

The Struggle You Can't See

Experiences of Neurodivergent and Invisibly
Disabled Students in Higher Education

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Ash Lierman, *The Struggle You Can't See: Experiences of Neurodivergent and Invisibly Disabled Students in Higher Education*. Cambridge, UK: Open Book Publishers, 2024, <https://doi.org/10.11647/OBP.0420>

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Any digital material and resources associated with this volume will be available at <https://doi.org/10.11647/OBP.0420#resources>

ISBN Paperback: 978-1-80511-374-4

ISBN Hardback: 978-1-80511-375-1

ISBN Digital (PDF): 978-1-80511-376-8

ISBN Digital eBook (EPUB): 978-1-80511-377-5

ISBN HTML: 978-1-80511-378-2

DOI: 10.11647/OBP.0420

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Cover design: Jeevanjot Kaur Nagpal

5. Co-Curricular Campus Life

As important as the academic curriculum is, it is not the only important aspect of the higher education experience. Life on campus outside the classroom also has a significant impact on students' happiness, well-being, and academic success. A college or university is not just a place of learning, but also one where students socialize with each other, use spaces and facilities, and often reside. Often the academic and non-academic aspects of college life are not easily separated from one another, as well: examples include students' social relationships with peers in their courses, or their independent study arrangements outside of the classroom. Factors that affect neurodivergent and invisibly disabled students outside of class, positively or negatively, can have significant impacts on their academic lives, and the other way around.

Keeping in mind those complex interrelationships, this chapter will shift focus to common factors in student narratives that have their primary effects outside of the curriculum and classroom. These center around four main themes:

1. Social life and relationships with student peers, including social challenges;
2. Mental health challenges and needs;
3. Barriers and affordances in the physical environments of campus; and
4. Challenges and needs around daily living activities when residing on campus.

Many of the experiences discussed here focus on the challenges that invisibly disabled and neurodivergent students face in these areas. As in the previous chapter, however, in many cases they also point to affordances, actual and potential, that could improve students'

experiences in higher education and support their academic success. The seeds of these ideas will be expanded upon in greater detail, with examples of promising current practices, in the next section.

Social Life and Peer Relationships

Peer Relationships and Attitudes

Relationships with peers are tremendously important to students in college, and because of the nature of the university environment, they can affect almost every part of students' lives there: classes, socializing, athletics, living and dining arrangements, and more. Furthermore, positive relationships with peers are one of the most frequently cited forms of support upon which students rely, not only socially but for academic success and persistence as well.¹ Student narratives also report that socializing and maintaining a healthy personal life helps to support their well-being and mental health.² As is discussed elsewhere, this is an area of concern for students across all categories of difference, not only those specifically with psychiatric disabilities, so this type of support is particularly valuable. Some students, autistic students most frequently, report especially wanting and appreciating relationships with other disabled and neurodivergent peers.³ Students in Cullen (2013) also describe establishing supportive social relationships with others online through social networks. In addition to their informal support networks of friends and classmates, a number of students also value more formal support from designated or volunteered academic support peers,⁴ and peer support groups.⁵

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- 1 Demery et al., 2012; Melara, 2012; Young, 2012; Cullen, 2013; Houman & Stapley, 2013; Rutherford, 2013; Schaffer, 2013; Schindler & Kietz, 2013; Pino & Mortari, 2014; Ennals et al., 2015; Kreider et al., 2015; Strnadova et al., 2015; Childers & Hux, 2016; Lux, 2016; Sokal & Desjardins, 2016; Casement et al., 2017; LeGARY, 2017; Smith, 2017; Berry, 2018; Lightfoot et al., 2018; Accardo et al., 2019b; Davis, 2019; Kutscher & Tuckwiller, 2019; Winberg et al., 2019; Anderson et al., 2020; Giroux et al., 2020; Cox et al., 2021; Pfeifer et al., 2021; Turosak & Siwierka, 2021.
 - 2 Zafran et al., 2011; LeGARY, 2017; Smith, 2017; Turosak & Siwierka, 2021.
 - 3 Cullen, 2013; Schwenk et al., 2014; Accardo et al., 2019b; Anderson et al., 2020.
 - 4 Randolph, 2012; Strnadova et al., 2015; Ravert et al., 2017; Kutscher & Tuckwiller, 2019.
 - 5 Erten, 2011; Cullen, 2013; Houman & Stapley, 2013; Anderson et al., 2017; Sarrett, 2017; Serry et al., 2018; Accardo et al., 2019b; Hoffman et al., 2019; Anderson et al., 2020; Giroux et al., 2020; Grabsch et al., 2021.

As with faculty, however, the support that friends and other peers are able to provide in positive relationships makes negative experiences with peers all the more painful. Not only does this mean an experience of hurtful social rejection, but also that students miss out on potential benefits to their lives in college. Students' narratives in some studies also suggest that negative experiences of ableism by peers can have other damaging effects, including discouraging students from seeking more formal support (Winberg et al., 2019; Lett et al., 2020; Pfeifer et al., 2021). For example, one student described being discouraged by an experience with a classmate:

She said [students who use accommodations] are not on the same playing field as everyone else [because they use accommodations]. I said, "No, I actually have this diagnosed thing. Here's a report on it." And she was like, "Well, yeah, a lot of people get diagnosed with ADHD." (Pfeifer et al., 2021, p. 9)

It should come as no surprise, therefore, that students across many studies report being reluctant or afraid to disclose a disability or neurodivergence to peers, due to concern about stigmatizing responses or other misperceptions and negative reactions.⁶ In some other cases, students may prefer to be open with peers from the beginning, to get the process of disclosure out of the way and provide clarity (Knott & Taylor, 2014; Lizotte, 2018). It could be argued, however, that this is also a way of managing anxieties around disclosure.

Neither are those anxieties unfounded. Many student narratives describe lived experiences of stigma and negative attitudes from peers on disclosing a neurodivergence or invisible disability.⁷ In Doikou-Avliidou (2015), dyslexic students in Greek universities describe experiencing so much social stigma that they became isolated from their peers. In other cases, even among friends and otherwise understanding peers, a number of students describe experiences of peers expressing skepticism about their needs, such as accusations or implications of 'faking it' (Young, 2012; Gottschall & Young, 2017). Others describe peers expressing

6 Zafran et al., 2011; Demery et al., 2012; Simmeborn Fleischer, 2012; Schwenk et al., 2014; Ennals et al., 2015; Van Hees et al., 2015; Giroux et al., 2016; Casement et al., 2017; Hadley, 2017; Lightfoot et al., 2018; Giroux et al., 2020; Miller et al., 2020.

7 Heiney, 2011; Doikou-Avliidou, 2015; Gelbar et al., 2015; Pirttimaa, 2015; Timmerman & Mulvihill, 2015; Gottschall & Young, 2017; Lightfoot et al., 2018; VanderLind, 2018; Kain et al., 2019.

resentment of their accommodations, and in particular of ADHD medication, as supposedly unfair advantages.⁸ Avoiding disclosure, however, is not always a preferable solution, as some students report that their efforts to hide their disability or neurodivergence led to feeling poorly understood and isolated.⁹ Masking symptoms of a condition or neurodivergent behaviors can also be a source of stress in itself, such as for students with Ehlers-Danlos syndrome in Giroux et al. (2016). Being open with peers can come at a social cost for students, but so, clearly, can secrecy. Both choices can compromise the informal support networks that so many students report are beneficial.

Social Challenges

To make matters worse, other social challenges are also common for invisibly disabled and neurodivergent students. This is true across multiple categories, but they tend to be especially commonly reported by autistic students. Across an overwhelming number of studies, autistic students describe feelings of difference from others in college, and a sense of both desire and inability to ‘fit in’.¹⁰ In some cases, these difficulties have been exacerbated by their peers’ misunderstandings, ignorance, or stigmatizing of autism—or the fear that they will do so if the student’s identity becomes known.¹¹ Several students across studies report having been bullied, either prior to or in college,¹² although others report higher education has been a much safer environment from bullying than secondary education was (Anderson et al., 2018).

Indeed, the biggest challenges for autistic students seem to be in finding common ground with their undergraduate peers, and some

8 Young, 2012; Mullins & Preyde, 2013; Kreider et al., 2015; Gottschall & Young, 2017; Pfeifer et al., 2021.

9 Erten, 2011; Ennals et al., 2015; Casement et al., 2017; Miller et al., 2020.

10 Madriaga, 2010; Simmeborn Fleischer, 2012; Simmeborn Fleischer, 2013; Rutherford, 2013; Drake, 2014; Gelbar et al., 2014; Knott & Taylor, 2014; Strnadova et al., 2015; Van Hees et al., 2015; Anderson et al., 2017; Casement et al., 2017; LeGary, 2017; Vincent et al., 2017; Bolourian et al., 2018; Jansen et al., 2018; Ward & Webster, 2018; Harn et al., 2019; Anderson et al., 2020; Cage & Howes, 2020; Clouder et al., 2020.

11 Gelbar et al., 2014; Casement et al., 2017; Vincent et al., 2017; Winberg et al., 2019.

12 Simmeborn Fleischer, 2012; Cullen, 2013; Winberg et al., 2019; Krumpelman & Hord, 2021.

report finding it easier to form connections with faculty (Accardo et al., 2019a). Not only do students struggle with establishing social connections in general, furthermore, but some report specific difficulties with forming deep friendships (Cullen, 2013) and romantic relationships (Colclough, 2018). As a result of all of these factors, many autistic students describe feeling lonely and isolated, but pulled between wanting social connections and the relative safety and ease of remaining alone.¹³ Not only do autistic students express personal desire to connect, as well, but they also explicitly recognize in some interviews that they are lacking social support networks that would be beneficial in managing stress and academic challenges (White et al., 2016; Ward & Webster, 2018). Even so, their experiences of being made to feel different and ostracized can make reaching out to others seem not worth the risk. As a student in Vincent et al. (2017) poignantly described, “I want to socialise and have friends like any normal people, but every time the invitation comes, I almost always go into default mode and say ‘no’” (p. 309).

Another source of significant academic and social challenges for autistic students, as well, is lack of acceptance in university of idiosyncratic behavior and movements often characteristic of autistic people, such as stimming (Sarrett, 2017; Jansen et al., 2018). Stigma against these characteristics can result not only in exacerbated social difficulties, but in students’ being judged negatively in academic settings, and most often pressure falls on autistic students to disguise themselves and conform to neurotypical expectations, rather than on peers and faculty to accept them as they are. For example, some students describe experiences where they sought out supports that would relieve their academic stress and challenges, but found that university staff instead prioritized ‘fixing’ their social skills to align more with neurotypical behavior (Cage & Howes, 2020). As discussed, positive disability identity and self-acceptance are of great importance to student success and well-being, but students find it difficult to accept themselves when they are asked

13 Madriaga, 2010; Simmeborn Fleischer, 2012; Tarallo, 2012; Cullen, 2013; Gelbar et al., 2014; Gelbar et al., 2015; Sayman, 2015; Van Hees et al., 2015; Toor et al., 2016; Casement et al., 2017; Vincent et al., 2017; Anderson et al., 2018; Bolourian et al., 2018; Ward & Webster, 2018; Gurbuz et al., 2019; Harn et al., 2019; Anderson et al., 2020; Cage & Howes, 2020; Krumpelman & Hord, 2021.

to repress their natural behaviors in order to facilitate social interactions (Cox et al., 2017). Masking autistic behaviors is common for students, but it is also intensely exhausting and stressful (Anderson et al., 2020; Cox et al., 2021). All of the various pressures to mimic neurotypical behavior also compound the significant stress that autistic students experience, from academics and from the unfamiliar and unpredictable environmental factors that they have particular difficulty managing, and stress can compound these students' existing behavioral challenges and difficulties with managing emotions (Brazier, 2013; White et al., 2016). In combination with other pressures, the pressure to suppress minor and benign behaviors can actually contribute to outbursts and meltdowns that are much more disruptive—for the autistic student at least as much as for those around them. Fostering an aware, compassionate, accepting environment would be the more beneficial priority, rather than pushing autistic students to change for the comfort of others.

Social challenges have a large impact on students with psychiatric disabilities as well as autistic students, albeit usually for different reasons. As previously mentioned, because of the significant stigma around psychiatric disabilities, these students frequently describe experiencing feelings of shame and guilt about their conditions, and a perceived need to keep them secret.¹⁴ These concerns impact students' reaching out for support services, of course, but may also take such personal forms as students internalizing stigma and feeling 'broken' (VanderLind, 2018). As a result of these and other factors, students with psychiatric disabilities often report feeling isolated and in need of more social support;¹⁵ having low self-esteem related to shame about their symptoms and academic challenges (Hubbard, 2011; Sokal & Desjardins, 2016); and avoiding social contact, whether out of distrust, fear of discovery, or vulnerability if others learn more about them.¹⁶ Isolation is also reported by student veterans with trauma disorders, as, due to their military service, they are often at a different stage of life and maturity than traditional college students (Ness et al., 2014). For other students, substance abuse issues and the need to avoid triggering situations can

14 Hubbard, 2011; Demery et al., 2012; Stein, 2013; Sokal & Desjardins, 2016.

15 Hubbard, 2011; Demery et al., 2012; Sokal & Desjardins, 2016; Winberg et al., 2019; Miller et al., 2020.

16 Demery et al., 2012; Markoulakis & Kirsh, 2013; Ennals et al., 2015; Sokal & Desjardins, 2016; VanderLind, 2018; Winberg et al., 2019.

further limit socializing options on campus, where alcohol and other substances are likely to be prevalent (Demery et al., 2012). All of these anecdotal experiences are corroborated by the broader data, which show that students with psychiatric disabilities are less likely than others to participate in social activities and events, and to individually meet with faculty when not required (Koch et al., 2014). As alluded to earlier, this tendency is of particular concern for this population, as students who have experienced a mental health crisis specifically identify social connections and personal life balance as important factors in restoring and maintaining mental health (Zafran et al., 2011).

In general, autistic and psychiatrically disabled students seem to report the most social challenges, and the significant overlap between these two groups may concentrate these factors. Social challenges are also present, however, for students in other categories. Some students with ADHD, for example, describe difficulties with interpersonal relationships, including trouble with emotional outbursts and struggling to form deep friendships (Kwon et al., 2018). Social issues are also not uncommon for students with TBI: several narratives describe factors that affect students socially, such as finding that they are not able to participate in the same activities and hobbies that had previously been a foundation for social relationships, or that others or they themselves feel that they are 'not the same person' anymore (Bush et al., 2011; Gottschall & Young, 2017; Davis, 2019). A student's sense of identity may be in transition after a brain injury, an emotional journey that can be difficult and isolating, and can make connecting with others more challenging (Gottschall & Young, 2017; Davis, 2019). A number of students with TBI also describe struggles with mood issues, including more negative and changeable emotions than average (Ness et al., 2014; Childers & Hux, 2016), as well as frustration and anger with their cognitive changes (Owens, 2020), which may impact their relationships with others. Some also report feeling that it takes more energy for them to be active socially than it has in the past (Childers & Hux, 2016), and others find it helpful to have social connections facilitated by structures like dedicated communities and programs (Leopold et al., 2019). This desire echoes similar needs for facilitated social interaction expressed by autistic students, as well.

Although social challenges appear to be less acute for chronically ill students, some do find that illness can cause them to feel different and socially isolated among other college students (Schwenk et al., 2014),

and that having to manage the challenges of their health can be harmful to relationships (Barber & Williams, 2021). Students in some studies reported masking and hiding their conditions (Giroux et al., 2016; Barber & Williams, 2021), which can lead to feeling further isolated and less understood, as well as being a source of day-to-day emotional stress for the student (Giroux et al., 2016). Even when a student's condition is known, for that matter, they may experience negative, ableist, and unsympathetic responses from both faculty and peers (Hoffman et al., 2019; Giroux et al., 2020), and the unpredictable cycling of symptoms and needs that chronically ill students tend to experience makes it difficult to make and commit to social plans (Giroux et al., 2020). Some activities that might otherwise support students' forming social connections, like athletics, are also frequently out of reach for chronically ill students, when insufficient support is available for them to be confident in participating (Schwenk et al., 2014). It is significantly more difficult to form friendships when the spaces and programs where students most often socialize are not accessible to all.

Mental Health Challenges

Perhaps relatedly, students across many of the categories discussed here describe struggles with mental health concerns, which appear to be frequently linked to all relevant conditions, and which compound their challenges. Anxiety and depression are the most commonly experienced, and apart from students with psychiatric disabilities, they have been reported in larger numbers of autistic students than other categories.¹⁷ Anxiety, however, is also fairly common among students with ADHD¹⁸ and dyslexic students (Cameron, 2016; Lambert & Dryer, 2018; Clouder et al., 2020). Depression is also sometimes reported by students with ADHD (Bolourian et al., 2018; Clouder et al., 2020), dyslexic students (Clouder et al., 2020), and chronically ill students (Giroux et al., 2020).

17 Gelbar et al., 2014; Knott & Taylor, 2014; Gelbar et al., 2015; Van Hees et al., 2015; Cai & Richdale, 2016; Toor et al., 2016; White et al., 2016; Anderson et al., 2017; Anderson et al., 2018; Bolourian et al., 2018; Jansen et al., 2018; Ward & Webster, 2018; Accardo et al., 2019b; Gurbuz et al., 2019; Anderson et al., 2020; Clouder et al., 2020; Krumpelman & Hord, 2021.

18 Flowers, 2012; Melara, 2012; Bolourian et al., 2018; Kwon et al., 2018; Clouder et al., 2020.

Concurrent obsessive-compulsive disorder is less common, but also noted among students with ADHD (Melara, 2012) and autistic students (Cai & Richdale, 2016), while substance abuse issues have been noted by some chronically ill students (Barber & Williams, 2021). Anderson and Butt (2017) also note that in some cases, new or worsened mental health symptoms might be triggered by the transition to university.

Furthermore, even students without specific conditions also experience struggles related to mental health. Stress and overwhelm are frequently noted by students with ADHD, autistic students, chronically ill students, and dyslexic students.¹⁹ Autistic students also appear to experience high stress and a low tolerance for stress, particularly when it comes to academic stressors.²⁰ Psychiatrically disabled students in Demery et al. (2012) note a particular need for stress management tools and structures, as well. Elevated rates of sleep disturbances and associated fatigue, which are intimately intertwined with mental health struggles, have also been noted by students across every category examined.²¹ Where mental health challenges exist, furthermore, students report that they may be exacerbated by stigma and ableist microaggressions (Lett et al., 2020), as well as by struggles with disability needs and accommodations (Cai & Richdale, 2016).

Student: I've had a screaming fit in the middle of the corridor at the admin building. My particular lecturer walked away from me when I asked for help and I said, don't you walk away. And I really lost it (Cai & Richdale, 2016, p. 36).

On a related note, chronically ill students describe a number of emotional impacts from their illnesses, in addition to the physical effects, and often caused by them. Some describe living with an illness as an 'emotional roller coaster' (Giroux et al., 2020), and having to manage not only symptoms but feelings of stress and frustration with how symptoms impact them (Giroux et al., 2016; Giroux et al., 2020), as well as feelings of lack of control over their lives (Schwenk et al.,

19 Melara, 2012; Tarallo, 2012; Cullen, 2013; Hughes et al., 2016; Lambert & Dryer, 2018; Clouder et al., 2020.

20 Simmeborn Fleischer, 2013; White et al., 2016; LeGary, 2017; Anderson et al., 2018; Berry, 2018; Jansen et al., 2018; Ward & Webster, 2018; Gurbuz et al., 2019; Anderson et al., 2020; Cage & Howes, 2020.

21 Schaffer, 2013; Simmeborn Fleischer, 2013; Ness et al., 2014; Childers & Hux, 2016; Anderson et al., 2018; Lambert & Dryer, 2018; Hoffman et al., 2019.

2014). On the other hand, an unexpected positive aspect some students have noted of having to manage their health carefully is that it can increase their awareness and caution against common reckless college behaviors, such as excessive drinking (Schwenk et al., 2014). Especially given these students' generally elevated stress levels, however, some note a consequent need for safer, more inclusive campus-provided opportunities for recreation and relaxation (Ravert et al., 2017).

Even beyond the obvious concerns about students' quality of life, these increased mental health challenges have other demonstrated effects as well. Mental health notably impacts academic performance (Goodman, 2017), and this effect is likely to be compounded by the other challenges facing invisibly disabled and neurodivergent students. For example, autistic students in Anderson et al. (2020) cite poor mental health as a major factor in higher education non-completion. As noted by participants in Turosak and Siwierka (2021), there is also reason to suspect that mental health issues on college campuses are more prevalent than is believed—which is concerning given how widespread these challenges are already believed to be.

For psychiatrically disabled students in particular, of course, there are other specific concerns around mental health. Perhaps the greatest of these is what Miller et al. (2020) describe as 'stacking stressors': the academic, mental health, and other challenges (such as, in the study by Miller et al., foster care experiences) that students encounter not only combine but compound each other in their effects on students' stress levels.²² For example, not only are students' mental health symptoms problematic in themselves, but they have significant detrimental effects on their academic work, such as difficulties with concentration and motivation, and this increases academic stress as well.²³ Furthermore, even symptoms that do not directly affect students academically may do so indirectly, such as by impacting self-esteem, stress management, and self-care.²⁴ Experiences related to other illnesses and marginalized identities can also be compounding factors in students' stress levels, as well as triggers of trauma (Orem & Simpkins, 2015; Goodman, 2017; Conley et al., 2019).

22 Hubbard, 2011; Markoulakis & Kirsh, 2013; Ennals et al., 2015; Miller et al., 2020.

23 Markoulakis & Kirsh, 2013; Schindler & Kietz, 2013; Ennals et al., 2015; Kain et al., 2019; Jones, 2020; Turosak & Siwierka, 2021.

24 Markoulakis & Kirsh, 2013; Schindler & Kietz, 2013; Kent, 2015; Turosak & Siwierka, 2021.

These are not challenges that are unique to students with psychiatric disabilities, of course, but there is evidence that the higher education environment is more disabling for them than for others in relation to these issues (Markoulakis & Kirsh, 2013; McEwan & Downie, 2013). Students with psychiatric disabilities are less likely to graduate college even than students with other types of disabilities, and not because of poorer academic skills (Markoulakis & Kirsh, 2013; McEwan & Downie, 2013), as studies have indicated that their average grade performance is on par with the general population (Schindler & Kietz, 2013; Ness et al., 2014). Rather, these students are simply more likely to be at a significant disadvantage, which they may not fully understand or even recognize. The narratives of students with psychiatric disabilities often reflect a tendency to internalize their conditions as personal failings, to be overcome individually and secretly, rather than impairments others do not have to bear and that merit support and understanding. This tends to lead to significant negative impacts on self-esteem and feelings of shame and alienation.²⁵ Exacerbating these factors is the fact that psychiatrically disabled students may also experience cognitive distortions that impact their capacity for self-understanding, making it more difficult to conceptualize and quantify their experience, and making the aforementioned benefits of metacognition more difficult for them to access (Zafran et al., 2011; Jones, 2020). Students may not be able to easily recognize the impact their symptoms have on their academic work (Ness et al., 2014), and may be more inclined to believe and internalize incidences where others minimize their illness, due to lack of trust in their own perceptions (Turosak & Siwierka, 2021). As a result, students are less likely to seek the supports or take the precautions that they need to protect their well-being, and more likely to try to push through without acknowledging their impairments instead, which in many cases leads to a recurring pattern of decline, crisis, despair, and recovery (Ennals et al., 2015). As one might expect, if a student experiences an acute break or other mental health crisis in the course of their education, it creates a major disruption in every aspect of their lives, not to mention that these crises tend to be preceded by academic decline and failures that create additional stress for students to handle

25 Hubbard, 2011; Markoulakis & Kirsh, 2013; Sokal & Desjardins, 2016; VanderLind, 2018; Miller et al., 2020.

during their recovery period (Zafran et al., 2011). In this area as in many others, prevention would be far preferable to cure.

Campus Environments

Navigating the physical environment of campus may not present as many challenges for these categories of students as it does for those with sensory or mobility impairments, but it does present some. Specific groups such as autistic students or chronically ill students, in particular, commonly report unique needs that extend to their physical surroundings. This is especially true on a college or university campus, where many students not only attend classes but also study independently, socialize, eat meals, and reside in a shared living space. As an environment, college is one that students may occupy for more concentrated time than any other single place in their lives, and if it is a hostile environment for a student with unique needs, then it can be inescapably so.

General Concerns

There are a few concerns around spaces that apply generally across campus, rather than being specific to any one type of space. One is the need for access to transportation, both to and within campus, and issues with the distance, size, and navigability of campus itself. Autistic students in Anderson et al. (2020), for example, identify transportation help as one of their most desirable supports, with the implication being that transportation is one of many cumulative stressors around logistics and self-management that are particularly acute for these students, and any one of them is helpful to alleviate. Students in many categories may also have significantly greater need for medical care and supplies to be accessible on campus, such as prescription medications, but this is particularly true of chronically ill students (Ravert et al., 2017). Availability and privacy of bathroom facilities in all areas of campus can also be a significant issue across multiple types of conditions, especially chronic illness, and especially for illnesses that involve bowel dysfunction, which is one of the more common types of chronic illness that affects this age group (Schwenk et al., 2014). Any challenges with

ready access to sufficiently private bathrooms may also be compounded for transgender and gender-nonconforming students, which is a population that has been found to notably overlap with neurodivergent students. Depending on the campus and its social climate, finding a public restroom they can use comfortably and without fear for their safety may already be a challenge for these students, and a related impairment can only make this more difficult.

Additional considerations around spaces are especially important for autistic students. Because of sensory sensitivities that are common for these students, campus environments with large amounts of noise or other sensory input can present barriers to their use of the space. If these factors are not considered and carefully managed, campus events, spaces, and even classrooms can be prohibitively inaccessible to autistic students.²⁶ In fact, some former students in Anderson et al. (2020) cite these types of issue as a significant factor in their degree non-completion. Carving out dedicated sensory-friendly spaces in academic buildings is of value to autistic students (Sarrett, 2017; Anderson et al., 2020), as well as in some cases to students with TBI who may have developed sensitivity to light and sound (Ness et al., 2014). Nonetheless, if noise and sensory input levels remain extremely high in other parts of campus that are necessary for students to navigate on a regular basis, many autistic students will still be at a severe disadvantage. At the same time, carefully designed campus environments may be able to help mitigate another challenge autistic students often report: difficulty with adaptation to the university environment, and with lack of consistency and structure in the college experience.²⁷ Carefully structuring the class, living, and social environments to provide consistency and stability, communicate expectations, and relieve sensory stress could be helpful in managing a number of these struggles.

26 Madriaga, 2010; Van Hees et al., 2015; Cai & Richdale, 2016; Anderson et al., 2017; Vincent et al., 2017; Anderson et al., 2018; Bolourian et al., 2018; Colclough, 2018; Jansen et al., 2018; Lizotte, 2018; Gurbuz et al., 2019; Winberg et al., 2019; Anderson et al., 2020; Cage & Howes, 2020.

27 Brazier, 2013; Van Hees et al., 2015; Cai & Richdale, 2016; Vincent et al., 2017; Bolourian et al., 2018; Jansen et al., 2018; Anderson et al., 2020; Cage & Howes, 2020; Grabsch et al., 2021; Krumpelman & Hord, 2021.

Living Environments

Additional concerns arise from the fact that many students do not only attend classes and study on campus, but live there as well. One issue that particularly impacts many autistic students is the incompatibility of on-campus living environments, particularly dormitory environments, with their individual needs. Many autistic students across studies describe struggling to share living space with others, whether for reasons of social discomfort with roommates and being in close proximity to so many other students,²⁸ sensitivity to overwhelming sensory input like noise and smells,²⁹ or both. Students in Accardo et al. (2019a) specifically identify accommodations in housing as a necessary support for these reasons, and those in Grabsch et al. (2021) also point to a need for outreach about accommodations that are available, to increase students' awareness of them.

For chronically ill students, dorm life and other on-campus living situations also often lack needed affordances for managing their conditions and treatments. For example, dormitories generally lack adequate access to refrigeration for important medications that require it (Schwenk et al., 2014; Hoffman et al., 2019). As previously mentioned, the issue of bathroom access and privacy discussed in Schwenk et al. (2014) can also be particularly acute in dormitory living environments, depending on the design and availability of the facilities. In addition, students with inflammatory bowel disease also frequently need careful dietary management for their conditions, which can be prohibitively difficult to maintain when using campus dining hall facilities (Schwenk et al., 2014).

Third Places

Beyond their classrooms and living environments, students also report environmental challenges in social and independent study spaces around campus. Environments like academic libraries, student centers, and computer labs can be just as important to students' success and well-being in college as the places where they attend classes and reside, and

28 Drake, 2014; Gelbar et al, 2014; Toor et al., 2016; Bolourian et al., 2018; Grabsch et al., 2021.

29 Knott & Taylor, 2014; Toor et al., 2016; Casement et al., 2017; Bolourian et al., 2018; Grabsch et al., 2021.

just as fraught with complications for those who are invisibly disabled and neurodivergent. This is of greatest concern for higher education staff, however, around spaces where students study and complete academic work.

Overall, the most common needs students describe for these spaces involve control of their environment, if only in individual study areas within a larger space. In particular, students need control of the level of privacy, noise, and ambient distraction where they are working. Being able to minimize distractions in their study environment is often mentioned as a significant need for students with TBI (Bush et al., 2011; Gottschall & Young, 2017; Owens, 2020), and, as one might expect, for students with ADHD (Hubbard, 2011; Schaffer, 2013). Noise control and the availability of quiet spaces is also of value for autistic students, as part of the value of sensory-friendly spaces in general (Anderson et al., 2020). Paradoxically, however, autistic students in other studies have also found shared spaces that are traditionally 'quiet spaces' on campus, such as college libraries, can be *too* quiet for them to be able to focus and study comfortably. A communal space like a library that is designated for quiet study, or even a shared quiet study room within a building, can make autistic students feel hypervisible and anxious about conforming to social expectations, especially with regard to autistic behaviors and movement like stimming (Madriaga, 2010; Anderson, 2018; Pionke et al., 2019). Access to secluded, private study spaces with control of noise and other sensory input, to reduce both distractions and self-conscious discomfort, is therefore a very helpful support for autistic students, even within otherwise quiet shared environments (Madriaga, 2010; Anderson, 2018; Pionke et al., 2019).

Pionke's (2017) study of university library accessibility yielded several additional insights into student needs in academic libraries, which may also have implications for other campus buildings. Students in the study note the importance of building cleanliness, which is a potential consideration for students in several of the categories here, as well as attention to multiple types of accessibility in the building's affordances and safety features. The importance of training and empathy for those who staff the building, with regard to the potential diverse needs of users, was also stressed. Helpful and thorough signage has been reported as another critical factor for students with multiple types of impairment (Everhart and Escobar, 2018). Finally, to ensure all of these factors and more are adequately addressed, Pionke (2017)

indicates the importance of feedback mechanisms on spaces by which students and other users can convey any concerns.

When neurodivergent and invisibly disabled students struggle with the environment of study spaces, intersectional identities can also impact and exacerbate their challenges. For example, in Cameron and Greenland (2021), female students of color with dyslexia describe multiple layers of challenge in completing their work in university spaces, as opposed to their own personal residential spaces. Not only did university spaces lack tools and affordances that they needed to manage their study needs, and would have access to at home, but they were also adversely affected by trying to work in a STEM environment that was white- and male-dominated in terms of demographic makeup, expectations, and configuration. As the authors describe it:

Riya's [one of the students interviewed] experience in university spaces appeared to be shaped by a number of different intersecting characteristics; the departmental learning spaces were populated by mostly white, mostly male, and mostly highly socio-economically privileged students; the course required high productivity, adherence to tight deadlines, and it nurtured peer-competition; being 'worldly', confident, and well-off appeared to be necessary for success (p. 76).

Riya and other disabled, female STEM students of color, they argue, may be made uncomfortable to the point of avoiding campus spaces where they are very visibly different and struggle to meet common social norms and expectations, and this is to their detriment. Particularly in STEM disciplines, there is a need for students to be able to utilize spaces like labs and computing spaces for specialized software, and not all work can feasibly be completed in the student's home. Facing intersectional barriers like these in university spaces is to the detriment of students' academic success and personal well-being.

Furthermore, improvements to existing campus spaces are not the only need that has been identified. Across a number of studies and categories, students also express a need for specifically neurodiversity- and disability-oriented social and study spaces on campus. Students mention that it would be helpful to have a dedicated workspace for their needs with a variety of different affordances, including a distraction-free environment (Hubbard, 2011), sensory-friendly facilities and practices by staff (Sarrett, 2017; Anderson et al., 2020), other supports for the environmental needs of neurodivergent and disabled students

(Scheef, 2019; Winberg et al., 2019), and associated availability of childcare while using these spaces (Hubbard, 2011). The most commonly mentioned factor students want from these types of spaces, however, is the opportunity to form communities with other disabled and neurodivergent students, including both informal social groups and formal support groups.³⁰ A disability- and neurodiversity-friendly communal campus space would ideally be able to perform a dual role in this respect, both facilitating structured social groups and providing opportunities for serendipitous meetings of similar peers.

Daily Living on Campus

In addition to the factors around living environments described above, how students manage the activities of daily living while residing on campus is another important matter, and one that is often under-addressed. Depending on a student's particular areas of impairment and their severity, neurodivergent and invisibly disabled students may need substantial support with these activities, particularly within their residential environment. This is especially true if they are newly living away from home and family for the first time, and needing to adjust to completing independently tasks with which they may always have had help in the past. Autistic students across studies, for example, particularly report struggling with tasks like cleaning, attending to personal hygiene, and remembering appointments (Simmeborn Fleischer, 2012; Simmeborn Fleischer, 2013; Toor et al., 2016). Students across multiple categories in Kreider et al. (2015) also express frustration with the time and academic impacts of managing daily living tasks that are not as well supported as academic needs. Depending on the level of severity of the injury, as well, TBI may carry more risk of significantly reducing students' independent functioning than some other conditions. TBI survivors in Bush et al. (2011) required substantial help from family and faculty to continue their academic studies, as well as other life activities, raising concerns about what becomes of the needs of students who have less support available.

30 Sokal & Desjardins, 2016; Sarrett, 2017; Vincent et al., 2017; Scheef, 2019; Winberg et al., 2019.

Summary and Conclusions

Socializing in university is a great source of enjoyment, stress relief, and restoration for many students, and respite during what can sometimes be a very challenging period of their lives. It can also, however, be extremely fraught and difficult for students in these categories. Friends and other student peers are a frequent source of vital support, but stigma, skepticism, and resentment are recurring obstacles to those positive relationships. Compounding this is that students with some conditions also struggle to develop relationships and social connections, which has an impact not only on their quality of life in college but on the informal supports that are available. These struggles are particularly acute for autistic and psychiatrically disabled students, but are also present across other categories. All students, across all categories, are also at increased risk of mental health challenges. These may take the form of psychiatric disabilities, such as anxiety or depression, or more rarely conditions like obsessive-compulsive disorder, substance abuse disorders, or others. They may also take the form of more common experiences like stress, overwhelm, and sleep disturbances. Mental health symptoms can be exacerbated by the other disability-related challenges that students face, and have significant impacts on well-being and academic success.

At the same time, there are other supports and challenges for students in the campus environment. In general, students need reliable and discreet access to transportation, medical supplies, and bathroom facilities to be able to manage a variety of conditions, regardless of where they are on campus. Campus spaces can also present specific barriers for autistic students, even to a severely disabling degree, if they are overstimulating in terms of noise and other sensory input, while consistency and careful structure of spaces could be an opportunity to ease stress and improve experiences for autistic students. In social and study spaces, students most need the ability to control their environment in terms of distractions, sensory input, and privacy. Campus spaces need to offer students cleanliness, accessibility features, trained and compassionate staff, signage, and feedback mechanisms. All of these issues with campus spaces may be compounded for students with intersecting marginalized identities, such as invisibly disabled and neurodivergent students of color. Finally, dedicated spaces for

neurodivergent and disabled students would be helpful, and so would additional supports for managing activities of daily living.

The campus environment can represent a significant source of stress for students, both social and physically. Education and awareness initiatives are a potential approach to improve social environments for students, as are other strategies that will be investigated in Part III. Perhaps the most important takeaway around campus spaces, meanwhile, is that there are two separate categories of need. One is the need to create additional spaces specifically for disabled students, to facilitate their comfort, control, and social connections. Equally important, however, is the need to improve existing spaces, as well as adding new ones. As demonstrated by the difficulty autistic students face with noisy and crowded spaces on campus, while adding accessible spaces is beneficial, it does not make other important parts of campus any more accessible. Making campus a less disabling environment for all students cannot be achieved simply by adding on or repurposing a few individual facilities. Creativity, flexibility, and reorganization will need to be applied to existing classrooms, study spaces, social spaces, and dormitories to make them fully usable by all students. This work is complex and difficult, but if it is not undertaken, distractions, overwhelming sensory input, and other challenges will continue to make multiple parts of campus hostile to some students' needs. The understanding and cooperation of student peers would aid in this work, as would their added advocacy for the needs of their neurodivergent and disabled contemporaries.

