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EXPLORING POTENTIAL CORRELATES OF STUDENT SUPPORT SERVICE  
UTILIZATION, DISCLOSURE, ADJUSTMENT, AND FIT  
AMONG POSTSECONDARY STUDENTS WITH  
NEURODEVELOPMENTAL DISORDERS

by

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## **Dedication**

For my mother, Samantha, and for my father, James, who have always fostered, supported, and believed in my efforts to persist and persevere through all challenges.

Thank you both for the burdens you have carried, as well as the unconditional love and support you have provided to me.

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## ABSTRACT

# EXPLORING POTENTIAL CORRELATES OF STUDENT SUPPORT SERVICE UTILIZATION, DISCLOSURE, ADJUSTMENT, AND FIT AMONG POSTSECONDARY STUDENTS WITH NEURODEVELOPMENTAL DISORDERS

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This study examined campus-based student support service utilization and potential relationships among attitudes and perceptions related to support service utilization among current University of Houston-Clear Lake students with at least one neurodevelopmental condition (NDD). Participants ( $n = 34$ ) provided information about personal characteristics, service use, service needs, and perceived barriers to service use, as well as attitudes toward neurodevelopmental diagnosis disclosure, attitudes toward adjustment to college, and perceptions of academic fit. Results indicated that perceptions of adjustment to college and academic fit may be a particularly salient aspect of postsecondary experiences among students with NDD. In addition, perceptions of specific barriers to

student support service use may be closely related to attitudes about adjustment to college and academic fit.

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CHAPTER I:  
INTRODUCTION

**Contextualizing Neurodevelopmental Disorders in Postsecondary Education**

Neurodevelopmental disorders (NDDs) are, generally, chronic conditions with childhood-onset that are characterized by mild to severe impairment in one or more domains of cognitive, affective, social, behavioral, and academic adaptive functioning (American Psychiatric Association [APA], 2013). The APA characterizes NDD across seven primary classification groups; intellectual developmental disorder (formerly classified as intellectual disability; IDD), communication disorders (e.g., language disorders, speech-sound disorders, childhood-onset fluency disorder), autism spectrum disorders (ASD; inclusive of Asperger’s syndrome), attention-deficit/hyperactivity disorder (ADHD; inclusive of ADD), specific learning disorders (SLD; e.g., dyslexia, dyscalculia, reading comprehension impairment), motor disorders (inclusive of tic disorders, such as Tourette syndrome), and other specified or unspecified NDD. Recent estimates suggest that as many as one-in-six children aged 3–17 in the United States (US) were diagnosed with a NDD from 2009 to 2017 (Zablotsky et al., 2019), and research indicates that ADHD, SLDs, communication disorders (specifically speech disorders), and ASD are the most prevalent NDDs diagnosed in the US.

Most NDDs manifest early in development, but different conditions present varying patterns of symptomology and impairment within and across domains, both between primary classifications of NDD and subtypes of primary classifications. While NDDs generally show extreme variation within and across specific disorders and individuals, some forms of symptomology will manifest consistently across the lifespan (APA, 2013), but this stability tends to be found in lifetime persistence of symptoms

rather than severity of symptoms. The transition between adolescence, young adulthood, and adulthood may be marked by worsening symptoms related to comorbid NDD or other diagnoses for some individuals. As such, the significant heterogeneity related to outcome severity and impairments associated with NDD, as well as the lifelong course generally characteristic of these disorders, necessitates consideration of dynamic person-environment interactions in understanding the experiences of individuals with NDDs across the life course.

The National Postsecondary Aid Study (NPSAS:16) collected information from more than 75,000 postsecondary students across more than 1,500 postsecondary institutions in the US and found that approximately 3.09–5.15% of participating students reported ADHD/ADD, and fewer than 1.00% of students reported specific learning disability or dyslexia, autism, Asperger's or another developmental disability, and speech or language impairment (Wine et al., 2018). Unfortunately, estimates are not available for IDD or motor and tic disorders among postsecondary students, although the assumed prevalence in the general adult population in the US is also around 1.00%. In addition to individual-level factors related to NDDs, adolescents and emerging adults with NDDs likely experience high rates of comorbid conditions, as many psychiatric and mental health conditions are diagnosed between the ages of 15–21 (APA, 2013; Kessler et al., 2005), which coincides with sensitive periods of transition (e.g., secondary to postsecondary contexts), including transitioning from adolescence to emerging adulthood (Kessler et al., 2005). Estimates from the NPSAS:16 suggest that as many as 4.00% of postsecondary students have anxiety, and as many as 4.00% have depression (Wine et al., 2018). Thus, a meaningful number of college students, including students at the University of Houston-Clear Lake (UHCL), are likely living with NDD, with or without psychiatric comorbidity.

Postsecondary education is a viable pathway to higher occupational status, employment security, and lifetime-earnings in the US (US Bureau of Labor Statistics, 2020), with some estimates suggesting those who obtain bachelor's degrees earn approximately 74.00% greater median annual salary than individuals whose highest degree is a high school diploma/equivalent or who complete a nontraditional secondary program (Julian, 2012; Stevens et al., 2020). In addition, the social mobility and potential access to resources associated with completion of postsecondary education and occupational stability are related to more positive outcomes throughout the life course, including psychosocial wellness, health, and overall well-being (Palisano et al., 2017). While the enrollment gap for postsecondary students with disabilities, including NDD, appears to be narrowing (Newman et al., 2009; Newman et al., 2021), there are still observed disparities in graduation rates and patterns of occupational stability and success following graduation compared to students without NDDs or other types of conditions within the federally recognized disability categories. As such, researchers have indicated a need to further examine the potential influence of both academic (e.g., tutoring, accommodations, academic/success coaching) and nonacademic (e.g., social skills, health services, therapy/counseling) campus-based student support services on academic success, as well as overall well-being and quality of life, for students with NDDs (McMorris et al., 2019; Plotner & May, 2019; Sentenac et al., 2019).

### **Adjustment to College and Academic Fit**

Student adjustment is conceptualized across and between three primary domains (i.e., personal-emotional, social, and academic; Gerdes & Mallinckrodt, 1994), and the current study focuses on the social and academic domains of adjustment. Academic adjustment is conceptualized by Anderson et al. (2016) as adjustment to one's academic progress and performance, whereas social adjustment is conceptualized as both the

outcome and progress of individual integration into social campus-based communities and support systems (Gerdes & Mallinckrodt, 1994; Gray et al., 2013). Academic fit is conceptualized as a congruency of characteristics between the individual and their postsecondary institution (Schmitt et al., 2008), and it is described from the person-environment fit perspective (Kristof-Brown et al., 2005). Higher degrees of perceived academic adjustment to college (Anderson et al., 2016; Gerdes & Mallinckrodt, 1994), social adjustment to college (Gray et al., 2013; Kuh et al., 2008), and academic fit (Schmitt et al., 2008) have been linked to positive changes in satisfaction, academic performance, and persistence among postsecondary students in studies that have not considered NDD status, but few studies have considered academic adjustment, social adjustment, and academic fit and outcomes related to satisfaction, performance, and persistence among postsecondary students with NDD. Given the differences in academic and occupational outcomes identified among students with NDD compared to students without NDD (e.g., Fitzgerald et al., 2021; Palisano et al., 2017), it is crucial to examine aspects of academic and social adjustment to college, as well as academic fit, that may influence postsecondary persistence and success.

### **Student Support Service Use**

Postsecondary students typically have two broad institutional support systems available: disability-related student support services and universal student support services. Disability-related student support services are those typically provided through institutions' disability services office (DSO). Some institutions, such as UHCL, may label these offices differently (e.g., Accessibility Support Center). Disability-related student support services through DSOs fulfill the functions related to civil mandates outlined by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act of 2008 (Grossman & Smith, 2015; Newman et al., 2021). These legal

provisions permit reasonable accommodations as approved by an institution, and, unlike the Individuals with Disabilities Education Act (IDEA) applied to primary and secondary education contexts, requires self-disclosure of disability status to receive disability-related support services. Further, once accommodations are approved by the DSO, postsecondary students must also request the application of their approved accommodations in each of their courses. At least some postsecondary students with NDDs will want or need to access campus-based student support services at some point during their postsecondary careers, and motivating factors related to wanting and/or needing services may be related to support needs influenced by behavioral, affective, or health-related comorbidities rather than NDD.

Estimates from the National Longitudinal Transition Survey-2 (NLTS-2) suggest that as few as 35.00% of students who received special education services in secondary school self-disclosed disability status in subsequent postsecondary contexts (Newman et al., 2009; 2021; Newman & Madaus, 2015), and, although the vast majority (98.00%) received disability support services in high school, as few as 24.00% of students accessed disability-related support services. Recent research using data from the NLTS-2 (Newman et al., 2021) indicates that students with disorders/disabilities may be accessing and benefiting from universal student support services despite not accessing disability support services. Using a sample of approximately 2,230 students from the NLTS-2, Newman et al. (2021) found that approximately 57.40% of students with disabilities in the sample had accessed any student support services (i.e., universal, disability-related), with approximately 43.30% having only accessed universal student support services and approximately 11.50% only accessing disability-related student support services. The majority (79.00%) of students who had only accessed universal student support services persisted in their postsecondary programs, and approximately half (51.40%) of students

who did not access universal student support services persisted in their programs. Persistence rates were similar when comparing students who reported accessing any student support services compared to those who did not (75.30% vs. 55.80%). In contrast, students who accessed only disability-related student support services did not indicate a significant difference in rate of persistence compared to those who did not access disability-related student support services (54.20% vs. 57.10%, respectively). As highlighted by Newman et al. (2021), these results do not diminish the vital role of disability-related support services for bolstering potential support toward outcomes of persistence and program completion. The findings do provide evidence, using a nationally representative sample from a longitudinal study, of the role of universal student support services in the promotion of these postsecondary outcomes for students with NDD, regardless of the disclosure of disability status.

Unfortunately, there is limited literature considering the disability-related service use and universal student support service use outcomes of nontraditional students, such as those entering postsecondary education after they are no longer in emerging adulthood or those reentering postsecondary education, with one or more NDD. Research examining potential factors related to disability-related service use and universal student support service use in postsecondary education contexts among nontraditional students with NDDs may lead to a better understanding of the persistence and graduation gaps previously reported in the literature.

### ***Barriers to Service Use***

Previous research has identified several types of barriers that may influence service seeking and use, both on- and off-campus, for individuals with NDD (Barnard-Brak et al., 2010; Raymaker et al., 2017). These barriers are often categorized as practical or attitudinal barriers, but research considering individuals with NDD has identified

additional categories more fitting to the social and personal-emotional barriers that individuals with NDD may face during service seeking and use. Additional studies have identified potential attitudinal barriers related to seeking academic accommodations among students with NDD. These barriers have included attitudes toward academic integrity, self-disclosure of a disability, acceptance of disability-identity, and attitudes toward requesting accommodations related to a disability (Barnard-Brak et al., 2010).

### **NDD Disclosure**

Because universities in the US tend to utilize a self-advocacy model of service delivery, attitudes toward disclosure of NDD diagnosis likely influence decisions to seek student support services that require self-disclosure of a disability status. Student endorsement of disability status is closely intertwined with disability support service utilization patterns, which has implications for postsecondary persistence, success, and completion (Marshak et al., 2010; Megivern, 2003; O’Shea & Kaplan, 2018; O’Shea & Meyer, 2016; Shattuck et al., 2014). In addition to difficulties obtaining and navigating provided services, some postsecondary students with NDDs may not consider themselves to be disabled (Shattuck et al., 2014) and may have varying degrees of self-awareness about needs for support (Anctil et al., 2008; Getzel & Thoma, 2008; Hadley, 2017; Hong, 2015; Jameson, 2007; Kutscher & Tuckwiller, 2019; McCleary-Jones, 2008; Petcu et al., 2017; Skinner, 2004; Thompson-Ebanks, 2014). Previous research has also identified self-efficacy and confidence in academic and psychosocial domains as potentially vital to persistence, as they can bolster motivation to complete postsecondary education and are related to self-advocacy (Anctil et al., 2008; Finn, 1998; Fitchen et al., 2014; Getzel & Thoma, 2008; Hadley, 2017; Hong, 2015; Kutscher & Tuckwiller, 2019; McCleary-Jones, 2008; Megivern et al., 2003; Skinner, 2004; Thompson-Ebanks, 2014; Timmerman & Mulvihill, 2015). Personal empowerment, the ability to overcome

barriers, autonomy, goal-setting, and follow-through may also influence persistence among students with NDDs (Anctil et al., 2008; Duquette, 2000; Fitchen et al., 2014; Getzel & Thoma, 2008; Hartley, 2010; Hong, 2015; Jameson, 2007; Kutscher & Tuckwiller, 2019; Lee et al., 2015; Mamiseishvili & Koch, 2011; Mamisheishvili & Koch, 2012; McCleary-Jones, 2008; Petcu et al., 2017; Skinner, 2004; Thompson-Ebanks, 2014; Timmerman & Mulvihill, 2015).

Postsecondary students who use disability support services are required to employ self-advocacy, navigate a sometimes convoluted or overwhelming service system, and repeatedly disclose a disability status within the institutional context (Barnard-Brak et al., 2010; Madaus & Shaw, 2006; UHCL, 2022). Students are not required to disclose their specific condition or disorder to faculty to receive accommodations, but self-identification as a student with a disabling condition, whether invisible or visible to others, is required. Even students with experience with support services can be challenged with new expectations about self-advocacy and disclosure, and deep schisms can be created when secondary schools are unable, or unwilling, to offer transition services and programs for exiting students with disabilities, including NDDs. In addition, postsecondary students may not be aware of civil protections that are available, and students may also be unable to find a clinician or other licensed diagnostician who can provide documentation in support of disability registration requests. Obtaining proof of diagnosis may be particularly challenging for emerging adults with NDDs, as some individuals with NDDs are not diagnosed until after they have exited secondary education environments. Subsequently, individuals diagnosed once they have exited secondary education environments may not experience similar benefits as postsecondary students who have received specialized services during secondary education.

### **Scope of the Current Study**

UHCL offers a variety of academic and nonacademic student support services, which are provided through student fees. The extent to which students with NDDs are accessing UHCL student support services is unclear, and it is also unclear if there are perceived unmet needs, preferences for specific services, or perceived barriers to service access. Research is also needed to determine if available services that are being accessed are associated with key aspects of postsecondary persistence or if personal characteristics of students with NDDs are associated with use of, or access to, student support services.

The purpose of this study was to explore potential associations among reported personal characteristics, use of campus-based student support services, perceived unmet need or preference for student support services, perceived barriers to student support service access, attitudes toward NDD diagnosis disclosure, attitudes toward academic integrity related to accommodations, social and academic adjustment to college, and academic fit among current UHCL students with one or more NDDs. The first primary aim of the study was to obtain descriptive data related to personal characteristics, service use, unmet service need or preference, perceived barriers to service use, attitudes toward NDD diagnosis disclosure, attitudes toward academic integrity issues related to requesting academic accommodations, attitudes toward social adjustment to college, attitudes toward academic adjustment to college, attitudes toward academic fit, perceived academic performance, and intentions to transfer from UHCL to another college or drop out of postsecondary education entirely. The second primary aim of the study was to explore potential associations among the characteristics and attitudes examined in the descriptive analyses. While most hypotheses-driven research questions were exploratory, it was generally anticipated that service use would be positively associated with attitudes

toward social and academic adjustment to college and perceptions of academic fit and negatively associated with attitudes toward NDD diagnosis disclosure.

## CHAPTER II: METHODOLOGY

### **Participants**

A total of 34 current UHCL undergraduate ( $n = 29$ , 85.29%) and graduate ( $n = 5$ , 14.71%) students participated in the study during the Fall 2021 semester. On average, the online survey took 14.60 minutes to complete ( $n = 34$ ,  $SD = 15.10$ ), with completion times ranging from 5.88 minutes to 96.40 minutes. Participants were recruited using the UHCL SONA Research Participant Pool System. To be eligible for participation in this study, individuals were required to be at least 18 years old at the time of participation, be a currently enrolled student at UHCL, and have one or more current NDD.

Participant ages ranged from 18–48 years old ( $Mdn = 24.50$ ,  $IQR = 6.50$ ). Participants predominantly identified as white/caucasian ( $n = 20$ , 58.82%), and several participants identified as multiracial ( $n = 6$ , 17.65%), Latinx ( $n = 4$ , 11.76%), Asian/Asian American ( $n = 3$ , 8.82%), or Black ( $n = 1$ , 2.94%). Most participants identified as cisgender female ( $n = 24$ , 70.58%) or cisgender male ( $n = 7$ , 20.59%), however participants also identified as non-binary ( $n = 2$ , 5.88%) and “questioning” ( $n = 1$ , 2.94%). Most participants reported not having children ( $n = 25$ , 73.53%). “Parents/family members” were reported most frequently as the as the only source of financial support ( $n = 7$ , 20.58%), followed by student loans ( $n = 4$ , 11.76%), “parents/family members” and “self/job” ( $n = 4$ , 11.76 %), and “fellowships/scholarships/grants,” “student loans,” and “self/job” ( $n = 4$ , 11.76 %). Participants reported current cumulative UHCL GPA values that ranged from 1.50–4.00 ( $Mdn = 3.40$ ,  $IQR = 0.70$ ). Participants reported credit hours ranging from 2.00-15.00 hours ( $Mdn = 9.00$ ,  $IQR = 3.00$ ). Many participants identified as first-generation college students ( $n = 14$ , 41.18%). A majority of the sample reported being currently employed

( $n = 23$ , 67.65%). For currently employed participants, the typical number of hours worked per week ranged from 1.00–50.00 hours ( $Mdn = 30.00$ ,  $IQR = 16.50$ ), with 56.52% ( $n = 13$ ) of employed participants reporting that they worked the equivalent of full-time hours during a typical week.

### **Procedure**

Data were collected using an online Qualtrics survey. Following CPHS approval, participants were recruited using the UHCL SONA system and on-campus advertising, which was facilitated by the UHCL Office of Student Involvement and Leadership. During recruitment, participants were provided with an online survey link (i.e., URL) and/or QR code embedded with the online survey link. If potential participants chose to access the link/QR code, they were taken to the survey in Qualtrics. Once arriving at the online survey page, participants were prompted to read and complete an informed consent document. If informed consent was provided, participants were then screened to ensure eligibility criteria for participation were met. If informed consent was not provided, users were not able to advance to the eligibility prescreening item or begin the survey. Once a participant confirmed that all eligibility criteria were met, participants were prompted to begin the survey. Participants who did not meet the eligibility criteria were not given access to the survey. Participants were presented with survey items concerning UHCL student support service use and service need, perceived barriers to UHCL student support service use, attitudes toward NDD disclosure, attitudes toward social and academic adjustment to college, perceptions of academic fit, and personal characteristics.

## Measures

### Service Use

#### *Routine Care/Treatment Settings Related to Disorder(s)/Condition(s)*

This item (i.e., “In what type[s] of setting[s] do you currently receive routine care or treatment related to your condition[s]/disorder[s]?”) was adapted from an item on the *Barriers Survey* (Dobkin et al., 2013), with answer choices also adapted from this survey item. The answer choices were presented as a multiple-selection checklist with several categories of routine care/treatment settings. The categories of routine care/treatment settings included UHCL-based services (i.e., “University of Houston-Clear Lake [e.g., Health Services, Counseling Services, Center for Autism and Developmental Disabilities]”) and services unaffiliated with UHCL (i.e., “private practice [general practitioner/family doctor, psychiatrist/neurologist, psychologist/therapist/counselor]”, “hospital based clinic”, “urgent care clinic,” “community clinic/center,” and “VA medical center”). An open-ended (i.e., “other [please specify]”) answer choice and an option to indicate treatment/care related to current condition(s)/disorder(s) is not currently utilized (i.e., “I do not currently receive treatment/care related to my condition[s]/disorder[s]”) were also included. Following data collection, a dichotomized variable was created (any endorsed = 1, none endorsed = 0).

#### *UHCL Student Support Services*

Following data collection, transformed variables were created to reflect each specific UHCL student support service endorsed (endorsed = 1, not endorsed = 0), and a computed variable was created to reflect the total number of services endorsed by each participant.

**Exclusive Student Support Services.** UHCL provides some services and programs that are exclusive to students meeting certain criteria. Exclusive UHCL student

support services included in this study are the UHCL Connecting to College (CtC) Program and the Accessibility Support Center (ASC, formerly Disability Services). The CtC program is sponsored through the UHCL Center for Autism and Developmental Disabilities and offers services for transition-aged students with ASD and related needs. Thus, students without ASD and related needs are not permitted to enroll in the CtC Program. While not targeting particular disorders or conditions, the ASC also provides an exclusive student support service (i.e., registration for accommodations related to a disability) and also requires diagnostic disclosure.

***Enrollment in Connecting to College (CtC) Program.*** Participants were asked to indicate if they are currently enrolled in the CtC Program, and responses were measured using a “yes/no” format. If participants indicated that they are currently enrolled in the CtC Program at the time of participation, the number of semesters in which they had been enrolled in the program (i.e., “1,” “2,” “3,” “...,” or “10 or more”) and the modalities used to access the program (i.e., “in-person,” “remotely [online/virtually],” or “both in-person and remotely”) were assessed. Each of the CtC Program items are novel items developed for use in this study.

***ASC Accommodations Registration and Request.*** Participants were asked to indicate if they are currently registered with the ASC to receive accommodations related to a disability, if they have requested accommodations from instructors of their current UHCL course(s), and if they had previously requested accommodations from instructors of their UHCL class(es). One item is adapted from Fitchen et al. (2018), and two items are novel items developed for the present study. The first item (i.e., “Are you registered with the UHCL Accessibility Support Center [formerly Disability Services] to receive accommodations related to a disability?”; Fitchen et al., 2018) had a “yes/no” answer choice format and was adapted to be specific to UHCL and the ASC. The second item

(i.e., “Have you requested accommodations from any of the instructors of your current UHCL classes?”) also had a “yes/no” answer choice format and was a novel item developed for use in this study. The final item (i.e., “If you attended UHCL during prior semesters, did you request accommodations from any of the instructors of your previous UHCL classes?”) was also a novel item developed for this study and had answer choices that included “yes,” “no,” and “this is my first semester at UHCL.”

**Universal Student Support Services.** In contrast to exclusive student support services considered in this study (i.e., CtC Program, ASC), universal student support services are campus-based services available to any UHCL student.

***Academic and Nonacademic Student Support Service Use.*** Participants were asked to endorse specific UHCL student support services they have used, as well as the number of semesters each service has been used and the modalities that have been used to access the selected student support services. These are novel items developed for this study and were presented as a checklist that included academic and nonacademic student support services (i.e., “Career Services,” “Counseling Services,” “Health Services,” “Math Center,” “Testing Center,” “Tutoring,” “Writing Center.”). An open-ended (i.e., “other [please specify]”) item was also included as an answer response.

## **Service Need and Barriers to Service Access**

### ***Perceived Service Need***

Participants were asked if there are UHCL student support services that they would like or need to access, but are not currently accessing, using a single item (i.e., “Are there currently any UHCL student support services you would need or would like to access but you are not receiving?”). Answer choices were presented in a “yes/no” format. Participants that selected “yes” were prompted to select the specific UHCL student support services that they would like or need but are not receiving using checklist-

formatted answer choices that reflected all exclusive and universal UHCL student support services previously presented for endorsement of use. Following data collection, transformed variables were created to reflect each specific service endorsed (endorsed = 1, not endorsed = 0), and a computed variable was created to reflect the total number of services endorsed by each participant.

### ***Perceived Barriers to Service Access***

If indicating there were student support services that they would like or need to access but are not receiving, participants were prompted to endorse the specific services and then endorse perceived barriers (e.g., “Communication with the staff is too difficult,” “I have difficulties identifying when I need support”) preventing access to or use of these wanted or needed services. Most of the barriers included in the checklist were adapted from the *Barriers to Healthcare Checklist – Short Form* (Raymaker et al., 2017). One of the items was adapted from the *Barriers Survey* (i.e., “I do not have time to receive services”; Dobkin et al., 2013), and two additional potential barriers (i.e., “I sought help, but was unable to receive it,” and “The process is too overwhelming”) were novel items developed from previously identified barriers to service access in the literature (McMorris et al., 2019; Raymaker et al., 2017). Following data collection, transformed variables were created to reflect each specific barrier to service use endorsed (endorsed = 1, not endorsed = 0), and a computed variable was created to reflect the total number of barriers endorsed by each participant.

### **Attitudes Toward Requesting Accommodations (ATRA) Subscales**

#### ***NDD Disclosure***

Participants were asked to indicate the degree of agreement with statements related to attitudes toward disclosure of their NDDs in the context of UHCL. The six items ( $\alpha = .89$ ) were adapted from the *Disability Disclosure* subscale of the *ATRA* rating

scale (Barnard-Brak et al., 2010). All items were adapted to reflect language replacing “disability” with “[a] neurodevelopmental condition(s)/disorder(s),” in addition to adapting two items to ask specifically about UHCL (i.e., “I don’t want my friends at UHCL to know I have [a] neurodevelopmental disorder[s]/condition[s],” “I don’t want my professors at UHCL to know I have [a] neurodevelopmental disorder/condition”). Each item on the rating instrument was scored using a 5-point Likert-type scale with responses ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*), and all items were reverse-scored. Average scores for all items were used for the analyses, and higher average scores indicate a greater degree of negative attitudes toward NDD disclosure in the context of UHCL.

### ***Academic Integrity***

Participants were asked to indicate the degree of agreement with statements related to attitudes toward academic integrity in the context of accommodations. The seven items were adapted from the *Academic Integrity* subscale of the *ATRA* Scale (Barnard-Brak et al., 2010). Six of the items were adapted to ask specifically about UHCL (e.g., “Accommodations are for lazier students at UHCL,” “Students at UHCL should try to succeed without accommodations,” “I want to prove I can succeed at UHCL without accommodations”) and one original item was used (i.e., “Accommodations are for academically weaker students”). Each item was scored using a 5-point Likert-type scale with responses ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*), and each item was reverse-scored. Average scores were calculated for the items, and higher average scores indicate a greater degree of negative attitudes toward accommodations at UHCL. The adapted items had unacceptable internal reliability ( $\alpha = .55$ ) in the current sample, and, as a result, these items were dropped from further analyses.

## **College Adjustment**

### ***Social Adjustment***

Participants were asked to rate their degree of agreement with statements indicating social adjustment to college in the context of UHCL. The 13 items ( $\alpha = .84$ ) used to measure social adjustment were adapted from the *Social Adjustment to College Scale* developed by Gray et al. (2013). Each item was adapted to be specific to UHCL, and two items (i.e., “I have difficulty feeling at ease with others at college,” and “I am meeting people and making friends”) were each split into two items (i.e., “I have difficulty feeling at ease with my professors at UHCL,” “I have difficulty feeling at ease with other students at UHCL,” “I am meeting people I get along with at UHCL,” and “I am making friends at UHCL”). Each item was scored using a 5-point Likert-type scale, with responses ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Three items (i.e., “I have difficulty feeling at ease with my professors at UHCL,” “I have difficulty feeling at ease with other students at UHCL,” and “I feel lonely at UHCL a lot”) were reverse-coded. Average scores were used for the analyses, and higher average scores indicate a greater degree of perceived positive social experiences in context of UHCL.

### ***Academic Adjustment***

Participants were asked to rate their degree of agreement with statements related to academic adjustment in the context of UHCL. The three items ( $\alpha = .84$ ) were adapted from the *Academic Achievement* subscale of the *Academic Adjustment Scale* developed by Anderson et al. (2016) to be specific to UHCL (e.g., “I am satisfied with my ability to learn at UHCL”). Each set of response choices included 5-point Likert-type scales with the original scale anchor labels adapted to 1 (*Strongly disagree*) to 5 (*Strongly agree*). Average scores were used in the analyses, and higher average scores indicate a greater degree of positive perceived academic adjustment at UHCL.

## **Academic Fit**

Participants were asked to rate their degree of agreement with statements indicating perceived academic fit at UHCL. The seven items ( $\alpha = .85$ ) were adapted from the *Academic Fit Scale* developed by Schmitt et al. (2008) to be specific to UHCL (e.g., “The courses available to me at UHCL match my interests,” “I feel that my academic goals are met by the faculty at UHCL”). Each set of response choices were presented on a 5-point Likert-type rating scale, with the original scale anchor labels adapted to 1 (*Strongly disagree*) to 5 (*Strongly agree*). One item (e.g., “My current courses at UHCL are not really what I would like to be doing”) was reverse-scored. Average scores were used in the analyses, and higher average scores indicate a greater degree of perceived academic fit at UHCL.

## **Participant Characteristics**

### ***Demographics***

**Age.** Participants were asked to provide information about their chronological age using an open-ended item (i.e., “Please enter your current age in years”).

**Race/Ethnicity.** Participants were asked to provide information about their racial/ethnic identity using a single item (i.e., “What race or ethnic groups best describe you?”). Participants were encouraged to select as many answer choices as applied to them using the answer choices “Hispanic/Latinx/Spanish,” “White/Caucasian,” “African American/Black/African,” “Asian/Asian American,” “Native Hawaiian/Pacific Islander,” “American Indian/Native American/Alaska Native,” and “Arab American/Middle Eastern/North African,” which were presented in a checklist format and included an open-ended (i.e., “other [please specify]”) choice. Participant answer selections were combined to reflect all selected answer choices, as well as being recoded as a binary

variable (“uniracial” = 0 and “multiracial” = 1) for the analyses, wherein multiracial was comprised of those participants who selected two or more specific racial/ethnic identities.

**Gender.** Participant gender identity was collected with a single item (i.e., “What is your gender?”). Participants were instructed to select one answer choice and were provided with definition of the term cisgender (i.e., “Please note that cisgender means that the sex you were assigned at birth is the same as your gender identity.”). An open-ended (i.e., “other [please specify]”) answer choice was also included for specification of gender identities not included in the prescribed answer choices (i.e., “cisgender male,” “cisgender female,” “transgender male,” “transgender female,” “intersex,” or “non-binary”). Each endorsed gender identity was transformed into a dichotomized variable (endorsed = 1, not endorsed = 0).

**Parental Status.** Information about participant parental status (i.e., “no children,” “have a child with whom I have little or no contact,” “have a child for whom I have visitation rights only,” “have a child who resides in my home part-time,” and “have a child who resides in my home full-time”) was collected using a single item (i.e., “Which of the following best describes your current parental status?”). Answer choices were presented in a checklist format, and participants were instructed to select as many answer choices as applied to them. An open-ended (e.g., “other [please specify]”) answer choice was also included. Following data collection, participant responses were recoded to reflect parental status (no children = 0, any parental status selected = 1).

**Living Situation.** Participants were asked to provide information about their current living situation (i.e., “living in the on-campus residence hall,” “living in an on-campus apartment,” “living independently [i.e., by myself or with roommates/romantic partner] in an off-campus apartment or house,” or “living with family members in an off-campus apartment or house”) using a single item (i.e., “Which of the following best

describes your current living situation?”). Participants were instructed to select the best answer choice applicable to them. An open-ended (i.e., “other [please specify]”) answer choice was also included. Each endorsed living situation was transformed into a dichotomized variable (endorsed = 1, not endorsed = 0).

**Employment.** Participants were asked to provide information about their current employment status using a single item (i.e., “Are you currently employed?”), with answer choices presented in a “yes/no” format. An open-ended (e.g., “other [please specify]”) answer choice was also included. If participants indicated they were employed, the average number of hours usually worked per week was requested via an open-ended text entry item (i.e., “If yes, what is the average number of hours you work each week?”). Part-time employment hours were coded as being from 1–29 hours worked per week, on average, and full-time employment hours were coded as being from 30–50 hours worked per week, on average. Following data collection, dichotomized variables were created for part-time employment status and full-time employment status.

### **Diagnosis(es)**

**NDD.** Participants were asked to provide information about current NDD diagnosis(es), as well as the approximate age when diagnosed with each disclosed NDD. The answer choices were developed from the *DSM-5* (APA, 2013) primary diagnostic conditions included in the NDD diagnostic group (i.e., ADHD, ASD, communication disorders, intellectual disability, motor/tic disorders, and SLDs). An open-ended (i.e., “other [please specify]”) answer choice was also provided as an answer choice for participants to disclose NDD diagnoses not available in the prescribed answer choices. Additionally, participants were provided with answer choices that included “I do not have a neurodevelopmental disorder or condition,” and “I prefer to not answer.” Participants were able to select as many answer choices as applied to them, however the participant

selected “I do not have a neurodevelopmental disorder or condition,” the survey software was programmed to force-exit the participant’s active survey screen so that participants without a diagnosed NDD would not be able to continue participation. Following data collection, a disproportionate endorsement of ADHD compared to other NDD led to the decision to recode these responses into a transformed variable that reflected whether the participant had selected comorbid NDD (recoded to 1) or if the participant had not selected comorbid NDD (recoded to 0). Additionally, each endorsed NDD was also transformed into a dichotomized variable (specific NDD endorsed = 1, specific NDD not endorsed = 0).

**Mental Health and Psychiatric Comorbidities.** Participants were asked to provide general information about current comorbid mental health and psychiatric conditions (e.g., depressive disorders, anxiety disorders, substance use disorders). Answer choices were presented as a multiple selection checklist that included an open-ended (i.e., “other [please specify]”) answer choice, as well as “I do not have a mental health/psychiatric diagnosis” and “I prefer to not answer” choices. Following data collection, a computed variable reflecting the total number of endorsed mental health and psychiatric comorbidities was created for use in analyses.

**Additional Comorbidities.** Participants were asked to provide information about comorbid conditions other than NDD and/or mental health and psychiatric diagnoses (i.e., visual impairment not adequately corrected by glasses or contact lenses, deaf or hard of hearing, mobility impairment, chronic medical/chronic health problem). The answer choices were presented as a checklist and included an open-ended (i.e., “other [please specify]”) item, as well as “none of these apply to me” and “I prefer to not answer” choices. This item and the answer choices were developed from items on the UHCL ASC Student Online Application Form for accommodations and research conducted by Fitchen

et al. (2018) on accommodation service utilization patterns via campus-based disability services offices. Each endorsed additional condition or impairment category was transformed into a dichotomized variable (endorsed = 1, not endorsed = 0).

### ***UHCL Student Career***

Participants were asked to provide information about their current UHCL program (i.e., “undergraduate,” “post-baccalaureate,” “graduate-master’s,” “graduate-doctoral,” “certificate-seeking,” “non-degree seeking,” and/or “dual-degree”), current cumulative UHCL GPA, number of currently enrolled credit hours during the semester of participation (i.e., Fall 2021), first-generation student status, and financial sources of tuition (i.e., “parents/family members,” “fellowships/scholarships/grants,” “student loans,” and/or “self/job”). Following data collection, program level selection, first-generation status, and financial sources of tuition were transformed into dummy variables that were dichotomized (endorsed = 1, not endorsed = 0). Current cumulative UHCL GPA and currently enrolled credit hours were treated as continuous variables.

**Intent to Persist.** Intent for attrition (i.e., dropping out of their current program at UHCL) and intent to transfer to another college/university were assessed using two items (i.e., “I often have thoughts of transferring from UHCL to another school,” and “I often have thoughts of quitting college”). Both items were adapted from a single item of the *End-term Adjustment to College Measure* (English et al., 2017). The original item (i.e., “Did you ever have thoughts of transferring to another school or quitting school? How often?”) was adapted from the *Global Adjustment* subscale of the measure and was originally measured using a reverse-scored Likert-type scale (1 = *never*, 7 = *very often*). The current study converted the split items into nominal measures, with answer choices being presented in a “true/false” format. The answer choices were dichotomized (“true” = 1, “false” = 0) following data collection.

## **Analytic Overview**

Normality testing was conducted on all continuous variables to determine if the assumptions for Pearson's correlation were met for the data in the current study. While responses on attitudes toward NDD disclosure (Shapiro-Wilk  $W = .96, p = .28$ ) and attitudes toward social adjustment to college (Shapiro-Wilk  $W = .98, p = .84$ ) did not significantly violate normality, responses on attitudes toward academic adjustment (Shapiro-Wilk  $W = .86, p < .001$ ), perceptions of academic fit (Shapiro-Wilk  $W = .92, p < .05$ ), current cumulative UHCL GPA (Shapiro-Wilk  $W = .92, p < .05$ ), and participant age did significantly violate normality in the current sample (Shapiro-Wilk  $W = .89, p < .05$ ). Thus, Spearman rank-order correlations and Kendall's tau-B were used in lieu of Pearson's correlations and Point-Biserial correlations when estimating potential relationships among all variables that were found to violate assumptions of normality, and Pearson's correlations, Point-Biserial correlations, and Spearman's rank-order correlations were used, when appropriate, for examining relationships among attitudes toward NDD disclosure and attitudes toward social adjustment to college for the other variables of interest. Additionally, the chi-square test of association/independence could not be used because the expected frequencies assumption was not met for any variables. As such, Fisher's exact test of significance was used to estimate the relationships among specific services endorsed as wanted or needed and perceived barriers to service use.

CHAPTER III:

RESULTS

**Descriptive Statistics**

**Service Use, Service Need, and Perceived Barriers to Service Use**

**Table 1**

*Descriptive Statistics for Service Used and Service Wanted or Needed*

Service	Descriptive Statistics				
	<i>n</i>	%	Range	<i>Mdn</i>	<i>IQR</i>
Routine treatment/care settings	27	79.41			
UHCL services					
Services used	27	79.41	0.00–6.00	2.00	2.00
Endorsed types	27	79.41			
ASC	5	18.52			
Career Services	5	18.52			
Counseling Services	9	33.33			
Library	14	51.82			
SEC	18	66.67			
SSC	10	37.04			
Testing Center	2	7.41			
Tutoring	2	7.41			
Writing Center	7	25.93			
Services wanted or needed	9	26.47	0.00–4.00	0.00	0.00
Endorsed types	8	23.53			
ASC	7	87.50			
Career Services	2	25.00			
CtC	3	37.50			
Counseling Services	1	12.50			
Health Services	2	25.00			
Math Center	1	12.50			
Testing Center	2	25.00			
Tutoring	2	25.00			
Writing Center	1	12.50			

*Note.* *n* = 34; UHCL = University of Houston-Clear Lake, ASC = Accessibility Support Center, CtC = Connecting to College program, SEC = Student Enrollment Center, SSC = Student Success Center.

### ***Service Use***

Participants frequently reported accessing both routine care/treatment settings related to their condition(s)/disorder(s) and UHCL student support services ( $n = 21$ , 61.76%). Participants also reported use of UHCL student support services only ( $n = 6$ , 17.65%) and only routine care/treatment settings related to their condition(s)/disorder(s) ( $n = 6$ , 17.65%). One participant (2.94%) indicated they do not currently access routine care/treatment settings related to their condition(s)/disorder(s) and have not accessed UHCL student support services.

**Routine Care/Treatment for Disorder(s)/Condition(s).** Most participants endorsed accessing at least one routine treatment/care setting related to current condition(s) and disorder(s) ( $n = 27$ , 79.41%; Table 1), and 20.58% ( $n = 7$ ) of the sample indicated that routine treatment/care settings related to their condition(s) or disorder(s) are currently not being accessed.

**UHCL Student Support Services.** Most participants reported use of at least one UHCL student support service ( $n = 27$ , 79.41%), while 20.59% ( $n = 7$ ) of the sample did not endorse use of any UHCL student support service. Participants who endorsed at least one UHCL student support service use reported use of universal student support services only ( $n = 22$ , 81.48%), while a smaller proportion reported use of both exclusive and universal UHCL student support services ( $n = 5$ , 18.52%). The total number of endorsed UHCL student support services ranged from 0.00–6.00 services ( $Mdn = 2.00$ ,  $IQR = 2.00$ ; Table 1).

**Exclusive Student Support Services.** There were no participants in the current sample that reported enrollment in the CtC program. Most of the current sample reported they were not currently registered with the ASC for accommodations related to a disability ( $n = 29$ , 85.29%), with 14.71% ( $n = 5$ ; Table 1) of the sample indicating current

registration. Most respondents reported that they had not requested accommodations in previous classes ( $n = 21$ , 61.76%), and four respondents reported having requested accommodations in previous classes (11.76%). Nine participants (26.47%) did not provide a response to this item.

***Universal Student Support Services.*** Participants who indicated use of universal services ( $n = 27$ ; Table 1), either alone ( $n = 22$ , 81.48%) or in combination with exclusive support services ( $n = 5$ , 18.52%), frequently reported use of SEC services ( $n = 18$ , 66.67%), library services ( $n = 14$ , 51.85%), SSC services ( $n = 10$ , 37.04%), counseling services ( $n = 9$ , 33.33%), and writing center services ( $n = 7$ , 25.93%). Additional service types included career services ( $n = 5$ , 18.52%), testing center services ( $n = 2$ , 7.41%), and tutoring services ( $n = 2$ , 7.41%).

### ***Service Need***

A majority of participants ( $n = 25$ , 73.53%) reported that there are not UHCL student support services they would like or need, but are not currently receiving, whereas 26.47% ( $n = 9$ ; Table 1) indicated that there are UHCL student support services they would like or need but are not currently receiving (Table 1). Eight participants who indicated there are currently UHCL student support services they would like or need, but are not receiving, provided information about specific services needed, and, of those participants, a need for both universal and exclusive student support service categories was endorsed most frequently ( $n = 5$ , 62.50%), followed by exclusive service types only ( $n = 2$ , 25.00%), and universal service types only ( $n = 1$ , 12.50%). ASC services ( $n = 7$ , 87.50%) was the most frequently reported service wanted or needed, but not currently being accessed, as well as the CtC program ( $n = 3$ , 37.50%). Additional services endorsed by at least two participants (25.00%) included career services, health services, testing

center, and tutoring services, and services endorsed by at least one participant (12.50%) included counseling services, the math center, and the writing center.

**Table 2**

*Descriptive Statistics for Perceived Barriers to Student Support Service Use*

Barrier	Frequency of Endorsement	
	<i>n</i>	%
1. Fear, anxiety, embarrassment, or frustration keeps me from seeking UHCL student support services.	4	44.44
2. I have trouble following up on appointments.	2	22.22
3. I don't understand the UHCL student support service system.	2	22.22
4. It is too difficult to make appointments.	2	22.22
5. My needs are misinterpreted by staff.	1	11.11
6. The staff do not take my communications seriously.	2	22.22
7. I cannot find student support services offered by UHCL that accommodate my needs.	2	22.22
8. The staff do not include me in discussions about my needs.	1	11.11
9. Communication with the staff is too difficult.	3	33.33
10. I have difficulties identifying when I need support.	3	33.33
11. Concerns about cost or insurance coverage keep me from seeking UHCL student support services.	4	44.44
12. I do not have a way to get to campus to receive services.	1	11.11
13. I have inadequate social, family, or caregiver support.	1	11.11
14. I have problems filling out paperwork.	1	11.11
15. I do not have time to receive services.	2	22.22
16. I find it hard to handle waiting on campus to receive services.	1	11.11
17. I sought help, but was unable to receive it.	1	11.11
18. I do not know which services are best suited to my needs.	5	55.56
19. The process is too overwhelming.	3	33.33
20. COVID-19 Restrictions/Quarantine †	1	11.11
21. Not receiving adequate follow-up or assistance from staff after more than one attempt to reach out for support †	1	11.11

*Note.*  $n = 9$ ; Frequencies add up to more than 100.00% as participants could endorse more than one barrier; Participants reported a range of 1.00–16.00 barriers in total ( $Mdn = 3.00$ ,  $IQR = 5.00$ ).

† Refers to participant provided barriers.

### ***Barriers to Service Use***

The total number of barriers reported by participants ( $n = 9$ ) ranged from 1.00–16.00 barriers ( $Mdn = 3.00$ ,  $IQR = 5.00$ ; Table 2). Participants who reported reasons why they were not currently receiving needed or wanted services ( $n = 9$ ) most often endorsed not knowing which services were best suited to their needs ( $n = 5$ , 55.56%), concerns about cost or insurance coverage ( $n = 4$ , 44.44%), and fear, anxiety, embarrassment or frustration ( $n = 4$ , 44.44%). At least three participants (33.33%) endorsed barriers that included difficulty communicating with staff, difficulties in self-identifying when support is needed, and the process being too overwhelming. Additional barriers reported by at least two students (22.22%) included having trouble with following up on appointments, not understanding the UHCL student support service system, difficulty making appointments, that staff do not take their communications seriously, that they are unable to find UHCL student support services that accommodate their needs, and not having time to receive services. Barriers endorsed by at least one participant (11.11%) included that their needs are misinterpreted by staff, staff do not include them in discussions about their needs, they do not have a way to get to campus to receive services, inadequate social, family, or caregiver support, problems filling out paperwork, difficulty with waiting on campus to receive services, not receiving help when it was sought, as well as participant-provided barriers that included COVID restrictions had prevented access of wanted or needed services, feeling embarrassed and humiliated when detailing their student support questions and needs via digital communications, and not receiving adequate follow-up or assistance from staff after a second attempt to reach out.

## NDD Disclosure, Adjustment to College, and Academic Fit

**Table 3**

*Descriptive Statistics for NDD Disclosure, Adjustment to College, and Academic Fit*

Scale Items	Descriptive Statistics			
	<i>n</i>	Range	<i>M</i>	<i>SD</i>
DD	33	1.00–5.00	2.77	1.17
SA	32	1.00–4.00	2.8	0.74
AA	33	1.00–5.00	3.79	1.15
AF	33	1.00–5.00	3.59	0.91

*Note.* DD = neurodevelopmental diagnosis disclosure, SA = social adjustment to college, AA = academic adjustment to college, AF = academic fit.

As shown in Table 3, NDD diagnosis disclosure had a sample mean of 2.77 ( $n = 33$ ,  $SD = 1.17$ ). This indicates that participants tended to respond with somewhat positive attitudes toward NDD diagnosis disclosure. Social adjustment to college had a mean score of 2.80 ( $n = 32$ ,  $SD = 0.74$ ), and this indicates that students in the current sample tended to respond with somewhat negative attitudes. Academic adjustment to college had a sample mean of 3.79 ( $n = 33$ ,  $SD = 1.15$ ), indicating that participants in the current sample responded with relatively positive attitudes. Academic fit had a sample mean of 3.59 ( $n = 33$ ,  $SD = 0.91$ ), indicating that participants in the current sample responded with somewhat positive attitudes.

## Personal Characteristics

### *Demographics*

**Table 4**

*Descriptive Statistics for Participant Demographics*

Demographic	Descriptive Statistic	
	<i>n</i>	%
Race/Ethnicity		
Uniracial	28	82.35
White/Caucasian	20	58.82
Latinx	4	11.76
Asian/Asian American	3	8.82
Black	1	2.94
Multiracial	6	17.65
Gender		
Cisgender female	24	70.59
Cisgender male	7	20.59
Non-binary	2	5.88
Questioning	1	2.94
Parental status		
No children	25	73.53
Children	9	26.47
Child residing in home full-time	7	20.59
Child residing in home part-time	1	2.94
Child residing in home full-time and child residing in home part-time	1	2.94
Living arrangement		
Living independently off-campus	19	41.18
Living with family members off-campus	14	55.88
Living on-campus part-time/with family members off-campus part-time	1	2.94
Employed	23	67.65
Full-time hours	13	56.52
Part-time hours	10	41.67

*Note.*  $n = 34$ . Participant ages ranged from 18.00–48.00 years old ( $Mdn = 24.50$ ,  $IQR = 6.50$ ).

**Age.** Participant ages ranged from 18–48 years old ( $Mdn = 24.50$ ,  $IQR = 6.50$ ; Table 4).

**Race/Ethnicity.** As shown in Table 4, participants predominantly identified themselves as uniraical ( $n = 28$ , 82.35%), with a much smaller proportion identifying as multiraical ( $n = 6$ , 17.65%).

**Gender.** Most participants identified as cisgender female ( $n = 24$ , 70.58%) or cisgender male ( $n = 7$ , 20.59%), however participants also identified themselves as non-binary ( $n = 2$ , 5.88%) and one participant (2.94%) identified as “questioning” (Table 4).

**Parental Status.** A majority of the sample reported not having children ( $n = 25$ , 73.53%; Table 4), followed by having a child residing in their home full-time ( $n = 7$ , 20.59%), having a child residing in their home part time ( $n = 1$ , 2.94%), and both having a child residing in their home part-time and having a child residing in their home full-time ( $n = 1$ , 2.94%).

**Living Situation.** As shown in Table 4, participants primarily reported living with family members in an off-campus apartment or house ( $n = 19$ , 55.88%) or living independently in an off-campus apartment or house ( $n = 14$ , 41.18%). One participant (2.94%) specified that they are living in the on-campus residence hall during the week (i.e., Monday through Thursday) and living with family members on weekends (i.e., Friday through Sunday).

**Employment.** A majority of the sample reported being currently employed ( $n = 23$ , 67.65%; Table 4), with 32.35% ( $n = 11$ ) of participants reporting being currently unemployed. The majority of employed participants reported working the equivalent of full-time hours ( $n = 13$ , 56.52%), and 43.48% ( $n = 10$ ) of participants reported working the equivalent of part-time hours.

***Diagnosis(es)***

**Table 5**

*Descriptive Statistics for Participant Diagnosis(es)*

Diagnosis(es)	Descriptive Statistics				
	<i>n</i>	%	Range	<i>Mdn</i>	<i>IQR</i>
NDD					
ADHD	33	97.06			
ASD	6	17.65			
IDD	1	2.94			
MTD	1	2.94			
SLD	2	5.88			
Comorbid NDD <sup>a</sup>	8	23.53			
Comorbid mental health/psychiatric condition <sup>a</sup>	27	79.41	1.00–5.00	2.00	2.00
Additional comorbidities	8	23.53			
Visual impairment not adequately corrected by glasses or contact lenses	4	12.50			
Chronic medical health condition	4	12.50			

*Note.*  $n = 34$ ; NDD = neurodevelopmental disorder, ADHD = attention-deficit/hyperactivity disorder, ASD = autism spectrum disorder, IDD = intellectual developmental disorder, MTD = motor or tic disorder, SLD = specific learning disorder.

<sup>a</sup> Refers to more than one condition endorsed by participants.

**NDD.** As shown in Table 5, a marked majority of participants endorsed ADHD diagnosis ( $n = 33$ , 97.06%), either alone ( $n = 25$ , 75.76%) or with other NDD diagnoses ( $n = 8$ , 24.24%). One participant (2.94%) endorsed a motor/tic disorder only. Six participants endorsed ASD diagnosis (17.65%), two participants endorsed SLD diagnosis (5.88%), and one participant endorsed IDD diagnosis (2.94%). Participants in the current sample did not endorse communication disorder(s). The most frequently reported

comorbid NDD conditions included ADHD and ASD diagnoses ( $n = 5$ , 14.71%).

Additional comorbid NDD conditions that were endorsed by at least one participant (2.94%) included ADHD and IDD diagnoses, ADHD and SLD diagnoses, and ADHD, ASD, and SLD diagnoses.

**Mental Health and Psychiatric Comorbidities.** A majority ( $n = 27$ , 79.41%; Table 5) of participants endorsed at least one mental health/psychiatric comorbidity. Participants who endorsed at least one mental health/psychiatric condition reported a total of 1.00–5.00 comorbid conditions ( $Mdn = 2.00$ ,  $IQR = 2.00$ ), and the most frequently reported co-occurring mental health/psychiatric comorbidities included anxiety disorder(s) and depressive disorder(s) ( $n = 9$ , 33.33%).

**Additional Comorbidities.** A majority of participants did not endorse additional comorbidities ( $n = 24$ , 75.00%; Table 5). The most frequently reported additional conditions were both endorsed by at least four participants (12.50%) and included visual impairment not adequately corrected by contact lenses/glasses and chronic medical/health condition(s).

## *UHCL Student Career*

**Table 6**

*Descriptive Statistics for UHCL Student Career Variables*

UHCL Student Career Variable	Descriptive Statistics				
	<i>n</i>	%	Range	<i>Mdn</i>	<i>IQR</i>
GPA	33		1.50–4.00	3.40	0.70
Program level					
Undergraduate	29	85.29			
Graduate-Master's	5	14.71			
Credit hours	31		2.00–15.00	9.00	3.00
First-generation student status	14	41.18			
Financial sources of tuition					
Parents/family members	14	41.18			
Self/job	17	50.00			
Student loans	15	44.12			
Fellowships/grants/scholarships	12	35.29			
FAFSA	1	2.94			
Texas Guaranteed Tuition Plan	1	2.94			
Intent to persist					
Often thinks about transferring <sup>a</sup>	10	29.41			
Often thinks about quitting <sup>a</sup>	16	47.06			

*Note.*  $n = 34$ ; Frequencies sum to more than 100.00% as participants could endorse more than one answer. GPA = grade point average.

<sup>a</sup> Refers to frequency of endorsement of statements as "true."

**Self-Reported GPA.** Participants reported current cumulative UHCL GPA values that ranged from 1.50–4.00 ( $Mdn = 3.40$ ,  $IQR = 0.70$ ; Table 6).

**Program Level.** As shown in Table 6, participants endorsed undergraduate enrollment ( $n = 29$ , 85.29%) or graduate enrollment in a master's program ( $n = 5$ , 14.71%).

**Credit Hours.** Participants reported credit hours ranging from 2.00–15.00 ( $Mdn = 9.00$ ,  $IQR = 3.00$ ; Table 6).

**First-Generation Student Status.** Less than half ( $n = 14, 41.18\%$ ) of the current sample endorsed first-generation student status (Table 6).

**Financial Sources of Tuition.** As shown in Table 6, participants most frequently endorsed “self/job” as a financial source of tuition ( $n = 17, 50.00\%$ ), followed by student loans ( $n = 15, 44.12\%$ ), fellowships/scholarships/grants ( $n = 12, 35.29\%$ ), and parent/family members ( $n = 14, 41.18\%$ ). Additional types of financial tuition sources included FAFSA (i.e., federal student aid) and the Texas Guaranteed Tuition Plan, and each were endorsed by one participant (2.94%).

**Intent to Persist.** Most participants reported that they did not have thoughts of transferring from UHCL ( $n = 24, 70.59\%$ ), and fewer than one-third of participants ( $n = 10, 29.41\%$ ) reported thoughts of transferring (Table 6). The majority of participants also reported that they did not have thoughts of quitting college ( $n = 18, 52.94\%$ ), and 47.06% ( $n = 16$ ) of participants reported thoughts of quitting college (Table 6).

### **Correlations**

#### **NDD Disclosure, Adjustment to College, and Academic Fit**

Attitudes toward NDD diagnosis disclosure was not significantly associated with attitudes toward social adjustment to college ( $r = -.38, p = .28$ ) or attitudes toward academic adjustment to college ( $r_s = -.13, p = .48$ ), but higher attitudes toward NDD diagnosis disclosure was significantly associated with lower perceptions of academic fit ( $r_s = -.39, p < .05$ ). Higher attitudes toward social adjustment to college was significantly associated with higher attitudes toward academic adjustment to college ( $r_s = .44, p < .05$ ) and higher perceptions of academic fit ( $r_s = .50, p < .01$ ). Higher attitudes toward academic adjustment to college was also associated with higher perceptions of academic fit ( $r_s = .40, p < .05$ ).

## **Service Use, Service Need, and Perceived Barriers to Service Use**

### ***Routine Treatment/Care Settings***

Endorsement of any routine/treatment care settings was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_{pb} = .00, p = .99$ ), attitudes toward social adjustment to college ( $r_{pb} = -.24, p = .18$ ), attitudes toward academic adjustment to college ( $r_{\tau} = -.16, p = .31$ ), or perceptions of academic fit ( $r_{\tau} = .10, p = .51$ ).

***UHCL Student Support Services***

**Table 7**

*Correlation Coefficients for NDD Disclosure, Adjustment to College, and Academic Fit Across Services Used and Services Wanted or Needed*

Services	Correlation Coefficients			
	DD †	SA †	AA ‡	AF ‡
Services used <sup>a</sup>				
Number of services used	.24	-.14	.01	.06
ASC	.16	-.22	-.15	-.15
Career Services	.21	.01	.11	.05
Counseling Services	.35	.05	.18	.18
Library	.02	-.03	.01	.14
SEC	-.27	-.18	.06	.04
SSC	.20	-.08	-.03	.16
Testing Center	.11	-.08	-.13	-.08
Tutoring	-.06	.11	-.09	-.07
Writing Center	.45	-.16	-.16	-.15
Services wanted or needed				
Number of services wanted or needed	-.10	-.09	-.04	-.06
ASC	-.14	-.16	-.13	-.10
Career Services	-.13	-.19	-.09	-.01
CtC	-.12	-.16	-.17	-.02
Counseling Services	-.12	-.24	-.07	-.16
Health Services	.13	.22	.05	.12
Math Center	.01	-.05	.21	-.09
Testing Center	-.13	.15	.20	.02
Tutoring	-.10	-.05	.11	.04
Writing Center	.14	.32	.21	.18

*Note.* ASC = Accessibility Support Center, CtC = Connecting to College Program, SEC = Student Enrollment Center, SSC = Student Success Center; DD = neurodevelopmental diagnosis disclosure, SA = social adjustment to college, AA = academic adjustment to college, AF = academic fit.

<sup>a</sup> Refers to one-tailed negative hypothesis for DD and one-tailed positive hypothesis for SA, AA, and AF; † Refers to Point-Biserial correlation coefficients; ‡ Refers to Kendall's tau-B correlation coefficients.

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

**Service Use.** As shown in Table 7, the total number of UHCL student support services used was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_s = .24, p = .91$ ), attitudes toward social adjustment to college ( $r_s = -.14, p = .78$ ), attitudes toward academic adjustment to college ( $r_s = .01, p = .48$ ), or perceptions of academic fit ( $r_s = .06, p = .38$ ). There were also no significant relationships observed among endorsement of specific service types and attitudes toward NDD disclosure ( $r_{pb} = -.27-.45, p = .06-1.00$ ), attitudes toward social adjustment to college ( $r_{pb} = -.22-.11, p = .27-.89$ ), attitudes toward academic adjustment to college ( $r_\tau = -.16-.18, p = .12-.84$ ) or perceptions of academic fit ( $r_\tau = -.15-.18, p = .11-.84$ ).

**Service Need.** As shown in Table 7, the total number of UHCL student support services endorsed as wanted or needed, but that are not currently being accessed, was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_s = -.10, p = .56$ ), attitudes toward social adjustment to college ( $r_s = -.09, p = .65$ ), attitudes toward academic adjustment to college ( $r_s = -.04, p = .81$ ), or perceptions of academic fit ( $r_s = -.06, p = .76$ ). There were not any significant relationships observed among endorsement of specific service types and attitudes toward NDD disclosure ( $r_{pb} = -.14-.14, p = .30-.60$ ), attitudes toward social adjustment to college ( $r_{pb} = -.24-.32, p = .08-.81$ ), attitudes toward academic adjustment to college ( $r_\tau = -.17-.21, p = .17-.73$ ), or perceptions of academic fit. ( $r_\tau = -.16-.18, p = .23-.94$ ).

**Table 8***Correlation Coefficients for NDD Disclosure, Adjustment to College, and Academic Fit Across Perceived Barriers to Student Support Service Use*

Barrier	Correlation Coefficients			
	DD †	SA †	AA ‡	AF ‡
1. Fear, anxiety, embarrassment, or frustration keeps me from seeking UHCL student support services.	.13	-.24	-.13	-.10
2. I have trouble following up on appointments.	.25	-.30	-.03	-.22
3. I don't understand the UHCL student support service system.	-.08	-.02	-.15	.09
4. It is too difficult to make appointments.	.11	-.08	-.13	-.08
5. My needs are misinterpreted by staff.	.34	-.37*	-.25	-.22
6. The staff do not take my communications seriously.	.16	-.44*	-.23	-.27
7. I cannot find student support services offered by UHCL that accommodate my needs.	.27	-.27	-.28	-.17
8. The staff do not include me in discussions about my needs.	.34	-.37*	-.25	-.22
9. Communication with the staff is too difficult.	.17	-.56***	-.32*	-.37*
10. I have difficulties identifying when I need support.	.14	-.24	-.27	-.06
11. Concerns about cost or insurance coverage keep me from seeking UHCL student support services.	.20	-.05	-.13	.05
12. I do not have a way to get to campus to receive services.	-.14	-.03	-.07	.14
13. I have inadequate social, family, or caregiver support.	.34	-.37*	-.25	-.22
14. I have problems filling out paperwork.	.34	-.37*	-.25	-.22
15. I do not have time to receive services.	.35	-.04	-.03	-.03
16. I find it hard to handle waiting on campus to receive services.	.34	-.37*	-.25	-.22
17. I sought help, but was unable to receive it.	-.27	.05	-.07	-.02
18. I do not know which services are best suited to my needs.	.06	-.33	-.15	-.16
19. The process is too overwhelming.	.13	-.26	-.06	-.10
20. COVID-19 Restrictions/Quarantine	.06	-.33	-.21	-.24
21. Not receiving adequate follow-up or assistance from staff after more than one attempt to reach out for support	.04	-.01	-.14	-.02

*Note.* DD = neurodevelopmental diagnosis disclosure, SA = social adjustment to college, AA = academic adjustment to college, AF = academic fit.

† Refers to Point-biserial correlation coefficients; ‡ Refers to Kendall's tau-B correlation coefficients.

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

**Barriers to Service Use.** The total number of endorsed perceived barriers to UHCL student support service use was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_s = -.06, p = .76$ ), attitudes toward social adjustment to college ( $r_s = -.06, p = .76$ ), attitudes toward academic adjustment to college ( $r_s = -.06, p = .76$ ), or perceptions of academic fit ( $r_s = -.06, p = .76$ ). There were no significant relationships observed among endorsement of specific barriers or attitudes toward NDD disclosure ( $r_{pb} = -.27-.35, p = .05-.84$ ; Table 8). As shown in table 8, there were several types of perceived barriers to service use significantly associated with attitudes toward social adjustment to college: their needs are misinterpreted by staff ( $r_{pb} = -.37, p < .05$ ), staff do not take their communications seriously ( $r_{pb} = -.44, p < .05$ ), staff do not include them in discussions about their needs ( $r_{pb} = -.37, p < .05$ ), communication with the staff is too difficult ( $r_{pb} = -.56, p < .001$ ), having inadequate social/caregiver/parent support ( $r_{pb} = -.37, p < .05$ ), having problems filling out paperwork ( $r_{pb} = -.37, p < .05$ ), and that it is difficult for them to wait on campus to receive services ( $r_{pb} = -.37, p < .05$ ). All other specific barriers were not significantly associated with attitudes toward social adjustment to college ( $r_{pb} = -.33-.05, p = .06-.97$ ; Table 8). Participant endorsement of the perceived barrier concerning communication with staff being too difficult was significantly associated with both attitudes toward academic adjustment to college ( $r_s = -.32, p < .05$ ) and academic fit ( $r_s = -.37, p < .05$ ), but no other specific barriers were significantly associated with attitudes toward academic adjustment to college ( $r_\tau = -.28- .03, p = .07-.85$ ; Table 8) or perceptions of academic fit ( $r_\tau = -.27-.14, p = .07-.92$ ; Table 8).

**Table 9***Associations Among Barriers to Service Use and Types of Wanted or Needed Services*

Barrier	Wanted or Needed Service Types								
	ASC	CS	CtC	CoS	HS	MC	TC	TS	WC
1. Fear, anxiety, embarrassment, or frustration keeps me from seeking UHCL student support services.	<.001	.23	.03	1.00	.23	.12	.23	.01	1.00
2. I have trouble following up on appointments.	.04	1.00	1.00	1.00	1.00	.06	.12	.12	1.00
3. I don't understand the UHCL student support service system.	.04	.12	.01	1.00	.12	1.00	1.00	.12	1.00
4. It is too difficult to make appointments.	.04	1.00	1.00	1.00	1.00	1.00	.12	1.00	1.00
5. My needs are misinterpreted by staff.	.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6. The staff do not take my communications seriously.	.04	.12	.17	.06	1.00	1.00	1.00	1.00	1.00
7. I cannot find student support services offered by UHCL that accommodate my needs.	.04	1.00	.17	1.00	.12	1.00	1.00	1.00	1.00
8. The staff do not include me in discussions about my needs.	.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9. Communication with the staff is too difficult.	.10	.17	.25	.09	1.00	1.00	1.00	1.00	1.00
10. I have difficulties identifying when I need support.	.01	.17	.02	1.00	.17	1.00	1.00	.17	1.00
11. Concerns about cost or insurance coverage keep me from seeking UHCL student support services.	.02	.23	.03	1.00	.01	1.00	1.00	.23	.12
12. I do not have a way to get to campus to receive services.	.21	.06	.09	1.00	1.00	1.00	1.00	.06	1.00
13. I have inadequate social, family, or caregiver support.	.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14. I have problems filling out paperwork.	.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15. I do not have time to receive services.	.37	1.00	1.00	1.00	.12	1.00	1.00	1.00	.06
16. I find it hard to handle waiting on campus to receive services.	.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17. I sought help, but was unable to receive it.	.21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18. I do not know which services are best suited to my needs.	<.001	.02	.00	.15	.28	.15	.28	.02	1.00
19. The process is too overwhelming.	.01	.17	.25	1.00	1.00	.09	.17	.01	1.00
20. COVID-19 Restrictions/Quarantine	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
21. Not receiving adequate follow-up or assistance from staff after more than one attempt to reach out for support	.21	1.00	.09	1.00	.06	1.00	1.00	1.00	1.00

*Note.* Fisher's exact test of significance *p*-values reported; ASC = Accessibility Support Center, CS = Career Services, CtC = Connecting to College program, CoS = Counseling Services, HS = Health Services, MC = Math Center, TC = Testing Center, TS = Tutoring Services, WC = Writing Center.

***Exclusive Student Support Services.*** As shown in Table 9, per Fisher's exact test of significance, endorsement of ASC service want or need was significantly associated with endorsement of multiple perceived specific barriers: fear, anxiety, embarrassment, or frustration ( $p < .001$ ), trouble following up on appointments ( $p < .05$ ), not understanding the UHCL student support system ( $p < .05$ ), it is too difficult to make appointments ( $p < .05$ ), staff do not take communications seriously ( $p < .05$ ), unable to find services to accommodate needs ( $p < .05$ ), difficulties identifying when support is needed ( $p < .01$ ), concerns about costs/insurance coverage ( $p < .05$ ), not knowing which services best suited to needs ( $p < .001$ ), and the process being too overwhelming ( $p < .01$ ). The remaining barriers were not significantly associated with endorsement of ASC service want or need ( $p = .10$ – $1.00$ ; Table 9). As shown in Table 9, endorsement of CtC program enrollment want or need was significantly associated with endorsement of fear, anxiety, embarrassment, or frustration ( $p < .05$ ), not understanding the UHCL student support system ( $p < .01$ ), concerns about costs/insurance coverage ( $p < .05$ ), and not knowing which services are best suited to their needs ( $p < .05$ ). The remaining barriers were not significantly associated with endorsement of CtC program enrollment as a wanted or needed student support service ( $p = .09$ – $1.00$ ).

***Universal Student Support Services.*** Endorsement of career services ( $p < .05$ ) and tutoring services ( $p < .05$ ) were significantly associated with endorsement of communication with the staff being too difficult (Table 9). Endorsement of tutoring services was also significantly associated with fear, anxiety, embarrassment, or frustration ( $p < .05$ ) as a barrier to service use, as well as endorsement of the process being too overwhelming ( $p < .01$ ; Table 9). Endorsement of health services as a wanted or needed service was associated with endorsement of concerns about cost/insurance coverage ( $p < .05$ ; Table 9). There were no other significant associations observed among

specific universal student support services wanted or needed and endorsement of specific barriers to service use ( $p = .06-1.00$ ; Table 9).

## **Participant Characteristics**

### ***Demographics***

**Age.** Higher participant age was significantly associated with higher scores on perceptions of academic fit ( $r_s = .38, p < .05$ ), but age was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_s = .06, p = .76$ ), attitudes toward social adjustment to college ( $r_s = .30, p = .09$ ), or attitudes toward academic adjustment to college ( $r_s = .21, p = .23$ ). Higher participant ages were also significantly associated with higher total number of endorsed UHCL student support services ( $r_s = .43, p < .05$ ), although age was not significantly associated with the total number of reported services wanted or needed ( $r_s = .29, p = .05$ ), but that are not currently received, or the total number of perceived barriers to service use endorsed by participants ( $r_s = -.38, p = .32$ ).

**Race/Ethnicity.** Endorsement of multiracial racial/ethnic identities was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_{pb} = -.10, p = .59$ ), attitudes toward social adjustment to college ( $r_{pb} = .23, p = .21$ ), attitudes toward academic adjustment to college ( $r_\tau = .19, p = .22$ ), or perceptions of academic fit ( $r_\tau = .12, p = .44$ ).

**Gender.** Endorsement of cisgender female identity was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_{pb} = -.10, p = .60$ ), attitudes toward social adjustment to college ( $r_{pb} = .20, p = .27$ ), or perceptions of academic fit ( $r_\tau = .26, p = .60$ ), but was significantly associated with attitudes toward academic adjustment to college ( $r_\tau = .37, p < .05$ ). Endorsement of cisgender male, non-binary, or questioning identities was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_{pb} = -.06-.34, p = .05-.99$ ), attitudes toward academic adjustment

to college ( $r_{\tau} = -.25-.18, p = .10-.24$ ), or perceptions of academic fit ( $r_{\tau} = -.22-.26, p = .08-.88$ ). Endorsement of cisgender male ( $r_{pb} = -.01, p = .95$ ) or non-binary ( $r_{pb} = -.09, p = .61$ ) identities was not significantly associated with attitudes toward social adjustment to college, while endorsement of questioning gender identity was significantly associated with lower scores on attitudes toward social adjustment to college ( $r_{pb} = -.37, p < .05$ ). Endorsement of a specific gender identity was not significantly associated with the number of services used ( $r_{\tau} = -.09-.18, p = .23-.99$ ), the number of services wanted or needed ( $r_{\tau} = -.09-.24, p = .10-.60$ ), or the number of perceived barriers to service use endorsed by participants ( $r_{\tau} = -.47-.49, p = .12-.71$ ).

**Parental Status.** Parental status was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.18, p = .31$ ), attitudes toward social adjustment to college ( $r_{pb} = .13, p = .48$ ), attitudes toward academic adjustment to college ( $r_{\tau} = .11, p = .49$ ), or perceptions of academic fit ( $r_{\tau} = .24, p = .12$ ). Endorsement of parental status was not significantly associated with the number of student support services used ( $r_{\tau} = .21, p = .17$ ), the number of student support services wanted or needed ( $r_{\tau} = -.03, p = .85$ ), or the number of perceived barriers to student support service use reported by participants ( $r_{\tau} = -.33, p = .30$ ).

**Living Situation.** Current living situations endorsed by participants were not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.04-.06, p = .74-.92$ ), attitudes toward social adjustment to college ( $r_{pb} = -.33-.08, p = .06-.85$ ), attitudes toward academic adjustment to college ( $r_{\tau} = -.21-.10, p = .17-.87$ ), or perceptions of academic fit ( $r_{\tau} = -.24-.14, p = .12-.70$ ). Current living situations endorsed by participants were also not significantly associated with the number of student support services used ( $r_{\tau} = -.07-.03, p = .67-.83$ ), the number of student support services wanted

or needed ( $r_{\tau} = -.07$ – $.07$ ,  $p = .66$ ), or the number of perceived barriers to service use ( $r_{\tau} = -.20$ – $.31$ ,  $p = .32$ – $.54$ ) endorsed by participants.

**Employment Status.** Part-time employment status was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.08$ ,  $p = .68$ ), attitudes toward social adjustment to college ( $r_{pb} = -.06$ ,  $p = .76$ ), attitudes toward academic adjustment to college ( $r_{\tau} = -.20$ ,  $p = .18$ ), or perceptions of academic fit ( $r_{\tau} = .10$ ,  $p = .50$ ). Part-time employment status was significantly associated with lower total number of services reported as used ( $r_{\tau} = -.33$ ,  $p < .05$ ), but was not significantly associated with the total number of services reported as wanted or needed ( $r_{\tau} = -.23$ ,  $p = .17$ ), as well as not being significantly associated with perceptions of academic fit ( $r_{\tau} = .49$ ,  $p = .12$ ). Full-time employment status was significantly associated with perceptions of academic fit ( $r_{\tau} = .43$ ,  $p < .01$ ), but was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.27$ ,  $p = .13$ ), attitudes toward social adjustment to college ( $r_{pb} = .31$ ,  $p = .96$ ), or attitudes toward academic adjustment to college ( $r_{\tau} = .01$ ,  $p = .96$ ). Additionally, endorsement of full-time employment status was not significantly associated with the number of services used ( $r_{\tau} = .13$ ,  $p = .41$ ) or the number of services needed ( $r_{\tau} = -.06$ ,  $p = .71$ ), but was significantly associated with a lower number of perceived barriers to service use ( $r_{\tau} = -.70$ ,  $p < .05$ ).

**Diagnosis(es)**

**Table 10**

*Correlation Coefficients for NDD Disclosure, Adjustment to College, and Academic Fit Across Participant Diagnosis(es)*

Diagnosis(es)	Correlation Coefficients			
	DD †	SA †	AA ‡	AF ‡
NDD				
ADHD	.12	-.17	-.01	.09
ASD	.13	.01	-.05	-.25
IDD	-.19	.26	.07	.11
MTD	-.12	.17	.01	-.09
SLD	-.02	.13	-.04	-.10
Comorbid NDD	.04	.15	.04	-.16
Comorbid mental health/psychiatric condition	.31	-.05	.17	-.09
Additional comorbidities				
Visual impairment not adequately corrected by glasses or contacts	-.26	-.18	.09	-.03
Chronic medical health condition	.09	.08	.11	-.03

*Note.* NDD = neurodevelopmental disorder, ADHD = attention-deficit/hyperactivity disorder, ASD = autism spectrum disorder, IDD = intellectual developmental disorder, MTD = motor and tic disorders, SLD = specific learning disorder; DD = NDD diagnosis disclosure, SA = social adjustment to college, AA = academic adjustment to college, AF = academic fit.

† Refers to Point-Biserial correlation coefficients; ‡ Refers to Kendall's tau-B correlation coefficients.

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

**NDD.** As shown in Table 10, endorsement of specific types of NDD were not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.19-.13$ ,  $p = .28-.93$ ), attitudes toward social adjustment to college ( $r_{pb} = -.17-.26$ ,  $p = .15-.97$ ), attitudes

toward academic adjustment to college ( $r_{\tau} = -.05-.17, p = .63-.96$ ), or perceptions of academic fit ( $r_{\tau} = -.25-.11, p = .09-.56$ ). Endorsement of more than one NDD condition group was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = .04, p = .82$ ), attitudes toward social adjustment to college ( $r_{pb} = .15, p = .40$ ), attitudes toward academic adjustment to college ( $r_{\tau} = .04, p = .81$ ), or perceptions of academic fit ( $r_{\tau} = -.34, p = .06$ ). Endorsement of comorbid NDD was not significantly associated with the number of student support services used ( $r_{\tau} = -.08, p = .59$ ), the number of student support services wanted or needed ( $r_{\tau} = .07, p = .70$ ), or the number of perceived barriers to student support service use endorsed by participants ( $r_{\tau} = -.21, p = .51$ ).

**Mental Health/Psychiatric Comorbidities.** As shown in Table 10, the total number of endorsed mental health/psychiatric comorbidities was not significantly associated with attitudes toward NDD diagnosis disclosure ( $r_s = .31, p = .07$ ), attitudes toward social adjustment to college ( $r_s = -.05, p = .71$ ), attitudes toward academic adjustment to college ( $r_{\tau} = .17, p = .23$ ), or perceptions of academic fit ( $r_{\tau} = -.09, p = .51$ ). The total number of endorsed mental health and psychiatric comorbidities was also not significantly associated with the number of student support services used ( $r_s = -.13, p = .48$ ), the number of student support services wanted or needed ( $r_s = .07, p = .71$ ), or the number of perceived barriers to service use ( $r_s = .40, p = .29$ ) reported by participants.

**Additional Comorbidities.** Endorsement of any additional comorbidity, besides NDD and mental health/psychiatric comorbidities, was not significantly associated with the number of student support services used ( $r_{\tau} = -.10, p = .51$ ), the number of student support services wanted or needed ( $r_{\tau} = -.12, p = .47$ ), or the number of perceived barriers to service use ( $r_{\tau} = .31, p = .33$ ) reported by participants.

As shown in Table 10, endorsement of a visual impairment not adequately corrected by glasses or contact lenses was not significantly associated with attitudes

toward NDD disclosure ( $r_{pb} = -.26, p = .14$ ), attitudes toward social adjustment to college ( $r_{pb} = -.18, p = .34$ ), attitudes toward academic adjustment to college ( $r_{\tau} = .09, p = .58$ ), or perceptions of academic fit ( $r_{\tau} = -.03, p = .87$ ). Additionally, endorsement of a chronic health/medical condition was also not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = .09, p = .63$ ), attitudes toward social adjustment to college ( $r_{pb} = .08, p = .67$ ), attitudes toward academic adjustment to college ( $r_{\tau} = .11, p = .47$ ), or perceptions of academic fit ( $r_{\tau} = -.03, p = .87$ ).

### ***UHCL Student Career***

**Table 11**

*Correlation Coefficients for NDD Disclosure, Adjustment to College, and Academic Fit Across UHCL Student Career Variables*

UHCL Student Career Variable	Correlation Coefficients			
	DD †	SA †	AA ‡	AF ‡
UHCL program level				
Graduate-Masters	.16	.26	-.11	.08
Undergraduate	-.16	-.26	.11	-.08
First-generation student status	-.19	.23	.31	-.08
Financial sources of tuition				
Parents/family members	.21	-.42	-.40	-.37
Fellowships/scholarships/grants	-.25	.20	.15	.07
Student loans	-.03	.30	.31	.24
Self/job	.03	.14	.12	.21
Texas Guaranteed Tuition Plan	.06	-.10	-.11	-.19
FASFA	-.19	.26	.11	.07
Credit hours	-.15	.15	-.06	-.26
GPA	-.08	.21	-.01	.11
Intent to persist				
Often think about transferring	-.10	-.30	-.08	-.15
Often think about quitting	.27	-.38*	-.18	-.24

*Note.* GPA = grade point average, DD = neurodevelopmental diagnosis disclosure, SA = social adjustment to college, AA = academic adjustment to college, AF = academic fit.

† Refers to Point-Biserial correlation coefficients; ‡ Refers to Kendall's tau-B correlation coefficients.

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

**Program Level.** As shown in table 11, UHCL program level was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.16, p = .38$ ), attitudes toward social adjustment to college ( $r_{pb} = -.26, p = .16$ ), attitudes toward academic adjustment to college ( $r_{\tau} = -.08, p = .60$ ), or perceptions of academic fit ( $r_{\tau} = .11, p = .48$ ). Program level also was not significantly associated with the total number of endorsed UHCL services participants had accessed ( $r_{\tau} = .06, p = .71$ ), the total number of UHCL services endorsed as wanted or needed ( $r_{\tau} = -.14, p = .40$ ), or the total number of barriers to service use ( $r_{\tau} = -.09, p = .77$ ).

**Credit Hours.** Credit hours were not significantly associated with NDD disclosure ( $r_s = -.08, p = .66$ ; Table 11), attitudes toward social adjustment to college ( $r_s = .15, p = .44$ ; Table 11), attitudes toward academic adjustment to college ( $r_s = -.06, p = .77$ ; Table 11), or perceptions of academic fit ( $r_s = -.26, p = .16$ ; Table 11). Higher reported credit hours were significantly associated with lower rates of total student support service use ( $r_s = -.39, p < .05$ ), although no significant relationships were observed among credit hours and the number of services endorsed as wanted or needed ( $r_s = .05, p = .78$ ) or the number of perceived barriers to service use ( $r_s = -.37, p = .41$ ).

**Self-Reported GPA.** As shown in Table 11, self-reported GPA was not significantly associated with attitudes toward NDD disclosure ( $r_s = .15, p = .40$ ), attitudes towards social ( $r_s = .21, p = .27$ ) and academic ( $r_s = .11, p = .57$ ) adjustment to college, or perceptions of academic fit ( $r_s = -.01, p = .95$ ). Self-reported GPA was not significantly associated with the number of UHCL student support services endorsed as used ( $r_s = -.22, p = .22$ ), the number of services endorsed as wanted or needed ( $r_s = .13, p = .47$ ), or the number of barriers to service use endorsed by participants ( $r_s = .29, p = .44$ ).

**First-Generation Student Status.** Endorsement of first-generation student status was not significantly associated with NDD disclosure ( $r_{pb} = -.19, p = .29$ ; Table 11),

attitudes toward social adjustment to college ( $r_{pb} = .23, p = .20$ ; Table 11), or perceptions of academic fit ( $r_{\tau} = -.08, p = .59$ ; Table 11). Higher scores on attitudes toward academic adjustment to college were significantly associated with endorsement of first-generation student status ( $r_{\tau} = .31, p < .05$ ; Table 11). Endorsement of first-generation student status was not significantly associated with the number of student support services used ( $r_{\tau} = .16, p = .31$ ), the number of student support services wanted or needed ( $r_{\tau} = .07, p = .66$ ), or the number of perceived barriers to service use endorsed by participants ( $r_{\tau} = -.20, p = .54$ ).

**Financial Sources of Tuition.** As shown in Table 11, endorsement of parents/family members as a financial source of tuition was significantly associated with lower scores on attitudes toward social adjustment to college ( $r_{pb} = -.42, p < .05$ ), attitudes toward academic adjustment college ( $r_{\tau} = -.37, p < .05$ ), and perceptions of academic fit ( $r_{\tau} = -.40, p < .01$ ). Additionally, endorsement of student loans as a financial source of tuition was significantly associated with higher scores on perceptions of academic fit ( $r_{\tau} = .31, p < .05$ ), however, there were no other significant associations observed among endorsement of specific financial sources and attitudes toward social adjustment to college ( $r_{pb} = .14-.30, p = .09-.44$ ), attitudes toward academic adjustment to college ( $r_{\tau} = .07-.24, p = .12-.63$ ), or perceptions of academic fit ( $r_{\tau} = -.12-.15, p = .32-.44$ ). There were no significant associations observed among endorsement of specific financial sources of tuition and attitudes toward NDD disclosure ( $r_{pb} = -.25-.21, p = .17-.87$ ).

Endorsement of self/job as a financial source of tuition was significantly associated with the number of services used ( $r_{\tau} = .36, p < .05$ ). Endorsement of fellowships/scholarships/grants was also significantly associated with the number of services used ( $r_{\tau} = .34, p < .05$ ), however no other significant associations were observed

among number of services used and endorsement of specific financial sources of tuition ( $r_{\tau} = -.19-.05, p = .21-.74$ ). There were also no significant relationships observed among endorsement of specific financial sources of tuition and the number of services wanted or needed ( $r_{\tau} = -.004-.21, p = .21-.98$ ) or perceived barriers to service use ( $r_{\tau} = -.30-.39, p = .22-1.00$ ).

**Intent to Persist.** As shown in Table 11, participant endorsement of often having thoughts of transferring from UHCL to another postsecondary institution was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.10, p = .57$ ), attitudes toward social adjustment to college ( $r_{pb} = -.30, p = .10$ ), attitudes toward academic adjustment to college ( $r_{\tau} = -.15, p = .33$ ), or perceptions of academic fit ( $r_{\tau} = -.15, p = .33$ ). Participant endorsement of often having thoughts of quitting college was not significantly associated with attitudes toward NDD disclosure ( $r_{pb} = -.10, p = .57$ ), attitudes toward academic adjustment to college ( $r_{\tau} = -.18, p = .25$ ), or perceptions of academic fit ( $r_{\tau} = -.15, p = .33$ ). Participant endorsement of often having thoughts of quitting college was significantly associated with lower scores on attitudes toward social adjustment to college ( $r_{pb} = -.38, p < .05$ ).

Participant endorsement of often having thoughts of transferring from UHCL to another school was not significantly associated with the number of UHCL student support services used ( $r_{\tau} = -.15, p = .34$ ), the number of student support services wanted or needed ( $r_{\tau} = -.17, p = .31$ ), or the number of barriers to service use reported by participants ( $r_{\tau} = .09, p = .77$ ). Participant endorsement of often having thoughts of quitting college was also not significantly associated with the number of UHCL student support services used ( $r_{\tau} = .20, p = .19$ ), the number of student support services wanted or needed ( $r_{\tau} = -.13, p = .44$ ), or the number of barriers to service use reported by participants ( $r_{\tau} = .12, p = .71$ ).

## CHAPTER IV:

### DISCUSSION

Service utilization was not significantly associated with attitudes toward NDD disclosure, adjustment to college, or perceptions of academic fit, but there were a number of perceived barriers to service use associated with attitudes toward adjustment to college and academic fit, as well as personal characteristics. Additionally, more positive perceptions of academic fit were related to more positive attitudes toward NDD disclosure, social adjustment, and academic adjustment, and there was a significant relationship observed among social adjustment and academic adjustment.

#### **Service Use, Unmet Service Need, and Barriers to Service Use**

Students with NDD in the current sample reported relatively high rates of universal student support service use, but there were low rates of exclusive student support service use. There was also a meaningful proportion of students who reported a desire or need to access UHCL student support services that had not been accessed yet, and, of these services, exclusive student support services were the most frequently endorsed. While universal student support service use is similar to rates observed in previous research (Newman et al., 2021), students who want or need to access predominantly exclusive support services are not receiving these services, and these students are experiencing specific barriers when attempting to access exclusive support services. Many of the reported barriers were related to student-service provider (i.e., faculty/staff) interactions and communication (e.g., needs are misinterpreted by staff, staff do not take communications seriously), which is consistent with barriers to service use reported in previous research (Raymaker et al., 2017). Given the negative associations among adjustment to college and experiencing multiple types of barriers to student support service use, the findings support previous research suggesting that

institutions should develop specialized programs that promote and foster academic and social adjustment to college for students with NDD. Instructional- and behavioral-based skills trainings and interventions can address some needs for students with NDD, but the literature also suggests that students with NDD may benefit from institutionally-facilitated opportunities for organic social engagement with their campus community through networking and connection with other students (Burgstahler & Russon-Gleicher, 2015; Francis et al., 2018). Postsecondary institutions that address the social support needs of students with NDD can address barriers related to social interactions and communication, which could help students with NDD to access needed services.

### **Adjustment to College and Academic Fit**

Attitudes toward social adjustment to college were associated with perceptions of academic fit and attitudes toward academic adjustment to college, which further supports the importance of providing students with NDD with opportunities to develop social skills. The more negative attitudes about social adjustment to college expressed by participants could be explained by the social difficulties characteristic of NDDs (APA, 2013), but it could also be related to specific barriers related to social interactions and communication with faculty and staff (Barnard-Brak et al., 2010; Francis et al., 2018; Mamboleo et al., 2020; Raymaker et al., 2017). Restrictions due to the COVID-19 pandemic may also have influenced campus-based service use, adjustment to college, and perceptions of academic fit among the current sample. Addressing social adjustment to college among students with NDD may be particularly important for retention, as more negative attitudes toward social adjustment to college were associated with a greater likelihood of often thinking about quitting college. In addition to the social difficulties experienced by those with NDD, there is evidence that individuals with NDD may experience social stigma related to NDD and/or comorbidities across the life-course

(Lebowitz et al., 2016). These social stigmas may manifest in postsecondary contexts, which creates additional challenges for students as they are managing increased demands on executive functioning and self-regulation skills (DuPaul et al., 2021; Gray et al., 2016). Providing students with NDD with support services that address social adjustment to college may help students to persist in postsecondary contexts, especially when students also have access to academic support services.

### **NDD Disclosure**

In contrast to previous research, attitude toward NDD disclosure was not associated with adjustment to college in the current sample. It is possible that the current sample primarily included students with positive attitudes about NDD disclosure, as participants were required to disclose NDD status to participate. Prior research suggests that previous disclosure experiences may influence a student's disclosure decision-making (Mamboleo et al., 2020). Specifically, the literature indicates that student perceptions of disclosure experiences, and anticipated staff and faculty reactions, likely influence student support service seeking decision-making (De Cesaeri, 2015; Hartman-Hall & Haaga, 2002; Hong, 2015; Mamboleo et al., 2018; Mamboleo et al., 2020). Students who have had more negative experiences with staff and faculty during disclosure interactions may be more likely to avoid situations that requires NDD disclosure (Baker et al., 2012; Mamboleo et al., 2020). As such, postsecondary institutions must ensure that staff and faculty receive adequate training about working with students with NDD to ensure that interactions among students with NDD and faculty/staff are positive. A campus climate that fosters destigmatizing attitudes toward NDD may dismantle barriers created by prior negative experiences among students with NDD and other comorbidities, and institutional efforts to reduce negative attitudes toward

NDD diagnosis disclosure may influence feelings of social adjustment and academic fit, resulting in greater postsecondary persistence.

### **Limitations and Directions for Future Research**

The results of the current study must be interpreted in the context of several limitations. First, the sample was relatively small and consisted primarily of students with ADHD, which may not be representative of many UHCL students with NDD. Further, participants were recruited from the UHCL Psychology SONA Research Participant Pool System, which primarily consists of students enrolled in programs in the College of Human Sciences and Humanities. In addition, some of the analyses that had to be used because of the small sample size (i.e., Fisher's exact test) provided limited information, and future research with a larger sample would allow for the use of analyses that could indicate the direction and strength of associations. Some participants also provided incomplete responses to some items, and this incomplete data further limited the analyses for the study. Because the study was cross-sectional, longitudinal patterns and associations could not be examined, and future research using a longitudinal design could help to further identify student services that are beneficial or needed for students with NDD. Finally, several of the measures for the current study adapted items from previous studies or used items created for the current study, and further research with these items is needed to validate their use in research.

### **Conclusion**

The current study sought to explore campus-based student support service utilization patterns, as well as potential associations among variables related to service utilization and persistence among postsecondary students with NDD. The findings indicate that students with NDD in the current sample were more likely to utilize universal, rather than exclusive, student support services. Additionally, the findings

indicate that perceived barriers to service access were associated with more negative attitudes toward adjustment to college and perceptions of academic fit. Postsecondary institutions should identify and address barriers to student support service use, as well as consider implementation of programs that address the needs of students with NDD and provide members of the campus community with resources to better support students with NDD.

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