $r(37) = .384, p = .016$, respectively). For the attendance flexibility accommodation, these subscales were weakly to moderately positively predictive of faculty positive impressions (ACCOM: $r(37) = .343, p = .032$; ACMat: $r(37) = .414, p = .009$; ILStrat: $r(37) = .427, p = .007$).

Neither the Course Modifications, Inclusive Classroom, Inclusive Assessment, nor the Disability Law and Concepts ITSI subscales were predictive of any faculty attitudes, positive or negative, for any accommodation.

Specific Impressions Collapsed over Accommodation Type. To gain a more detailed understanding of specific faculty attitudes, correlation analyses were run between the ITSI subscales and the specific accommodation judgments (e.g., appropriate, feasible, justified, etc.) collapsed over all accommodation types (i.e., distraction-free testing, extended time, deadline flexibility, attendance flexibility) as presented in Table 4. Only the Accommodations, Accessible Course Materials, and Inclusive Lecture Strategies ITSI subscales significantly correlated with specific faculty attitudes about the accommodations in the vignettes.

Table 4*Correlations of ITSI Scales with Accommodation Judgement Single Items*

	Appropriate	Feasible	Justified	Not Enough Information	Disrupt students	Unfairness	Disrupt teaching	Reduce Rigor	Compromise Essential Element
Accom	.32*	.32*	.29	-.35*	-.44**	-.30	-.41**	-.33*	-.45**
ACMat	.27	.41**	.28	-.12	-.50**	-.26	-.47**	-.33*	-.41
CMod	.25	.17	.15	-.12	-.18	-.08	-.17	-.04	-.12
ILStrat	.37*	.40*	.34*	-.28	-.43**	-.28	-.37*	-.42**	-.40*
IncCla	.19	.08	.21	-.20	-.24	-.14	-.32	-.24	-.22
IncAssmt	.08	.14	.05	-.15	-.16	-.06	-.20	-.00	-.09
DisLaw	.07	-.03	.04	.05	-.08	.02	-.21	-.10	-.05

** . Correlation is significant at the .001 level (2-tailed)

* . Correlation is significant at the .05 level (2-tailed)

The Accommodation (ACCOM) ITSI subscale was moderately negatively correlated with faculty attitudes of accommodation disruptiveness to students ($r(37) = -.442, p = .005$) and teaching ($r(37) = -.413, p = .009$), reduction of rigor ($r(37) = -.333, p = .038$), and compromising an essential element of the class ($r(37) = -.445, p = .005$). The ACCOM subscale was weakly positively correlated with faculty attitudes of accommodation feasibility, $r(37) = .316, p = .050$.

The Accessible Course Materials (ACMat) ITSI subscale was moderately negatively correlated with faculty attitudes of accommodation disruptiveness to students ($r(37) = -.502, p = .001$) and teaching ($r(37) = -.474, p = .002$), and compromising an essential element of the class ($r(37) = -.407, p = .010$). The ACMat subscale was moderately positively correlated with accommodation feasibility, $r(37) = .411, p = .009$, and moderately negatively correlated with reduction of rigor, $r(37) = -.329, p = .041$.

The Inclusive Lecture Strategies (ILStrat) ITSI subscale was moderately negatively correlated with faculty attitudes of accommodation disruptiveness to students ($r(37) = -.428, p = .007$) and reduction of rigor ($r(37) = -.423, p = .007$). The ILStrat subscale was weakly negatively correlated with accommodation disruption to testing ($r(37) = -.369, p = .021$) and compromising an essential element of the class ($r(37) = -.395, p = .013$). This subscale was also weakly positively correlated with accommodation appropriateness ($r(37) = .367, p = .021$), feasibility ($r(37) = .398, p = .012$), and justifiability ($r(37) = .341, p = .033$).

None of the ITSI subscales predicted faculty attitudes towards accommodation unfairness.

An interesting pattern emerged between the ITSI subscale ratings and faculty attitudes towards accommodation disruptiveness. For perceived disruption to students, higher scores on

the Accommodation ($r(37) = -.442, p = .005$), Accessible Course Materials ($r(37) = -.502, p = .001$), and Inclusive Lecture Strategies ($r(37) = -.428, p = .007$) subscales correlated moderately negatively with lower scores of disruptiveness. Similarly, higher scores on these three subscales correlated negatively, but to a lesser extent, with lower faculty scores on disruptiveness to teaching (ACCOM: $r(37) = -.413, p = .009$; ACMat: $r(37) = -.413, p = .009$; ILStrat: $r(37) = -.369, p = .021$). This pattern can also be observed for faculty perceptions of an accommodation's reduction of class rigor (ACCOM: $r(37) = -.333, p = .038$; ACMat: $r(37) = -.329, p = .041$; ILStrat: $r(37) = -.423, p = .007$).

Student Disclosure Practices and Preferences

To understand the relationship between the quantitative student personal questions about disclosure (see Appendix O), correlations were conducted. Two questions (3 and 5) asked students how helpful it might be to faculty during accommodation negotiations to include their diagnosis or illness information, respectively. Two questions (4 and 6) asked students how willing they would be to disclose their diagnosis or illness information, respectively, in the accommodation letter. There were several significant correlations, with strongly significant correlations between questions 4 and 6, $r(52) = .849, p < .001$, and questions 5 and 6, $r(52) = .710, p < .001$. In context, this first pair, questions 4 and 6, refers to the questions about how willing students would be to disclose diagnosis and illness information. Students who were more willing to disclose their diagnosis may be more willing to disclose illness information. Questions 5 and 6 referenced the perceived helpfulness of disclosing illness information and students' willingness to do so. A significant positive correlation here indicates students who thought it would be helpful to give faculty information about their illness and how it impacts their academic functioning were more willing to disclose that information. For the related pair of

questions, 3 and 4, there was also a moderately strong positive correlation, $r(52) = .505, p < .001$. This similarly indicates that students who thought it would be helpful to include their diagnosis in the accommodation letter to faculty were also more willing to disclose this information. Interestingly, question 1 (how often do students actually disclose their illness) was not significantly nor strongly correlated with questions 3, 4, 5, or 6. This suggests that students' current personal disclosure practices do not have a bearing on their perceptions of the proposed types of more formal disclosure and vice versa.

Paired samples *t*-tests were conducted on questions 3 and 5 and questions 4 and 6 to understand further relationships between these questions. Only the *t*-test for questions 3 and 5, about students perceived helpful impact of the inclusion of respective information, was significant. This analysis shows that students thought it would be more helpful when negotiating accommodation with faculty if illness information were provided in the accommodation letter as compared to including the diagnosis, $t(53) = -4.75, p < .001$. The distinction here is that including a diagnosis will only name the condition that the student has. Including information about the illness, which may reveal what the diagnosis is, includes information about how the illness impacts the student and may affect their academic and/or daily functioning.

Exploratory Qualitative Analyses of Student Disclosure Reasons

To better understand motivations for diagnosis disclosure among student participants, a preliminary thematic analysis was done on the responses to the qualitative question, "For what reasons might you decide to disclose your diagnosis?" given to student participants. Responses were grouped by similarity and categories were discussed in research group meeting to check for fidelity. Formal reliability analyses were not conducted due to time constraints. There were 48 total responses, two of which were omitted as they did not answer the question ("take time off,

unable to pay attention, struggle reading” and “embarrassment”). These responses were first examined with the general theme of deciding to disclose or not. Two categories emerged from this analysis: those whose statements included wording alluding to *reasons they usually disclose* ($n = 27$) and those whose statements included language indicating they *disclose provisionally* ($n = 18$). Examples of this second category included words like “only if...” or “I would if...” Thus, provisional disclosers gave examples of times they might choose to disclose their diagnosis to a faculty member (or not) rather than explain why they do disclose.

Choosing to disclose one’s diagnosis could be considered a form of self-advocacy, so themes of proactive, reactive, and retrospective self-advocacy highlighted by Daly-Cano et al. (2015) were considered. The reactive and retrospective themes were more applicable to the responses in the “provisionally discloses” group and proactive self-advocacy was more evident in the “usually discloses” group. Responses indicating students chose to disclose in order to bolster their case for accommodations or as a part of self-advocacy were termed reactive. Lastly, students who reported that they only disclose after an illness flare up or an otherwise unexpected event were categorized as engaging in retrospective self-advocacy.

Most of the cases for disclosure provided by participants in the “provisionally disclose” group were retrospective ($n = 7$). Examples of wording used to indicate this include: “I only disclose my issues... if it becomes a major issue. So, urgent issues where I have to be out of class for an extended period of time, etc.,” “Only if I am really struggling with my illness...,” and, “When something comes up that isn’t covered in my approved accommodations.”

Two students in the “provisionally disclose” group proactively disclosed meaning they would only disclose if they foresaw issues in the class, as evidenced by examples like: “If I feel

the work in a class will be impacted by my condition” and, “If I don’t have tests in a class, I find no need to tell the teacher.”

A major theme that emerged from responses in either group (provisionally disclose or generally do disclose) is that students would often reference faculty as a negative factor when considering disclosure. An example from the responses in the “provisional disclosures” group was comfortability. Many students referenced that being comfortable with the faculty member had an impact on their decisions to disclose. Either students would only disclose if they felt comfortable with the faculty member ($n = 6$) or, in two cases, if they wanted to become more comfortable with them: “If I am close to the professor or if I know I want to be close to the professor in the future” and, “If I feel comfortable with the professor or know I will have them in future classes.”

Another category of responses that related to faculty was the desire to educate them through students’ disclosure. Seven students referenced wanting “to help the professor understand” their situation or needs. Other examples of this include: “To give professors context of what my disability looks like for me...,” “Disclosing these effects [of my diagnosis] helps the professors know beforehand what they may have to deal with...” and, “... by sharing [my diagnosis] with my teachers I feel as though they may understand why I do the things I do better and better understand me as a student as well as a person.”

The majority of the responses relating to faculty ($n = 8$ out of 15) indicated that students disclosed in order to prove something. For example, one student said they disclose “so the professors or SAS believes me.” Another student said they disclose to prove their accommodations are “valid;” another for “proving legitimacy,” another to “justify [their] needs.” Two students reference fear of disbelief: “I often fear my professors won’t really understand how

my disability makes school harder for me. And if they don't understand maybe they'll be even less accommodating than originally before" and "If I know a professor won't believe me so I feel like I have to discuss my mental health which is personal and I would prefer not to, but there are just some professors that won't believe it."

Two additional smaller themes emerged: choosing to disclose equated to better support or receiving proper accommodations; and disclosing because doing otherwise would be seen as hiding something or lying. A particularly powerful response highlights this second theme clearly: "I believe it's important to be honest about my situation otherwise why should I expect any empathy or help."

Discussion

This study explored impressions of accommodations for college students with disabilities, what might impact those impressions, and the expectations and experiences of students with disabilities as they navigate the accommodation process. More specifically, this study assessed faculty impressions of accommodations and what students with disabilities perceive faculty impressions to be using both ratings of actual and perceived inclusive teaching practices and responses to experimental vignettes. In the vignette study, faculty and students were given varying amounts and kinds of information through an accommodation notification letter about a hypothetical student's disability (unspecified or specified as chronic migraine; illness education absent, present, or offered by student) to see what might influence impressions and whether that depended on accommodation type (extended time, distraction free testing, deadline flexibility, attendance flexibility). The standard accommodation letter, which does not specify the disability and only includes the approved accommodations, was used as a control condition. More positive impressions were expected of common accommodations (extended time

and distraction free testing) than rare accommodations (deadline and attendance flexibility), even though the rare accommodations are important for students with chronic migraines. It was also hypothesized that more information about the disability and its impact would positively influence accommodation impressions and increase faculty acceptance and perceived faculty acceptance. Receiving illness information directly from the student was hypothesized to have a greater impact rather than receiving the same information from the Office of Student Accessibility Services (SAS). It was also hypothesized that students would anticipate less acceptance of accommodations and less positive attitudes toward accommodations from faculty than faculty actually reported having.

The first hypothesis — more common accommodations would be viewed more positively — was generally supported by the results. Participants viewed all accommodation types (distraction-free testing, extra test time, and deadline flexibility) more positively than the rare attendance flexibility accommodation. Participants perceived all other accommodations to be more negative than the distraction-free testing accommodation. This is a sensible finding as distraction-free testing is a more common accommodation, and one that has a low likelihood of compromising an essential element of the class. The attendance accommodation was perceived to be the most negative compared to the other accommodation types, partially due to the perception that it would be more likely to compromise an essential element of the class. A faculty member is not required to accept a recommended accommodation if they believe that an accommodation compromises an essential component of the class.

Giving participants more information, whether just the diagnosis or more in-depth illness information, positively impacted accommodation perceptions, supporting the second hypothesis. “Positive impressions” are a combination of the individual accommodation judgements of

appropriateness, feasibility, justifiability, and fairness. The impact of information on these ratings was apparent regarding the two rarer accommodations, deadline and attendance flexibility, that are most relevant to adequately supporting students with chronic migraine. With the addition of the diagnosis, participants rated the deadline flexibility accommodation more positively than did participants who were given the standard accommodation letter. Participants who were provided the diagnosis or given illness information from SAS rated the attendance flexibility accommodation more positively than participants who were given the standard accommodation letter. The impact of added information is clear because participants given the standard accommodation letter rated all accommodations less positively than participants who were given the accommodation letter with the diagnosis. These findings suggest that adding more information to the standard accommodation letters could help faculty to have a more positive perception of not just these two rarer accommodations, but all tested accommodations.

The addition of information also impacted the negative perceptions of accommodations. Ratings of negativity were constructed by combining the individual accommodation judgements of disruptiveness to students, disruptiveness to teaching, reduction of rigor, and compromises an essential element of the class. Similar to the pattern of positive accommodation perceptions, the attendance accommodation had the highest negative rating when compared to the other three accommodations. Participants given the accommodation letter that included the diagnosis and those given illness information from the student rated all accommodations less negatively than participants given the standard accommodation letter. This further suggests that more information positively impacted accommodation perceptions.

The impact of additional information on judgements about accommodations is also clear from the findings from the “Not enough information” accommodation question analysis. The

addition of illness education from SAS or the student made participants feel better equipped to judge the two rarer accommodations, deadline and attendance flexibility. Moreover, the addition of illness information from the student made participants feel better able to judge any accommodation when compared to the information given in the current standard accommodation letter.

The third hypothesis, that illness information given by the student would have a greater impact than if the information came from the Office of Accessibility Services (SAS), was not supported. However, the addition of illness information in general, from either SAS or the student, had a positive impact on specific accommodation impressions.

The fourth hypothesis — students would perceive faculty to have more negative attitudes and impressions of accommodations than faculty would report — was supported in one of the vignette analyses, and also in faculty-student comparisons of actual/perceived on a standard assessment of inclusive teaching practices (ITSI). In the vignette study, students believed faculty would have more negative attitudes only about the distraction-free testing accommodation compared to what faculty reported. In comparisons of inclusive practices ratings (ITSI), students' ratings of perceived faculty attitudes about inclusive behavior were generally lower than the responses of faculty. Specifically, they were lower on the Accommodations, Inclusive Lecture Strategies, Inclusive Classroom, Inclusive Assessment, and Disability Laws and Concepts subscales. Thus, students' perceived faculty to have less inclusive teaching practices than faculty reported themselves as having.

Student ratings of inclusive teaching practices were strong even though they were lower than faculty ratings. Student responses also indicated they believed faculty attitudes towards many types of inclusive classroom behaviors to be highly connected. This overall pattern could

be due to the fact that students were asked to rate how they thought most faculty would respond. This could also suggest that students' predictions about faculty responses were influenced by a stereotype effect. For example, if students assumed professors hold strong positive attitudes about one type of inclusive classroom behavior, it may extend to attitudes about other types of behavior. This pattern might also be explained by students having difficulty distinguishing the nuances across the different types of inclusive teaching strategies assessed on the ITSI. Both explanations are plausible because students were not answering based on their own beliefs, but rather predicting the responses of faculty. Student predictions of faculty behavior in the vignette study and on the ITSI were presumably based on their own experiences navigating accommodations for their own disabilities. Thus, at least according to the ITSI findings, the student experience may be less positive than faculty appreciate. In further research, it may be interesting to ask faculty to answer the ITSI based on their personal experiences and ask students to answer based on their experiences with faculty.

Several other analyses explored faculty responses to better understand the extent to which overall findings from the vignette study applied specifically to faculty, and to probe the relationship between faculty reports of inclusive teaching practices (ITSI) and their responses to the accommodation vignettes. As there were both student and faculty participants who responded to the hypothetical vignettes, it was important to understand if the overall findings discussed above, which included both faculty impressions and student expectations of faculty impressions with only one significant interaction involving role/perspective, were reflected in analyses of faculty only. Results from faculty-only analyses followed similar patterns as the entire sample, with weaker findings and trends partially attributable to smaller sample size. Compared to combined responses, faculty impressions of accommodations were more dependent on the

specific accommodation type in conjunction with what information they were given. There were no main effects for communication type in these faculty-only analyses, but such effects were observed in combined analyses. Students may have anticipated the type of information (diagnosis present or absent; illness education) having a broad impact on how faculty view all accommodations, but faculty impressions were more nuanced.

Analyses of faculty-only responses on the ITSI survey were useful for understanding relationships between different types of inclusive behavior, and how these responses related to ratings of accommodations by faculty in the hypothetical vignette study. Faculty had generally high ratings on the ITSI indicating that they generally hold attitudes that align with Universal Design principles. Two scores were somewhat lower, suggesting less inclusive attitudes towards substantially lowering course load and supplying extra credit assignments for any student regardless of disability. If faculty answered highly about one set of inclusive behaviors, they were likely to answer highly about another, suggesting coherence in faculty attitudes towards Universal Design and inclusion. There were a few exceptions to this pattern of relatedness: faculty attitudes towards accommodations, accessible course materials, and inclusive teaching strategies were not strongly related to their knowledge about disability laws. Additionally, faculty attitudes about accommodations and accessible course materials as measured by the ITSI were not strongly related to their attitudes towards making course modifications for students with and without disabilities.

There were three ITSI subscales that related significantly to positive and negative faculty attitudes towards accommodation types in the vignette study. These were: the Accommodation subscale that asked questions about accommodating behavior like using alternative exam types or providing class materials to students; the Accessible Course Materials subscale that asked

questions about digital access to course materials; and the Inclusive Lecture Strategies subscale that asked questions about emphasizing lecture organization and reiterating questions or comments made in class. Faculty who reported less agreement towards using practices outlined in these three scales tended to have more negative attitudes towards the extra test time and the deadline flexibility accommodations. Faculty who were in greater agreement with the inclusive practices on the ITSI subscales were more likely to have positive attitudes about the two more rare accommodations (deadline and attendance flexibility). These findings suggest that faculty who believe more strongly in the importance of these types of inclusive teaching behaviors in the classroom are more likely to view accommodations requests more positively, even for rare and sometimes controversial accommodations.

These three subscales referring to accommodating behavior like using alternative exam types or providing class materials to students, digital access to course materials, and emphasizing lecture organization and reiterating questions or comments made in class were also related to faculty responses to individual accommodation judgments in the hypothetical vignette study (e.g., appropriate, feasible, justified, etc.). In this analysis, faculty who more strongly agreed with the importance of the behaviors on the Accommodation subscale viewed all accommodations as 1) less disruptive to students; 2) less disruptive to teaching; and were 3) less likely to feel that any of the accommodations reduced the rigor of the class and 4) less likely to feel that the accommodations compromised an essential element of the class. Responses to the Accessible Course Materials and Inclusive Lecture Strategies scale reflected a similar pattern of faculty judgments of accommodations: the more they believed the inclusive behaviors were important, the more they perceived the accommodations to be 1) less disruptive, 2) have less of an impact on the rigor of the class, and 3) be less likely to compromise an essential element. Interestingly,

the more faculty endorsed behaviors on the Inclusive Lecture Strategies scale (emphasizing lecture organization and reiterating questions or comments made in class), the more likely faculty were to judge accommodations to be appropriate, feasible, and justified. These findings suggest that the more that faculty endorse essential principles and practices of inclusive teaching in general, the more likely they may be to view specific accommodation requests more positively and less negatively.

To more directly assess student experiences navigating accommodation requests with faculty, student participants were asked questions about their current disclosure practices and their beliefs about the impact of including information like a diagnosis or illness education in accommodation letters for professors. Students believed that it would be more helpful when negotiating accommodations with professors if illness education was provided in the accommodation letter, as opposed to just including the diagnosis. This is consistent with the finding reported above that the addition of illness education has an impact on faculty perceptions of accommodations. It is important to note that for privacy reasons, specific illness information that would disclose the diagnosis is not permitted to be in the standard accommodation letter. Diagnosis is privileged information and even with the approval from a student to include such information, it is the policy of SAS to not include that information. However, these findings and the students' beliefs about the importance of this information suggest that it nevertheless could be helpful. These findings indicate that any information given to faculty on the impact of illness on a students' academic and daily functioning could positively impact faculty impressions and perceptions of accommodations.

When student participants were asked why they might choose to disclose the diagnosis to a faculty member, many expressed the hope that disclosing would educate their professor and

lead to less stigmatization and more acceptance. Many students disclosed in order to prove their need for accommodation, to prove that they were seeking academic support for legitimate reasons, and in order to convince the Office of Student Accessibility Services or their professors that their accommodation requests should be met. Some students explained that they disclose because in doing so, they may receive better support, or if they did not disclose, they could be seen as deliberately hiding something. These sentiments are reflected in the following illustrative quote: “I believe it’s important to be honest about my situation otherwise why should I expect any empathy or help.”

From students’ testimonies it is clear that the majority of students disclose their private medical information to professors for varying reasons. The findings of this study suggest that if professors have more information about the diagnosis and/or illness impacts, they might be more understanding and more willing to accommodate. While it is against privacy laws for disability services laws to disclose private medical information on behalf of students, for good reasons, it is clear that students are choosing to disclose anyway. The need for further research is exigent as students *are* disclosing their illness and, as some students shared, they feel they must in order to receive the proper support. Finding a way to adequately support students with invisible disabilities as they navigate the accommodations processes will require methods that can exist within the current framework of disability and privacy policy so they can do so in an illness identity-affirming way. Strategies to help students and mitigate potential stigmatization that can accompany disclosure could focus on educational or preventative disclosure practices that bolster student self-advocacy and agency.

For some students, disclosing is viewed as being necessary, most notably in order to be treated with empathy and compassion. This study suggests that disclosing engenders empathy,

but students should not have to share private information in order to feel supported. This study clearly highlights a need to change current college practices in order to more accurately support the needs of students with invisible illness. There should be a focus on both supporting students to disclose in an illness-affirming way *and* bolstering faculty development and awareness about disability justice and ableism. Teaching faculty the impact illness has on students, in general, can help shift attitudes around accommodations. Additionally, these results suggest that faculty should be taught how to create a safe space for students that wish to disclose their illness. Teaching students disclosure practices that are illness-identity affirming and teaching faculty about illness impacts and how to support students regardless of their decision to disclose, could help students with invisible illnesses to navigate college successfully, build healthy and positive illness identities, and learn to embrace their unique differences.

There were several limitations of the current study. The scope of the study, and therefore the impact of the findings, was limited because of the number of participants. There may not have been enough power to adequately detect higher order interactions with role (student vs. faculty). Faculty demographics, like whether they had received First-Year Seminar training that includes disability education, were not analyzed for differences for time purposes but could be considered in future research. Similarly, student participants were asked if they were registered with the Office of Student Accessibility Service; this measure was not part of this study's analyses but should be considered in future research. Additionally, the small sample size of faculty participants did not allow for the examination of the impact that training or individual backgrounds might have had on perceptions. In some places, multiple analyses were conducted where fewer multivariate analyses may have been used to reduce the chances of Type II error. The experimental study design assessed specific attitudes or judgements about each

accommodation. However, for the purposes of data reduction, these individual items were collapsed into positive and negative impression factors, the findings of which were less nuanced than analyzing each judgment item individually.

One example of nuance lost was with the individual item that asked if the accommodation compromised an essential element of the course, which is important for understanding accommodation attitudes. This is a reason faculty can decide not to implement an accommodation a student is qualified for, and from a review of disability resources it seems to be a common concern when deciding to grant the attendance flexibility accommodation. More items are needed to fully examine how faculty determine that an accommodation compromises an essential element of the class and what might affect that decision. Many faculty and schools have had to rethink how students attend and participate in classes during the COVID-19 pandemic. The changes that have been made, especially transitioning to remote learning, show that an academically rigorous course can still be offered successfully while allowing a certain degree of attendance flexibility (i.e., for students who may be in a different time zone or for health related reasons). The successful integration of some attendance flexibility in our new virtual academic environment may be partially because online classes are easier to record and share with students who may have been absent. However, the ability to record classes was considered an inclusive teaching strategy to help students with disabilities before remote learning was required. Pre-pandemic, the idea of recording classes was met with resistance from faculty and staff who held the belief that recording and sharing class time would either hinder their teaching flow or expose sensitive information shared during class (Morris et al., 2019). Much of these fears had to be overcome quickly with the abrupt and necessary change to remote learning. Further research must be done to understand how the pandemic and the need for flexibility for everyone has

impacted faculty attitudes towards inclusive teaching strategies for students with disabilities, specifically.

It is important to reiterate that this study focused on accommodations of a student with chronic migraines specifically. Chronic migraine is a unique chronic illness even amongst other invisible chronic illnesses and therefore attitudes about it cannot be accurately extrapolated to apply to other chronic illnesses. For example, attitudes towards accommodations for an individual with depression, an invisible chronic illness, will be different to those for an individual with chronic migraine. Universal Design is the “design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability” (Centre for Excellence in Universal Design, 2020). In the current context of creating inclusive and accessible spaces for students with invisible chronic illness in college, the unique experiences of other ICIs must be studied. Invisibility is a complex phenomenon with many facets, all dependent upon the diagnosis and the individual with their specific illness identity and experiences (Masana, 2011; Sniatecki et al., 2015; Spencer et al., 2018). Similarly, it is important to note that as with all other aspects of identity, chronic illness is intersectional and is experienced and must be understood with varying identities. A person’s gender, race, sexual orientation, and socioeconomic class all interact with and impact the individual and institutional experience of illness. This thesis was focused broadly on college-aged students with invisible chronic illness, but it was not able to explore the intersections of invisible chronic illness with other identities due to sample limitations and due limitations of the experimental design.

Faculty attitudes, as seen by students with ICI, can significantly impact students’ willingness to disclose their illness and even their willingness to seek support (Hartman-Hall &

Haaga, 2016; Lynch & Gussel, 1996). This study has shown that biases about and negative attitudes toward accommodations for a student with chronic migraines can be positively impacted. Giving faculty more information about how illness impacts a student's ability to function can change the way in which they view the support given to students. Future research on this topic can help to further understand how to construct an inviting and inclusive space for students with disabilities as they navigate life with illness. In college, students with disabilities must learn to advocate for themselves, but this research suggests institutions and policymakers should help students develop this skill by bolstering their illness-related self-image and mitigate the stress and stigma that they currently experience.

References

- About IDEA*. Individuals with Disabilities Education Act. <https://sites.ed.gov/idea/about-idea/#ADA>
- Akin, D., & Huang, L. M. (2019). Perceptions of College Students with Disabilities. *Journal of Postsecondary Education and Disability*, 31(1), 21-33.
- 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.
- Centre for Excellence in Universal Design. (2020). *What is Universal Design*. National Disability Authority. <http://universaldesign.ie/What-is-Universal-Design/>
- Chan, E. C. C., Piira, T., & Betts, G. (2005). The school functioning of children with chronic recurrent pain. *Pediatric Pain Letter*, 7(2-3), 11-16.
- Chronic diseases in america*. (2020). National Center for Chronic Disease Prevention and Health Promotion. <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>
- Chronic migraine: The basics of chronic migraine*. (2016). American Migraine Foundation. <https://americanmigrainefoundation.org/resource-library/chronic-migraine/>
- Corrigan, P. W., Kosyluk, K. A., & Rüsçh, N. (2013). Reducing self-stigma by coming out proud. *American Journal of Public Health*, 103(5), 794-800.
<https://doi.org/10.2105/AJPH.2012.301037>
- Corrigan, P. W., Michaels, P. J., Powell, K., Bink, A., Sheehan, L., Schmidt, A., Apa, B., & Al-Khouja, M. (2016). Who comes out with their mental illness and how does it help? *Journal of Nervous and Mental Disease*, 204(3), 163-168.

- Credé, M., Roch, S. G., & Kieszczynka, U. M. (2010). Class Attendance in College: A Meta-analytic Review of the Relationship of Class Attendance with Grades and Student Characteristics. *Review of Educational Research, 80*(2), 272-295.
<https://doi.org/10.3102/0034654310362998>
- Dallas, B. K., Sprong, M. E., & Upton, T. D. (2014). Post-secondary Faculty Attitudes Toward Inclusive Teaching Strategies. *Journal of Rehabilitation, 80*(2), 12-20.
- Daly-Cano, M., Vaccaro, A., & Newman, B. (2015). College Student Narratives About Learning and Using Self-advocacy Skills. *Journal of Postsecondary Education and Disability, 28*(2), 213-227.
- deBettencourt, L. U. (2002). Understanding the differences between IDEA and section 504. *Teaching Exceptional Children, 34*(3), 16-23. <https://doi.org/10.1177/004005990203400302>
- Dick, B. D., & Pillai Riddell, R. (2010). Cognitive and school functioning in children and adolescents with chronic pain: a critical review. *Pain Research & Management, 15*(4), 238-244.
- Elliot, M., & Doane, M. J. (2015). Stigma management of mental illness: Effects of concealment, discrimination, and identification on well-being. *Self and Identity, 14*(6), 654-674. <https://doi.org/10.1080/15298868.2015.1053518>
- Employees hide headaches, migraines from supervisors.* Reuters.
<https://www.reuters.com/brandfeatures/excedrin/employees-hide-headaches-migraines-from-supervisors>
- The family educational rights and privacy act: Guidance for eligible students.* (2011). Department of Education. <https://www2.ed.gov/policy/gen/guid/fpco/ferpa/for-eligible-students.pdf>

- Flexibility in attendance as an accommodation.* (2016). Connecticut College Student Accessibility Services. https://drive.google.com/file/d/16CkvXCg-v06a1hRCHO_Gx0Kp17L6zbUy/view
- Gil-Gouveia, R., & Martins, I. P. (2019). Cognition and cognitive impairment in migraine. *Current Pain and Headache Reports*, 23(84). <https://doi.org/10.1007/s11916-019-0824-7>
- Goadsby, P. J., Holland, P. R., Martins-Oliveira, M., Hoffmann, J., Schankin, C., & Akerman, S. (2017). Pathophysiology of migraine: A disorder of sensory processing. *Physiological Reviews*, 97, 553-622. <https://doi.org/10.1152/physrev.00034.2015>
- Goffman E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. Prentice Hall.
- Gorodzinski, A. Y., Hainsworth, K. R., & Weisman, S. J. (2011). School functioning and chronic pain: a review of methods and measures. *Journal of Pediatric Psychology*, 36(9), 991-1002. <https://doi.org/10.1093/jpepsy/jsro38>
- Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2018). 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>
- Guite, J. W., Walker, L. S., Smith, C. A., & Garber, J. (2000). Children's Perceptions of Peers with Somatic Symptoms: The Impact of Gender, Stress, and Illness. *Journal of Pediatric Psychology*, 25(3), 125-135. <https://doi.org/10.1093/jpepsy/25.3.125>
- Hartman-Hall, H. M., & Haaga, D. A. F. (2016). College Students' Willingness to Seek Help for Their Learning Disabilities. *Learning Disability Quarterly*, 25(4), 263-274. <https://doi.org/10.2307/1511357>

- Houman, K. M., & Stapley, J. C. (2013). The College Experience for Students with Chronic Illness: Implications for Academic Advising. *NACADA*, 33(1), 61-70.
<https://doi.org/10.12930/NACADA-13-227>
- Katsiyannis, A., Dalun Zhang, Landmark, L., & Reber, A. (2009). Postsecondary Education for Individuals with Disabilities. *Journal of Disability Policy Studies*, 20(1), 35-45.
<https://doi.org/10.1177/1044207308324896>
- Kreider, C. M., Bendixen, R. M., & Lutz, B. J. (2015). Holistic needs of university students with invisible disabilities: A qualitative study. *Physical & occupational therapy in pediatrics*, 35(4), 426-441. <https://doi.org/10.3109/01942638.2015.1020407>
- Logan, D. E., Catanese, S. P., Coakley, R. M., & Scharff, L. (2007a). Chronic Pain in the Classroom: Teachers' Attributions about the Causes of Chronic Pain. *Journal of School Health*, 77(5), 248-256.
- Logan, D. E., Coakley, R. M., & Scharff, L. (2007b). Teachers' Perceptions of and Responses to Adolescents with Chronic Pain Syndromes. *Journal of Pediatric Psychology*, 32(2),
<https://doi.org/139-149>. 10.1093/jpepsy/jsj110
- Logan, D. E., Simons, L. E., & Kaczynski, K. J. (2009). School Functioning in Adolescents with Chronic Pain: The Role of Depressive Symptoms in School Impairment. *Journal of Pediatric Psychology*, 34(8), 882-892. <https://doi.org/10.1093/jpepsy/jsn143>
- Lombardi, A., Vukovic, B., & Sala-Bars, I. (2015). International Comparisons of Inclusive Instruction Among College Faculty in Spain, Canada, and The United States. *Journal of Postsecondary Education and Disability*, 28(4), 447-460.

- Lynch, R. T., & Gussel, L. (1996). Disclosure and Self-advocacy Regarding Disability-related Needs: Strategies to Maximize Integration in Postsecondary Education. *Journal of Counseling and Development*, 74(4). <https://doi.org/10.1002/j.1556-6676.1996.tb01879.x>
- M., P. (2019, Feb 18). Guest blog: Disability accommodations for balancing school and migraines. *mindful migraine*. <https://www.mindfulmigraine.org/blog-1/2019/1/21/guest-blog-disability-accommodations-for-balancing-school-and-migraines>
- Madaus, J. W., & Shaw, S. F. (2004). Section 504. *Intervention in School and Clinic*, 40(2), 81-87. <https://doi.org/10.1177/10534512040400020301>
- Marko, G. (2012). My Painful Self: Health Identity Construction in Discussion Forums on Headaches and Migraines. *Arbeiten Aus Anglistik Und Amerikanistik*, 37(2), 245-272. <https://www.jstor.org/stable/43025830>
- Marshak, L., Van Wieren, T., Raeke Ferrell, D., Swiss, L., & Dugan, C. (2010). Exploring Barriers to College Student Use of Disability Services and Accommodations. *Journal of Postsecondary Education and Disability*, 22(3), 151-165.
- Masana, L. (2011). Invisible chronic illnesses: Inside apparently healthy bodies. In S. Fainzang, & C. Haxaire (Eds.), *Of bodies and symptoms: Anthropological perspectives on their social and medical treatment* (pp. 127-149). URV.
- Migraine university*. National Headache Foundation. <https://headaches.org/resources/migraine-university/>
- Migraine vs. headache: How to tell the difference*. (2019). Penn Medicine. <https://www.pennmedicine.org/updates/blogs/health-and-wellness/2019/november/migraines-vs-headaches>

- Moore, R. (2006). Class Attendance: How Students' Attitudes About Attendance Relate to Their Academic Performance in Introductory Science Classes. *Research and Teaching in Developmental Education, 23*(1), 19-33. <http://www.jstor.com/stable/42802273>
- Morris, N. P., Swinnerton, B., & Coop, T. (2019). Lecture Recordings to Support Learning: A Contested Space Between Students and Teachers. *Computers & Education, 140*, 1-23. <https://doi.org/10.1016/j.compedu.2019.103604>
- Murray, C., Wren, C. T., & Keys, C. (2008). University Faculty Perceptions of Students with Learning Disabilities: Correlates and Group Differences. *Learning Disability Quarterly, 31*(3), 95-113. <https://doi.org/10.2307/25474642>
- Olson, A. L., Seidler, A. B., Goodman, D., Gaelic, S., & Nordgren, R. (2004). School professionals' perceptions about the impact of chronic illness in the classroom. *Archives of Pediatrics and Adolescent Medicine, 158*, 53-58. <https://doi.org/10.1177/10598405040200061101>
- Oris, L., Luyckx, K., Rassart, J., Goubert, L., Goossens, E., Apers, S., Arat, S., Vandenberghe, J., Westhovens, R., & Moons, P. (2018). Illness Identity in Adults with a Chronic Illness. *Journal of Clinical Psychology in Medical Settings, 25*(4), 429-440. <https://doi.org/10.1007/s10880-018-9552-0>
- Parikh, S. K., & Young, W. B. (2019). Migraine: Stigma in Society. *Current Pain and Headache Reports, 23*(8) <https://doi.org/10.1007/s11916-019-0743-7>
- Sniatecki, J. L., Perry, H. B., & Snell, L. H. (2015). Faculty Attitudes and Knowledge Regarding College Students with Disabilities. *Journal of Postsecondary Education and Disability, 28*(3), 259-275.

- Spencer, G., Lewis, S., & Reid, M. (2018). Living with a Chronic Health Condition: Students' Health Narratives and Negotiations of (Ill) Health at University. *Health Education Journal*, 77(6), 631-643. <https://doi.org/10.1177/0017896917738120>
- Social schema*. APA Dictionary of Psychology. <https://dictionary.apa.org/social-schema>
- St. Clair, K. L. (1999). A Case Against Compulsory Class Attendance Policies in Higher Education. *Innovative Higher Education*, 23(3), 171-180. <https://doi.org/10.1023/A:1022942400812>
- Taniguchi, E. (2020). The Roles of Mental Illness Disclosure and Disclosure Strategies on Well-being Among College Students. *Journal of American College Health*, 1–11. Advance online publication. <https://doi.org/10.1080/07448481.2020.1781868>

Appendix A

Email to professors:

Dear Connecticut College faculty member,

I am a senior working on my honors thesis in the psychology department. The focus of my study is on how both students and faculty interact with accessibility policy here at Conn. I am inviting as many faculty members as possible, as well as students, to take my survey. I understand that your spare time is limited, especially during the pandemic so I want to let you know that my study will take just 15 minutes or less. Gaining the diverse perspectives of as many faculty members and students as possible will increase the validity of my study and the usefulness of the resulting data.

You will have the opportunity to enter in a raffle to win a \$20 gift card of your choosing after completing the survey.

Here is the anonymous survey link:

https://conncoll.co1.qualtrics.com/jfe/form/SV_8okB6LoebGTDNad

Thank you for your time and consideration,

Andra Gurley-Green

Email to SAS students:

Dear Connecticut College student,

I am a senior working on my honors thesis in the psychology department. The focus of my study is on how both students and faculty interact with accessibility policy here at Conn. I would like to invite you to take my survey, which will take just 15 minutes or less. Gaining the diverse

perspectives of as many students as possible will increase the validity of my study and the usefulness of the resulting data.

You will have the opportunity to enter in a raffle to win a \$20 gift card of your choosing after completing the survey.

Here is the anonymous survey link:

https://conncoll.co1.qualtrics.com/jfe/form/SV_b8BaAoZ5nXjgqoJ

Thank you for your time and consideration,

Andra Gurley-Green

Facebook post text:

If you...

1. have an illness or disability that interferes with school and daily life and
2. Are not registered with SAS

Please consider taking Andra Gurley-Green's honors thesis survey about navigating college with illness or disability. *It will take just 15 minutes or less of your time!*

Survey link:

https://conncoll.co1.qualtrics.com/.../SV_b8BaAoZ5nXjgqoJ

If eligible, you will be entered into a raffle to win a \$20 gift card! Please note that participation in this study will not count for course credit.

Please Contact: Andra Gurley-Green at agurleyg@conncoll.edu if you have questions or wish to participate!

Appendix B

Please read the following passage about Jaime Harris, a hypothetical student at a liberal arts college. Jaime is enrolled in an interdisciplinary first year seminar. The class includes written assignments, tests, and quizzes.

Dear Professor,

Jaime Harris is registered with the Office of Student Accessibility Services (SAS) based upon documentation verifying a disability.

Jaime should meet with you privately to discuss accommodation arrangements no later than **7 business days before** the accommodation is to be implemented. An accommodation should be provided to the student unless it compromises an essential element of the class.

Jaime has been approved for the following accommodation(s):

1. Test Accommodation(s):

- Testing in a distraction-reduced environment
- 50% extended time for tests, quizzes, and in class assignments

Must discuss arrangements with professor

2. Deadline flexibility

- Must discuss specific parameters with professor

3. Attendance flexibility:

- Must discuss specific parameters with professor

If you have any questions or concerns please contact the Office of Student Accessibility Services.

Please remember that information pertaining to a student's disability is confidential and should not be discussed in the classroom.

Appendix C

Please read the following passage about Jaime Harris, a hypothetical student at a liberal arts college. Jaime is enrolled in an interdisciplinary first year seminar. The class includes written assignments, tests, and quizzes.

Dear Professor,

Jaime Harris is registered with the Office of Student Accessibility Services (SAS) based upon documentation verifying a disability. Jaime's disability results from the following medical condition: Chronic Migraines.

Jaime should meet with you privately to discuss accommodation arrangements no later than **7 business days before** the accommodation is to be implemented. An accommodation should be provided to the student unless it compromises an essential element of the class.

Jaime has been approved for the following accommodation(s):

- Test Accommodation(s):
 - Testing in a distraction-reduced environment
 - 50% extended time for tests, quizzes, and in class assignments

Must discuss arrangements with professor

- Deadline flexibility
 - Must discuss specific parameters with professor
- Attendance flexibility:
 - Must discuss specific parameters with professor

If you have any questions or concerns please contact the Office of Student Accessibility Services.

Please remember that information pertaining to a student's disability is confidential and should not be discussed in the classroom.

Appendix D

Please read the following passage about Jaime Harris, a hypothetical student at a liberal arts college. Jaime is enrolled in an interdisciplinary first year seminar. The class includes written assignments, tests, and quizzes.

Dear Professor,

Jaime Harris is registered with the Office of Student Accessibility Services (SAS) based upon documentation verifying a disability. Jaime's disability results from the following medical condition: Chronic Migraines.

Below is information on this illness and how it may impact academic functioning:

Migraine is a complex neurological disorder which differs from a headache. Some triggers include chemical and environmental triggers, skipping meals, sleep disruption, and stress. Symptoms of migraine are commonly self-reported but studies have documented objective cognitive decline during a migraine attack. Neuropsychological tests administered during an attack show declines in areas such as processing speed, working memory, visual-spatial processing, attention, and verbal learning.

There are four phases in a migraine attack: the premonitory phase; the aura phase; the headache phase; and the postdrome phase.

Symptoms of each phase include:

- Premonitory: irritability, fatigue, food cravings, repetitive yawning, changes in mood and activity, stiff neck muscles, and sound sensitivity; A typical migraine attack can last for a few hours to several days but the premonitory symptoms may be present up to 72 hours before the onset of pain.

- Aura: temporary transient neurological deficits like visual hallucinations, loss of vision, or affected motor function
- Headache: can last anywhere from four to 72 hours with accompanying symptoms like nausea, light and sound sensitivity, impaired thinking, difficulties with speech, and feeling distracted
- Postdrome: tiredness, difficulties in concentrating, and muscle or neck stiffness

Even without the sensation of pain, a migraineur can be disoriented, tired, and have reduced focus for days before and days after pain. Migraine brains also process sensory information differently overall and have lower stress resilience when compared to healthy peers. During the time between attacks without symptoms, a migraineur is more sensitive to light, sound, certain visual stimuli, and painful thermal stimuli.

Jaime should meet with you privately to discuss accommodation arrangements no later than **7 business days before** the accommodation is to be implemented. An accommodation should be provided to the student unless it compromises an essential element of the class.

Jaime has been approved for the following accommodation(s):

- Test Accommodation(s):
 - Testing in a distraction-reduced environment
 - 50% extended time for tests, quizzes, and in class assignments

Must discuss arrangements with professor

- Deadline flexibility
 - Must discuss specific parameters with professor
- Attendance flexibility:
 - Must discuss specific parameters with professor

If you have any questions or concerns please contact the Office of Student Accessibility Services.

Please remember that information pertaining to a student's disability is confidential and should not be discussed in the classroom.

Appendix E

Please read the following passage about Jaime Harris, a hypothetical student at a liberal arts college. Jaime is enrolled in an interdisciplinary first year seminar. The class includes written assignments, tests, and quizzes.

Dear Professor,

Jaime Harris is registered with the Office of Student Accessibility Services (SAS) based upon documentation verifying a disability. Jaime's disability results from the following medical condition: Chronic Migraines.

Jaime should meet with you privately to discuss accommodation arrangements no later than **7 business days before** the accommodation is to be implemented. An accommodation should be provided to the student unless it compromises an essential element of the class.

Jaime has been approved for the following accommodation(s):

- Test Accommodation(s):
 - Testing in a distraction-reduced environment
 - 50% extended time for tests, quizzes, and in class assignments

Must discuss arrangements with professor

- Deadline flexibility
 - Must discuss specific parameters with professor
- Attendance flexibility:
 - Must discuss specific parameters with professor

If you have any questions or concerns please contact the Office of Student Accessibility Services.

Please remember that information pertaining to a student's disability is confidential and should not be discussed in the classroom.

Jaime Harris has sent a follow-up email to the SAS notification letter.

Dear Professor,

I am following up on an email you received from the Office of Student Accessibility Services (SAS) to provide you with some information about my illness of Chronic Migraines and how it may impact my academic functioning.

Migraine is a complex neurological disorder which differs from a headache. Some of my triggers include chemical and environmental triggers, skipping meals, sleep disruption, and stress. Symptoms of migraine are commonly self-reported but studies have documented objective cognitive decline during a migraine attack. Neuropsychological tests administered during an attack show declines in areas such as processing speed, working memory, visual-spatial processing, attention, and verbal learning.

There are four phases in a migraine attack: the premonitory phase; the aura phase; the headache phase; and the postdrome phase.

Symptoms of each phase include:

- Premonitory: irritability, fatigue, food cravings, repetitive yawning, changes in mood and activity, stiff neck muscles, and sound sensitivity; A typical migraine attack can last for a few hours to several days but the premonitory symptoms may be present up to 72 hours before the onset of pain.
- Aura: temporary transient neurological deficits like visual hallucinations, loss of vision, or affected motor function

- Headache: can last anywhere from four to 72 hours with accompanying symptoms like nausea, light and sound sensitivity, impaired thinking, difficulties with speech, and feeling distracted
- Postdrome: tiredness, difficulties in concentrating, and muscle or neck stiffness

Even without the sensation of pain, I can be disoriented, tired, and have reduced focus for days before and days after pain. My brain also processes sensory information differently overall and I have lower stress resilience when compared to my healthy peers. During the time between attacks without symptoms, I am more sensitive to light, sound, certain visual stimuli, and painful thermal stimuli.

I look forward to meeting with you privately to discuss accommodation arrangements.

Thank you,

Jaime Harris

Appendix F

Questions:

Please answer the following questions about each accommodation based on how you think most professors at Conn would respond:

Test Accommodation(s):

Testing in a distraction-reduced environment (must discuss arrangements with professor)

This accommodation is appropriate

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is feasible

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is justified

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

There is not enough information about the illness to judge the accommodation

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would raise issues of fairness for other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt teaching

1	2	3	4	5
---	---	---	---	---

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
----------------------	----------	---------	-------	----------------

This accommodation would reduce the academic rigor of the class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is likely to compromise an essential element of a class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Test Accommodation(s):

50% extended time for tests, quizzes, and in class assignments (must discuss arrangements with professor)

This accommodation is appropriate

1	2	3	4	5
---	---	---	---	---

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
-------------------	----------	---------	-------	----------------

This accommodation is feasible

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is justified

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

There is not enough information about the illness to judge the accommodation

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would raise issues of fairness for other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt teaching

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would reduce the academic rigor of the class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is likely to compromise an essential element of a class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Deadline flexibility:

Illness flare ups may cause difficulties with completing work by assigned deadline (must discuss specific parameters with professor)

This accommodation is appropriate

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is feasible

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is justified

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

There is not enough information about the illness to judge the accommodation

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would raise issues of fairness for other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt teaching

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would reduce the academic rigor of the class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is likely to compromise an essential element of a class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Attendance flexibility:**Chronic/episodic nature of illness may cause difficulties with regular class attendance****(must discuss specific parameters with professor)****This accommodation is appropriate**

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is feasible

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is justified

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

There is not enough information about the illness to judge the accommodation

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would raise issues of fairness for other students

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would disrupt teaching

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation would reduce the academic rigor of the class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

This accommodation is likely to compromise an essential element of a class

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

Appendix G

ITSI Survey

1. I believe it's important to allow students with documented disabilities to use technology (e.g. laptop, calculator, spell checker) to complete tests even when such technologies are not permitted for use by students without disabilities

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

2. I believe it's important to provide copies of my lecture notes or outlines to students with documented disabilities

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

3. I believe it's important to provide copies of my overhead and/or PowerPoint presentations to students with documented disabilities

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

-
4. I believe it's important to allow flexible response options on exams (e.g. change from written to oral) for students with documented disabilities

1	2	3	4	5	6
Strongly disagree					Strongly agree

5. I believe it's important to allow students with documented disabilities to digitally record (audio or visual) class sessions

1	2	3	4	5	6
Strongly disagree					Strongly agree

6. I believe it's important to make individual accommodations for students who have disclosed their disability to me

1	2	3	4	5	6
Strongly disagree					Strongly agree

7. I believe it's important to arrange extended time on exams for students who have documented disabilities

1	2	3	4	5	6
Strongly disagree					Strongly agree

8. I believe it's important to extend the due dates of assignments to accommodate the needs of students with documented disabilities

1	2	3	4	5	6
Strongly disagree					Strongly agree

9. I believe it's important to use a course website (e.g. Moodle or faculty web page)

1	2	3	4	5	6
Strongly disagree					Strongly agree

10. I believe it's important to put my lecture notes online for ALL students (on Moodle or another website)

1	2	3	4	5	6
Strongly disagree					Strongly agree

11. I believe it's important to post electronic versions of course handouts

1	2	3	4	5	6
Strongly disagree					Strongly agree

12. I believe it's important to allow students flexibility in submitting assignments electronically (e.g. mail attachment, digital drop box)

1	2	3	4	5	6
Strongly disagree					Strongly agree

13. I believe it's important to allow a student with a documented disability to complete extra credit assignments

1	2	3	4	5	6
---	---	---	---	---	---

Strongly
disagree

Strongly
agree

14. I believe it's important to reduce the overall course reading load for a student with a documented disability even when I would not allow a reduced reading load for another student

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

15. I believe it's important to reduce the course reading load for ANY student who expresses a need

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

16. I believe it's important to allow ANY student to complete extra credit assignments in my course(s)

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

17. I believe it's important to repeat the question back to the class before answering when a question is asked during a class session

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

18. I believe it's important to begin each class session with an outline/agenda of the topics that will be covered

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

19. I believe it's important to summarize key points throughout each class session

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

20. I believe it's important to connect key points with larger course objectives during class sessions

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

21. I believe it's important to use technology so that my course material can be available in a variety of formats (e.g., podcast of lecture available for download, course readings available as mp3 files)

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

22. I believe it's important to use interactive technology to facilitate class communication and participation (e.g., Discussion Board)

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

23. I believe it's important to present course information in multiple formats (e.g., lecture, text, graphics, audio, video, hands-on exercises)

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

24. I believe it's important to create multiple opportunities for engagement

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

25. I believe it's important to survey my classroom in advance to anticipate any physical barriers

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

26. I believe it's important to include a statement in my syllabus inviting students with disabilities to discuss their needs with me

1	2	3	4	5	6
Strongly disagree					Strongly agree

27. I believe it's important to make a verbal statement in class inviting students with disabilities to discuss their needs with me

1	2	3	4	5	6
Strongly disagree					Strongly agree

28. I believe it's important to use a variety of instructional formats in addition to lecture, such as small groups, peer assisted learning, and hands on activities

1	2	3	4	5	6
Strongly disagree					Strongly agree

29. I believe it's important to supplement class sessions and reading assignments with visual aids (e.g., photographs, videos, diagrams, interactive simulations)

1	2	3	4	5	6
---	---	---	---	---	---

Strongly
disagree

Strongly
agree

30. I believe it's important to allow students to demonstrate the knowledge and skills in ways other than traditional tests and exams (e.g., written essays, portfolios, journals)

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

31. I believe it's important to allow students to express comprehension in multiple ways

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

32. I believe it's important to be flexible with assignment deadlines in my course(s) for ANY student who expresses a need

1 2 3 4 5 6

Strongly
disagree

Strongly
agree

33. I believe it's important to allow flexible response options on exams (e.g., change from written to oral) for ANY student who expresses a need

1	2	3	4	5	6
Strongly disagree					Strongly agree

34. *I am confident in my understanding of the Americans with Disabilities Act (1990)*

1	2	3	4	5	6
Strongly disagree					Strongly agree

35. *I am confident in my responsibilities as an instructor to provide or facilitate disability related accommodations*

1	2	3	4	5	6
Strongly disagree					Strongly agree

36. *I am confident in my knowledge to make adequate accommodations for students with disabilities in my course(s)*

1	2	3	4	5	6
Strongly disagree					Strongly agree

37. *I am confident in my understanding of section 504 of the Rehabilitation Act of 1973*

1	2	3	4	5	6
Strongly disagree					Strongly agree

38. *I am confident in my understanding of Universal Design*

1	2	3	4	5	6
Strongly disagree					Strongly agree

39. *I am confident in my understanding of the legal definition of disability*

1	2	3	4	5	6
Strongly disagree					Strongly agree

Appendix H

Manipulation Checks

Which of the following pieces of information were you provided with?

Please check all that apply.

The student's name	Specific approved accommodations for the student	The student's medical condition	A description of the medical condition and its impact on functioning
--------------------------	--	---------------------------------------	--

If “a description of the medical condition and its impact on functioning” is selected:

From whom did the description of the medical condition and its impact on functioning come?

The Office of Accessibility Services	The student
---	-------------

Appendix I

Informed Consent Form

Title of the Project: **Understanding Interactions with Accessibility Services**

Principal Investigator: Andra Gurley-Green, Honors Student in Psychology, Connecticut College

Faculty Advisor: Audrey Zakriski, Professor of Psychology, Connecticut College

You are invited to participate in a research study. In order to participate, you must be employed at Connecticut College and teach at least one class. Taking part in this research project is voluntary, so you may choose to participate or not and can stop at any time throughout the study.

The purpose of the study is to understand how professors interact with accessibility policy at Connecticut College and with communications about approved student accommodations. If you choose to participate, you will be asked to read a short passage about a hypothetical student and then answer a set of short questions about the passage. At the end of the study you will be asked to fill out a set of short questions and demographic information, and will be given the option to remove your data from use in the study. This study will take you 15 minutes or less to complete.

Risks or discomforts from this research are expected to be minimal and no greater than the risks/discomforts encountered in day to day life. Although you will not directly benefit from being in this study, others might benefit because this research may contribute to a better general understanding of how information related to perceptions is processed and understood. To protect your privacy, we will not include any information that could directly identify you.

You will have the opportunity to sign up for a raffle for one of 10 \$20 gift cards. You will be asked if you would like to enter the raffle at the end of the survey. If yes, you will be directed through an anonymous link to a separate survey in which you will enter your name and email in order to contact you if you are selected. Your personal information for the raffle will not be linked to your survey responses in any way and will be deleted after the raffle is drawn.

I plan to publish the results of this study. To protect your privacy, your name and any other information that can directly identify you will be stored separately from the data collected as part of the project.

It is totally up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer. If you decide to withdraw before this study is completed, your survey results will be discarded.

If you have questions about this research, you may contact **Andra Gurley-Green** (agurleyg@conncoll.edu; 339-222-4853) or **Audrey Zakriski** (alzak@conncoll.edu).

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher (s), please contact the following:

Kira Phillips, IRB Administrator
Ann Devlin, IRB Chairperson
Connecticut College Institutional Review Board
270 Mohegan Avenue
New London, Ct 06320
Phone: (860) 439-2330
Email: irb@conncoll.edu

Please download the embedded copy of this document for your records. I will keep a copy with the study records. If you have any questions about the study, you can contact the study team using the information provided above.

If you have read the above information, consent to take part in the study, and are at least 18 years of age, please click the button below to confirm your consent.

By clicking this button, I indicate that I understand what the study is about and I agree to take part in this study.

I do not wish to participate in this study.

Appendix J

Do you have an explicit attendance policy in your courses?

Yes

No

If yes, can you describe it? (e.g, are there grades consequences for not attending, does the policy vary over your different courses)

Has your policy on attendance changed during the pandemic?

1

2

3

4

5

It is much more
strict

It is more
strict

Unchanged

It is more
lenient

It is much more
lenient

Is there anything you wish you were given or told to facilitate the process of arranging accommodations with students (Open ended)?

Demographics:

Write N/A if you choose not to respond.

- Please check one: ____ Assistant Professor ____ Associate Professor ____ Full Professor ____ Staff Member
- Department or Area (Social Sciences, Humanities, Sciences, Arts) - whichever you feel comfortable sharing:

- Have you ever taught a First-Year Seminar (FYS) class?

Yes

No

- Have you participated in the FYS Advising Seminar?

Yes

No

- With which gender identity do you most identify? (Open ended):

- Do you identify as Hispanic or Latino/x?

Yes

No

N/A

- How would you describe your race? (Open ended):

- Examples include:

- American Indian or Alaska Native
- Asian
- African American
- Black
- Native Hawaiian or Pacific Islander
- White
- Choose not to respond

Appendix K

Debriefing Form

First of all, thank you for participating in this research. In this study, we seek to understand how type of information about a student's accommodations might influence professors' perceptions of and actions towards requested accommodations. We also seek to understand if different types of accommodations are perceived differently.

Each participant was given one of four passages about the same hypothetical student. Each passage varied slightly in the amount, type, and source (student or accessibility office) of information conveyed about the student, with some communications prioritizing confidentiality and not naming the condition associated with the disability, and others naming or explaining the disability. Each participant then answered the same set of questions. Although the hypothetical accommodation letter was written in the format of those produced by the College's Student Accessibility Office, it did not come from this office. Because it explored hypothetical conditions of illness disclosure and illness education, the hypothetical accommodation letter does not actually reflect the policies and practices of SAS. Some of the accommodations we chose to include in the passage are more commonly implemented and some are implemented very rarely.

We included a measure called the Inclusive Teaching Strategies Inventory (ITSI). This is designed to gauge faculty's awareness of disability and inclusive teaching strategies based on the principles of Universal Design. Some of these questions reflect best practices at Connecticut College and some do not. Specifically, question six ("I believe it's important to make individual accommodations for students who have disclosed their disability to me") does not reflect best practices at Connecticut College as accommodations are requested through the Office of Student Accessibility Services and do not require a student to disclose the nature of their disability to a faculty member.

The goal of this research is to understand professors' perceptions of accommodations and disability related to invisible chronic illness. Specifically, the research examines whether different types of communications might influence perceived receptivity to requested accommodations for a student with chronic migraines. With these data we hope to be able to better understand the role of disclosure and education on accommodation perceptions. We also hope to compare faculty responses to student perceptions of faculty attitudes towards accommodations for chronic migraines. Hopefully, this research will offer suggestions for how accessibility policy could be implemented to help both professors and students interact around accommodations.

If you have any questions or concerns about the manner in which this study was conducted, please contact the IRB Chairperson, Ann Devlin, irb@conncoll.edu.

If you are interested in this topic and want to read the literature in this area, you might enjoy the following articles:

Gil-Gouveia, R., & Martins, I. P. (2019). Cognition and cognitive impairment in migraine. *Current Pain and Headache Reports*, 23(84).

Houman, K. M., & Stapley, J. C. (2013). The college experience for students with chronic illness: Implications for academic advising. *Macada*, 33(1), 61-70.

If you have questions about this research, you may contact **Andra Gurley-Green** (agurleyg@conncoll.edu; 339-222-4853).

Appendix L

Informed Consent Form

Title of the Project: **Student Experiences with Invisible Chronic Illness in College**
Principal Investigator: Andra Gurley-Green, Honors Student in Psychology, Connecticut College
Faculty Advisor: Audrey Zakriski, Professor of Psychology, Connecticut College

You are invited to participate in a research study. In order to participate, you must be at least 18 years old. Taking part in this research project is voluntary, so you may choose to participate or not and can stop at any time throughout the study.

The purpose of the study is to understand how students interact with accessibility policy and professors about accommodations. We want to understand the perspective of both students who are registered with the Office of Student Accessibility Services and those who are not but may qualify to register based on the interference of their illness on academic and daily functioning. If you choose to participate, you will be asked to respond to a set of short questions based on a short reading passage. You will then be asked to answer a set of short questions. At the end of the study you will be asked to fill out demographic information and will be given the option to remove your data from use in the study. This study will take you 15 minutes or less to complete.

Risks or discomforts from this research are expected to be minimal and no greater than the risks/discomforts encountered in day to day life. Although you will not directly benefit from being in this study, others might benefit because this research may contribute to a better general understanding of how information related to perceptions is processed and understood. To protect your privacy, we will not include any information that could directly identify you.

You will have the opportunity to sign up for a raffle for one of 10 \$20 gift cards. Please note that some people who begin the survey may not meet eligibility requirements to advance through the survey and will therefore not be entered into the raffle. Should you meet these requirements, you will be asked if you would like to enter the raffle at the end of the survey. If yes, you will be directed through an anonymous link to a separate survey in which you will enter your name and email in order to contact you if you are selected. Your personal information for the raffle will not be linked to your survey responses in any way and will be deleted after the raffle is drawn.

I plan to publish the results of this study. To protect your privacy, your name and any other information that can directly identify you will be stored separately from the data collected as part of the project.

It is totally up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at

any time. You do not have to answer any questions you do not want to answer. If you decide to withdraw before this study is completed, your survey results will be discarded.

If you have questions about this research, you may contact **Andra Gurley-Green** (agurleyg@conncoll.edu; 339-222-4853) or **Audrey Zakriski** (alzak@conncoll.edu).

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher (s), please contact the following:

Kira Phillips, IRB Administrator
Ann Devlin, IRB Chairperson
Connecticut College Institutional Review Board
270 Mohegan Avenue
New London, Ct 06320
Phone: (860) 439-2330
Email: irb@conncoll.edu

Please download the embedded copy of this document for your records. I will keep a copy with the study records. If you have any questions about the study, you can contact the study team using the information provided above.

If you have read the above information, consent to take part in the study, and are at least 18 years of age, please click the button below to confirm your consent.

By clicking this button, I indicate that I understand what the study is about and I agree to take part in this study.

I do not wish to participate in this study.

Appendix M

Are you registered with the Office of Student Accessibility Services?

Yes

No

If no,

Does your disability impact your academic or daily functioning? Including cognitive, learning, and emotional effects.

Yes

No

If no, diverted to end of survey

If yes,

To what extent does your disability interfere with your academic or daily functioning? Including cognitive, learning, and emotional effects.

1

2

3

4

5

Not at all

A little

A moderate amount

A lot

A great deal

Please choose the broad category under which you would place your illness.

If you have more than one disability, please choose the one that is most salient or dominant.

Visible - symptoms are visible to others	Invisible - symptoms are not visible to others
<u>Acute injury</u> <ul style="list-style-type: none"> ex. Arm or leg break, etc. 	<u>Mental health condition</u>
<u>Chronic physical condition</u> <ul style="list-style-type: none"> ex. Use of cane, wheelchair, crutches, etc. 	<u>Physical health condition</u> <ul style="list-style-type: none"> ex. Diabetes, cancer, etc.
	<u>Pain condition</u> <ul style="list-style-type: none"> ex. Chronic migraines, fibromyalgia, etc. <u>Learning disability</u>

Visible - acute injury	Visible - chronic physical condition	Invisible - mental health condition	Invisible - physical health condition	Invisible - pain condition	Invisible - learning disability
------------------------	--------------------------------------	-------------------------------------	---------------------------------------	----------------------------	---------------------------------

Appendix N

- How often do you choose to disclose your diagnosis when arranging accommodations?

1 2 3 4 5

Almost never Rarely Sometimes Often Almost always

- If yes, why did you decide to do so? Open ended
-

A standard SAS email intentionally provides details about approved accommodations but no information about student illness/health conditions to protect student privacy.

- How much do you think it would help you negotiate accommodations with your professors if your letter listed your medical condition?

1 2 3 4 5

Not at all Somewhat Unsure A lot Very much

- How willing would you be to authorize disclosure of such information?

1 2 3 4 5

Not at all willing Somewhat willing Unsure Willing Very willing

- How much do you think it would help you negotiate accommodations with your professors if your letter provided education about your medical condition and the impacts it may have on academic functioning?

1 2 3 4 5

Not at all Somewhat Unsure A lot Very much

- How willing would you be to authorize disclosure of such information?

1 2 3 4 5

Not at all willing Somewhat willing Unsure Willing Very willing

Demographics:

Write N/A if you choose not to answer:

- Age (##):
- Class year (202X):
- Gender: To which gender identity do you most identify? (Open ended):
- Are you of Hispanic, Latino, or Spanish origin?:

Yes

No

N/A

- How would you describe your race? (Open ended):
 - Examples include:
 - American Indian or Alaska Native
 - Asian
 - African American
 - Black
 - Native Hawaiian or Pacific Islander
 - White
 - Choose not to respond

Appendix O

Debriefing Form

First of all, thank you for participating in this research study. In this research, we wanted to gather data on students' experiences with Student Accessibility Services, accommodations, and professor interactions.

The goal of this research is to understand student experiences navigating through college with various health conditions that sometimes impact academic functioning. The research includes both students registered with the Office of Student Accessibility Services, as well as students who might qualify but who are not registered. With these data, we hope to be able to understand student decision making about SAS registration, facilitate student-professor communications about accommodations, and suggest changes to how accessibility policy is implemented to better support students.

Although the hypothetical accommodation letter was written in the format of those produced by the College's Student Accessibility Office, it did not come from this office. Because it explored hypothetical conditions of illness disclosure and illness education, the hypothetical accommodation letter does not actually reflect the policies and practices of SAS. Some of the accommodations we chose to include in the passage are more commonly implemented and some are implemented very rarely.

We included a measure called the Inclusive Teaching Strategies Inventory (ITSI). This is designed to gauge faculty's awareness of disability and inclusive teaching strategies based on the principles of Universal Design. Some of these questions reflect best practices at Connecticut College and some do not. Specifically, question six ("I believe it's important to make individual accommodations for students who have disclosed their disability to me") does not reflect best practices at Connecticut College as accommodations are requested through the Office of Student Accessibility Services and do not require a student to disclose the nature of their disability to a faculty member.

If you have any questions or concerns about the manner in which this study was conducted, please contact the IRB Chairperson, Ann Devlin, irb@conncoll.edu.

If you are interested in this topic and want to read the literature in this area, you might enjoy the following articles:

Ravert, R. D., Russell, L. T., & O'Guin, M. B. (2017). Managing chronic conditions in college: Findings from prompted health incidents diaries. *Journal of American College Health*, 65(3), 217-222. 10.1080/07448481.2016.1266640

Spencer, G., Lewis, S., & Reid, M. (2018). Living with a chronic health condition: Students' health narratives and negotiations of (ill) health at university. *Health Education Journal*, 77(6), 631-643. 10.1177/0017896917738120

If you have questions about this research, you may contact **Andra Gurley-Green** (agurleyg@conncoll.edu; 339-222-4853).