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Understanding the Expectations of Students with Autism to Increase Satisfaction with the On-Campus Living Experience

STUDENTS IN THE AUTISM COMMUNITY are a currently underrepresented, yet growing, population in higher education, which strives to understand student experiences on campus and find ways to better support students with autism. This qualitative research study examined the expectations and experiences of seven students on the autism spectrum in relation to residence life. Participants expressed having expectations related to academics, campus housing, community, roommates, and the overall collegiate experience. As expectation confirmation theory suggests, if the expectations of students with autism are met, satisfaction and success may be bolstered. The article provides insights on how to fulfill expectations unique to this student population and provides recommendations for practice.

College is often an overwhelming time and can involve a difficult transition for all students, but it can be particularly challenging for students with autism spectrum disorders (ASD). Since students must self-disclose their diagnosis to university personnel, the exact number of college students with ASD may never be known to researchers. Also, it is possible that some may not be medically diagnosed at the time they begin their undergraduate studies. The American College Health Association's *National College Health Assessment*, a leading national instrument examining health-related concerns in higher education, added an item in 2019 to its U.S.-based survey asking respondents if they have a formal medical diagnosis of autism spectrum disorder (ACHA, 2020, p. 60). These data will inform national estimates of the number of college students with ASD. However, estimates report that, at one university, "between .7 percent and 1.9 percent of college students could meet criteria for high functioning autism spectrum disorder (HFASD)" (White et al., 2011, p. 683). Given the widespread and increasing prevalence of students with ASD, all higher education institutions will be enrolling more students who meet this diagnostic criterion in the coming years.

AUTISM AND POSSIBLE CHALLENGES IN COLLEGE

Autism is a developmental disability that is diagnosed on a spectrum. Individuals who identify on the autism spectrum may face

Autism is a characteristic of one's identity that may shape an individual's life, but does not define them or limit their ability to thrive and succeed.

particular challenges with connection, tolerance, and control (Harrison, 1998). Practically, these challenges may show up as communication difficulties, problems with social interactions, and restricted, repetitive behaviors (Seltzer et al., 2003). ASD may be diagnosed by a medical professional based on the individual's ability to communicate, their social interactions, and their varying levels of interests and activities. Autism is a characteristic of one's identity that may shape an individual's life, but does not define them or limit their ability to thrive and succeed.

Students with ASD may face additional challenges with the transition to college because of a lack of support from friends, impairments impacting their visual or tactile sensory faculties, and heightened sensitivities to campus noise, crowds, and smells (Anderson et al., 2017; Kuder & Accardo, 2018). In addition to the challenges faced during the transition to college, data indicate that many of these students are not being retained, nor are they achieving the completion rates of their peers. For example, although there has been an increase in the number of students with ASD in college classrooms, the rate of postsecondary degrees for this population remains stagnant (Matthews et al., 2015). Along with poor transition and retention, students with ASD may face mental health issues in the college setting. Comorbid anxiety and/or depression in individuals with ASD are as high as 65% (Ghaziuddin, 2002). Comorbid implies that an individual is affected by more than one disorder concurrently, such as a diagnosis of ASD and anxiety (Ghaziuddin, 2002).

UNIVERSITY SUPPORT FOR STUDENTS WITH ASD

Support for students with ASD often falls on disability services offices within higher education. But college disability offices may already be understaffed and unable to provide the necessary support for this student population (Wenzel & Rowley, 2010). For this reason, it is the responsibility of all student and academic affairs professionals to continually work to provide resources to help students with ASD succeed. However, due to the difficulty of recruiting staff to coordinate intervention strategies, there are still many challenges related to supporting students with ASD (Shmulsky et al., 2015; Weiss & Rohland, 2015).

In the last two decades, higher education literature has included more and more information about autism-related resources and support interventions. These resources include books, worksheets and assessments (Wolf et al., 2009), ASD-specific technology (Asaro-Saddler et al., 2015), and individual support strategies (Accardo et al., 2019; Welkowitz & Baker, 2005). Even with the increasing number of studies of students with ASD, more research that is specific to university student housing is needed.

Housing and residence life offices have a unique opportunity to assist in the holistic development of residential students with disabilities. Their proximity to students and their personal spaces makes it possible to intercede at an earlier and deeper level. "Resident advisors may be the first to detect signs of depression or increased anxiety" in students with ASD "before it becomes an acute

crisis" (VanBergeijk et al., 2008, p. 1366). Even though housing and residence life are integral to student affairs, scant attention has focused explicitly on accommodations for students with disabilities. Thus, students with ASD living on campus may face inadequate support in their residential environments, including physical, human, and organizational supports (Statton-Brooks & Eichler, 2020; Strange & Banning, 2015). Over the last 20 years, there has been an increased emphasis on accommodations such as emotional support animals (Bauman et al., 2013; Kogan et al., 2016; Von Bergen, 2015), universal design (Mace, 1998; Watson et al., 2013), training and peer intervention needs related to students with ASD (Ackles et al., 2013; Fisher, 2015; Hansen, 2011; Platos & Wojaczek, 2018; VanBergeijk et al., 2008), and other housing options (Shaw et al., 2011; Vaccaro & Kimball, 2019) including autism-related living-learning communities (Hendrickson et al., 2013; Rians, 2018; Whitney et al., 2012). According to Ackles et al. (2013), "The residential living experience for individuals on the autism spectrum involve[s] navigating shared living arrangements, managing the organizational aspects of independent living, and coping with complex sensory issues" (pp. 202–203). The success of students with ASD in higher education settings is the responsibility of all professionals, not just those working in disability resources, and housing and residence life professionals in particular have a unique opportunity to support students outside of their academic classrooms.

THEORETICAL FRAMEWORK

The theoretical framework for the current study is Richard Oliver's (1977, 1980) expectation confirmation theory (ECT), which examines how customer expectations and product performance relate to each other and lead to overall satisfaction with the product. Oliver developed a model of product performance that includes consideration of consumer expectations, perceived performance of the product, disconfirmation of beliefs, and overall satisfaction. Ultimately, when a product performs to the standards of a consumer's original expectations, there is satisfaction. When a product exceeds original expectations, there is a disconfirmation of beliefs and overall satisfaction. However, if a product underperforms compared to a consumer's original expectations, there is a disconfirmation of beliefs and overall dissatisfaction with the product.

Expectation confirmation theory has been applied to the satisfaction of experiences beyond just that of products. For instance, scholars have successfully applied the theory to information system experiences (Chou et al., 2010; Hossain & Quaddus, 2012), motorists' satisfaction with their driving experiences on state highways (Poister & Thomas, 2011), higher education online learning environments (Keengwe et al., 2012), and customer service experiences (Chea & Luo, 2005). We selected this theoretical framework because many campus housing operations are concerned with student satisfaction as an outcome of the residential experience. For instance, campus housing frequently uses the Skyfactor Benchworks (2021) assessment for housing and residence life. This popular standardized assessment is organized around three primary factors: resident satisfaction, learning experience, and program effectiveness (Skyfactor Benchworks, 2021).

In the present study, students with ASD are considered the consumers, and the campus housing experience is the product. If housing and residence life professionals are better able to understand the expectations of

their consumers (i.e., students), then they are more likely to improve their satisfaction. When there is a positive effect and student satisfaction is high, then, according to expectation confirmation theory, the product is beneficial to consumers and therefore positively supports them during their time in college.

PURPOSE AND RELEVANCE

We explored individual and group expectations of the residential experience of a group of on-campus residents with ASD. If residence life and housing professionals understand the expectations of these students, then they can bolster their satisfaction and overall student experience. Our central purpose was to describe the expectations of on-campus students who identify themselves as being on the autism spectrum. Our primary research question was "What are the expectations of on-campus students who identify on the autism spectrum?" Findings from this research study may aid housing and residence life professionals from multiple functional areas such as residence education, marketing and communications, and academic initiatives in meeting the expectations of residents who identify on the autism spectrum. By understanding, managing, and meeting the expectations of these students, residence life and housing professionals can improve the overall student experience and their chances for success.

METHODS

We used a constructivist, qualitative paradigm (Lincoln & Guba, 1985) to employ a phenomenological design using individual, semi-structured interviews to understand the essence of the shared experiences of students with autism living in on-campus housing. The phenomenological design strives to uncover the essence of the on-campus experience of these students with an emphasis on their expectations. "These essences are the core meanings mutually understood through a phenomenon commonly experienced" (Patton, 2002, p. 106). The context for this study was a large public land-grant university in the southern United States. The research site involved a traditional housing operation with more than 11,000 beds in both apartments and residence halls. No live-on campus requirement was enforced. We centered the study on the stories of students with autism and their experiences and expectations related to university-managed housing. The study and associated protocol were approved by the Institutional Review Board at the research site.

Population and Recruitment

The target population was all on-campus residents who identify on the autism spectrum; the accessible population was on-campus residents who self-identified on the autism spectrum at the research site in the fall 2019 semester. A roster method was used to recruit participants (Marsden, 1990). All 8,417 students living on campus (including student staff but excluding Reserve Officers' Training Corps housing due to their unique housing experience) in the fall 2019 semester received an invitation via their university email addresses to participate. A total of 1,154 students responded (14% response rate) to the screener question "Do you identify as an individual on the autism spectrum?" Of the 1,154 responses, a total of 78 respondents self-reported being on the autism spectrum. Of these, 21 respondents agreed to be interviewed, but only seven ultimately completed an in-person semi-structured interview at the time of data saturation.

Participants

Table 1 presents demographic information related to study participants, including their chosen pseudonym, race, gender, status as a first-generation college student, other disabilities, intention to live on campus again, and current level of satisfaction with their housing experience.

Data Collection and Analysis

In order to aid content validity (Anastasia, 1988), a semi-structured interview protocol was developed by a panel of experts comprising housing and residence life professionals at the research site, a disability services professional, and researchers who often work with people with ASD. Semi-structured interviews, or focused interviews, can be more flexible and allow the researcher to better understand the perspective of the interviewee (Daymon & Holloway, 2002). The semi-structured interviews allowed us to refocus the questions or prompt for more information if something interesting or novel emerged. Thirteen standard interview questions with probes were established as the initial protocol. Interview questions focused on the individual on-campus housing experience, overall level of satisfaction, and areas for improvement. The protocol was piloted with two students before being revised and adopted to ensure that the research question could be

TABLE 1

Participants

PSEUDONYM	RACE	GENDER	FIRST-GENERATION	OTHER DISABILITY	LIVE ON CAMPUS AGAIN	SATISFACTION LEVEL
Chuck	White	Male	No	Clinical depression	Yes	Satisfied
Abigail	White	Variant/ nonconforming	No	No	Yes	Satisfied
Silas	White	Transgender male	No	Joint hypermobility (extra range of motion, difficulty moving)	Yes	Satisfied
Jeff	White	Male	No	No	Yes	Very satisfied
Kaleb	White	Male	No	No	Yes	Very satisfied
Rebecca	White	Female	No	ADHD, OCD, Tourette syndrome	Yes	Very satisfied
John	White	Male	No	No	Yes	Very satisfied

Note. ADHD is attention-deficit/hyperactivity disorder; OCD is obsessive-compulsive disorder.

answered. Each student's identity was coded by their chosen pseudonym to maintain confidentiality. Interviews lasted from 12 to 40 minutes (M = 23 minutes). The data were collected in a private office setting. After each session, the interview audio files were transcribed by a professional transcriptionist.

Data were analyzed using constant comparative, inductive thematic analysis (Creswell, 2007). Specifically, we employed the phenomenological research data analysis method (Groenewald, 2004). This analysis consisted of evaluating interviewer epoché and bracketing, isolating units of meaning, clustering units of meaning into categories to form themes, summarizing each interview to reduce the information to the most important items, and extracting common themes from all interviews and making a composite summary (Groenewald, 2004). To aid credibility, we utilized peer debriefing, an audit trail, a data organization tool called Dedoose, and memoing (Lincoln & Guba, 1985). Peer debriefing occurred once one interview was completed so that we could discuss responses and their richness related to the primary research objective. The audit trail, categories, and themes were managed via Dedoose, which added trustworthiness. Finally, we utilized field notes and memoing during and immediately after interviews. This allowed us to produce rich, thick narrative theme descriptions. Memos also aided in the development of initial categories and themes.

LIMITATIONS

Although we believe the study design to be sound, we note four limitations. Although we took efforts to recruit a sample of students with a diverse range of experiences and perspectives, our sample included only seven students. Additionally, all of these participants indicated that they were either satisfied or very satisfied with their on-campus living experience. Because we were unable to hear from students who reported being dissatisfied, we could not indicate unfulfilled expectations based on our chosen theoretical framework.

The second limitation of the study is that it is confined to only one institution with a particular institutional type and geographic location. Future research studies should investigate the experience and expectations of students with ASD at different institutional types (arts, small liberal arts, and community colleges) and within different housing and residence life environments (traditional housing, living-learning communities, and residential colleges).

The third limitation relates to the transferability of the sample of participants. For example, the sample included only White participants and no first-generation college students. Expectations may have been influenced by family and therefore may be different for first-generation college students. Since all participants were White and the research site was predominantly White, this might have led to all participants reporting that they were either satisfied or very satisfied with their on-campus housing experience. The research site is a Predominantly White Institution and therefore likely centers this racial demographic in its planning and execution, both intentionally and unintentionally.

Finally, the fourth limitation relates to the purposive sampling criteria. Our screener question allowed for participants to identify on the autism spectrum while not limiting them to a diagnosis. This flexibility might open up more of a continuum of experiences and expectations related to the purpose of the present study. Future research may consider other criteria for study inclusion.

FINDINGS

The purpose of our study was to explore the experiences and expectations that students with ASD had in terms of university-managed housing. If the expectations of students with ASD are better understood, then, according to expectation confirmation theory, their satisfaction can be improved. Findings revealed five primary themes of expectations: academics, campus housing, community, roommates, and the student experience. We present a narrative description of each emergent theme, and we use participant quotations to animate the theme dimensionality.

Academics

The first theme that emerged is related to participants' expectations to achieve and succeed academically. Because of the quantity of responses and variability therein, three categories were identified to understand specific topics relating to academic success: academic degree programs and experiences, academic support programming and services, and disability accommodations.

Academic degree programs and experiences. This theme relates to four participants' knowledge of academic degree programs (i.e., majors, minors, academic departments) and whether this knowledge or lack thereof impacted their overall satisfaction in the collegiate setting. Two participants, Kaleb and Silas, expressed concerns about not understanding the difference between expectations related to high school courses and those related to college courses. For example, when asked about the overall transition from high school to college, Kaleb explained,

> *I definitely think one of the things that I kind of struggled with while going to school was how classes are run . . . Maybe showing seniors in high school a sample schedule for somebody, for a student's day. And . . . it's like, "Hey, this is a day in the life of a college student."*

Silas also mentioned feeling confused during the spring semester registration after arriving on campus during the preceding fall semester. "I did not know the order of classes to take or who my advisor was. My [academic peer mentor] in housing got me connected to them but they seemed just as confused as me." There seemed to be confusion on the student level (both participant and staff) related to academic degree programs and academic department organization.

Academic support programming and services. Four participants expressed their expectations related to residentially based tutoring, technology resources, community computer labs, and other academic support services provided by university student housing. Responses in this category included comments about access to physical study spaces and tutoring services offered through the housing department. When explaining her need to have a physical space in the hall where she could study, Rebecca said, "The study lounge and TV lounge work pretty well." Kaleb commented that "having the ability to go to

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tutoring offered by residence life is a really cool thing." Jeff elaborated on the benefits of residential tutoring when he remarked that he felt like it "was helpful. I would say continuing that would be really good." In terms of technology, Chuck, Abigail, Kaleb, and Jeff all remarked on reliable internet services as an academic support service and technology need for their on-campus housing experience. Kaleb elaborated on the importance of technology, recommending that the university offer "maybe some tutorials on how to navigate the . . . [student information system] is a big thing because it's my second semester and I still don't fully know how to navigate [it]." Kaleb elaborated on his expectations for supporting technology:

> *. . . if you weren't allowed to have . . . a computer and internet in your dorm . . . it'd definitely make living in that dorm a lot less comfortable and a lot less homey. But when you're allowed to do that, it makes it so your dorm is almost your home, and it's nice living here.*

Rebecca emphasized the convenience of having technology and resources integrated into residential facilities and specifically mentioned the community computer labs available to residential students.

Disability accommodations. This category demonstrates participants' expectations to acquire knowledge of various disability accommodations, both academic and residential. Kaleb and Rebecca expressed the need for better communication within the residential communities about various services offered by the disability resource office. When asked about how much information she had about disability accommodations, Rebecca shared,

> *I would say more of a general awareness of resources. What I find in a lot of people who've never really had to ask for help or really had to ask . . . for a support system, they don't always know where to start . . . there's sort of an awareness of "If there are problems, who do I need to ask? If there are things [I need to know], who do I need to talk to?" Those are all the things that I made sure to remember during orientation.*

Campus Housing

The second theme relates to students' experience of adjusting and managing expectations within their residential communities, the support needed from residence life professional staff, and how these topics relate to their overall on-campus experience. Because of the quantity of responses and variability therein, four sub-categories were identified to inform the campus housing theme: advantages of living on campus, cost, noise, and physical space.

Advantages. This subtheme was identified from a student view of the various advantages of living on campus; all seven participants mentioned these expectations in their interviews. These advantages include access to facilities support such as maintenance and work orders, convenience and location of on-campus classes, and access to free on- and off-campus transportation systems. Jeff appreciated the easy access to his classes: "I thought it would be just a better way to transition to college rather than having all

the responsibilities of owning an apartment or leasing an apartment. Be able to have the convenience of walking to all my classes."

Cost. This subtheme of expectations emerged as three participants expressed the affordability of living on campus compared to the higher rents for off-campus housing. Also, the expected associated costs of living off campus were discussed by participants and included owning a car and paying for utilities. For example, Kaleb said,

> *. . . it's probably slightly more advantageous to live on campus because of all the costs [of] owning a car and paying for the parking permit and insurance. Especially when you're in your early 20s. Plus, you get free utilities with residence housing, which was also a factor.*

Rebecca and Abigail also mentioned the importance of the affordability of on-campus housing.

Noise. In this subtheme, four participants identified expectations related to the sensory benefits of living on campus, especially as operationalized by the quiet-hours policies in the residential communities. This theme is closely related to one of the problems that students on the autism spectrum often experience: a sensitivity to loud noises. Chuck spoke about how he manages this. When asked what residence life professional staff could do to better support students on the autism spectrum, he spoke about the need for quiet and courtesy hours:

> *. . . because I've known some people who, especially dealing with sensory overload or meltdowns in that situation, I've known some people who are off-put by noise or more off-put by certain visual elements. For me, it's always a noise. Continuous loud noise is usually what drives me off.*

Furthermore, Silas specifically mentioned the benefit of having quiet spaces to escape from the sensory overload that is often experienced on college and university campuses.

Space. This subtheme of expectations emerged based on three students' comments about the physical space in their on-campus room; important elements were safety, size of room, amenities, room temperature, light pollution, maintenance, and the ability to personalize their room with decorations. Kaleb spoke about the importance of being able to "hang what you wanted to," referring to decorations, as well as the importance of having a computer and internet connection in the residence hall. He shared that because of the customizability of his on-campus living space, "it makes it so your dorm is almost your home and it's nice living here." Along with being able to customize his private space on campus, Silas mentioned the benefit of having facility services available for emergency and nonemergency maintenance repairs.

Community

The theme of expectations is associated with the need to feel a sense of belonging and community on campus, and participants discussed the ability of residence life to provide this sense of community. Because of the quantity of responses and variability therein, three categories are distinct in understanding specific topics related to participants' expectations of the on-campus community: campus climate, peer connections, and resident advisors (RAs).

Campus climate. This category relates to two participants' experiences with the camaraderie, support, and social atmosphere of the on-campus community as a whole, both in and outside of the residential communities. Specifically, Rebecca spoke about the

importance of a "very supportive culture," where individuals in the community are "friendly, gregarious, genial, and sociable." John spoke about the uniqueness of a shared campus culture that makes individuals feel connected to their peers, even if it is just a silent connection.

Peer connections. This category was identified because of four participants' expressed drive to find support and develop relationships with peers. A recurring concept raised by three-quarters of the participants was the need for peer support, potentially through a student organization or a living-learning community. Kaleb discussed the need for peer relations and to know that each individual is not alone:

> *I think maybe an idea to throw out is sort of an organization that . . . For students on the autism spectrum to meet with each other and better each other and kind of talk about their experiences and it might be a good thing to do . . . But I think being able to spend time with somebody who knows what you're going through and can empathize with you is really a big thing because . . . you're not the weird one.*

Resident advisors. This theme emerged with two distinct dimensions. The first dimension relates to the importance of RAs who understand what autism is and how it impacts individual interactions within the residential community. Five participants, including Rebecca, spoke about the need for RAs to understand and know how to respond to students with autism.

> *I think for active RA stuff, for RAs to be a little more lenient. Not like a velvet glove or anything, but just a little more lenient. Because often if you socially misstep, it kind of takes people off-guard. They don't really know how to respond, or people read too much into something that you say.*

The second dimension of this category, mentioned by four participants, was the expectation that there would be RA programming related to developing a sense of community and building relationships with peers. When asked why he stated that he would choose to live on campus again, Kaleb shared, "All the events that the RAs hold . . . people can come and talk and just sort of hang out and do something fun together [and] I think [it] is a really good experience to have."

Roommates

This theme emerged based on expectations for roommates, which were mentioned by all seven participants. Dimensions of the theme are finding a roommate with some knowledge of autism or willingness to understand, assistance in communicating with roommates, and the overall importance of a healthy, friendly relationship with a roommate. John spoke about the need to have a roommate who understands autism and is willing to support their peers.

> *They really need to be with roommates who understand their condition and not only can tolerate that but can be there for them and support them in whatever they do. That is very, very important . . . they may not have the courage or kind of social ability to go to a professor's office hours or to build relationships with their peers. So, I think that when they come home at the end of the day, the roommates may be all they have.*

Another key element of this relationship was assistance in knowing how to best communicate with roommates. Silas shared that it is imperative for students on the spectrum

to know "how to communicate with a roommate who may not understand what they mean" and "may not understand their tone." In the same way, Silas expressed the view that it is the responsibility of residence life staff to help educate "the other side" on how to communicate with their roommate on the spectrum who "may take everything literally" and "may shut down if you speak to them in a certain tone."

Overall Student Experiences

This theme includes elements related to the overall student experience on campus and participants' drive to have a holistic, traditional campus experience despite their disability identity. Because of the quantity of responses and variability therein, three sub-categories were identified to understand the student experience theme: staff education, residence life, and personal growth and development.

Staff education. The education category relates to the expressed interest in and need for residence life staff to have knowledge of the uniqueness of autism diagnoses, as well as their ability to understand common symptoms. This category includes two dimensions: individualization and training. Individualization focuses on the uniqueness of each participant's experiences and needs on the spectrum. In response to asking how residence life staff are able to best support students with autism, Chuck said, "Autism's pretty broad, I feel like sometimes there are accommodations that are made or assumptions that are made that don't necessarily apply to everyone equally in a certain scenario" and explained the need to focus on the fact that one student is not the same as the next.

Training expectations relate to the necessary knowledge held by employees working with students with ASD (e.g., resident advisors, professional staff) in order to best support them throughout their college experience. Kaleb said that RAs must "have an idea of how these people act and just how to help these people rather than just punishing them," meaning that RAs should be present and educated enough to guarantee that students are learning something from their experiences. Training topics recommended by Kaleb, John, and Jeff could emphasize common behavioral manifestations of students on the spectrum, the prevalence of autism within college student demographics, and common disability resource accommodations.

Residence life staff. Six participants contributed to this theme and expressed specific expectations for residence life staff: treating them the same as able-bodied and -minded students and supporting them in the same way as they would other students. Abigail mentioned, "I do like being able to talk to my RA when something goes wrong." Rebecca, too, remarked on RAs and how well positioned they are to notice patterns in residents of the community.

> *. . . maybe if someone notices that someone said they'll show up for something and they didn't, they don't really give a reason why and it's a pattern . . . some kids can have a harder time adjusting and maybe social anxiety or maybe just they aren't sure how to adapt.*

She expected that the RA would reach out and connect with these residents. Chuck, John, Jeff, and Silas expressed the desire to be treated as normal. Chuck captured this shared sentiment when he posited, "I don't necessarily think I need special focus, I feel like what they do for the student body in general is good enough for me."

Personal growth and development. This theme developed from responses associated with participants' expectation to learn and improve throughout their time in the residence halls and on campus. Participants identified developing communication, time management, and professional skills as strategies for improvement. John and Kaleb specifically spoke about communication skills and how students and residence life staff must both be focused on making improvements. As Kaleb said,

> *The person on the autism spectrum should expect to improve upon themselves. . . . For them to improve with their communication skills is going to have to be a must, for them to grow as a professional. So, I think maybe some communication improvement sort of sessions would be very helpful.*

Outliers

Also identified were outliers with fewer than five codes related to participant expectations. Examples of such outliers include expectations concerning employment opportunities with residence life and the ability to persist through trials and develop as better individuals given these struggles.

DISCUSSION

Participants in this study placed significant emphasis on their academic support, specifically tutoring and technology services provided through housing and residence life. Multiple participants mentioned their interest in tutoring and mentoring relationships with peers. Housing and residence life can help facilitate this process by creating systems that build these types of relationships. Peer-mediated intervention (PMI)—in which peers are selected, trained, and supervised to teach or support other students—is one of the most recommended evidence-based practices for students with ASD (Platos & Wojaczek, 2018). Tutoring and peer mentorship help support students academically, as well as holistically. Peer-mediated interventions that are carefully structured to facilitate learning can reduce isolation and increase access to learning opportunities in individuals on the autism spectrum (Harrison, 1998). Having peer connections, as Kaleb noted, is an expectation of residents with autism and, when appropriately offered, could contribute to their overall satisfaction.

Another expectation arising within the academic support programming and resources theme was related to technology. For instance, Kaleb highlighted the basic need for technology where he lives, and Rebecca highlighted this expectation related to community computer labs. As Knight and associates (2013) concluded, technology helps to empower students with ASD. Technological systems such as word-processing systems, design-oriented software applications, and communication technologies can help all students succeed in their college courses and in building relationships with peers (Asaro-Saddler et al., 2015; Knight et al., 2013). Providing basic technology such as computers and the internet, as well as additional access to technologies (specialized software, communi-

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cation technology), can meet and surpass the expectations of students with ASD.

The theoretical framework for the present study focused our inquiry on understanding the expectations of students with ASD in order to be able to recommend strategies to bolster their satisfaction with university student housing. Oliver's expectation confirmation theory (1977, 1980) suggests that if the performance of a product (in this case, on-campus living) meets the expectations of customers (residents with autism), then their overall satisfaction will be high. One important conclusion derived from this study is that participants' expectations were similar to those of their peers not on the spectrum; as Chuck reminded higher education professionals, "Autism's pretty broad, I feel like sometimes there are accommodations that are made or assumptions that are made that don't necessarily apply to everyone equally in a certain scenario."

This expectation of students with ASD to be treated as an individual and not as a group is not new (Accardo et al., 2019), and many researchers, such as Welkowitz and Baker (2005), have supported an individual approach, or rejection of scripted approaches, for educators. Most institutions on the list of *25 Best Colleges for Students with Autism in 2020* (BestValueSchools.org, 2021) emphasize one-on-one mentoring, academic coaching, support via learning communities, and specialized classes. However, would not all students benefit from one-on-one support? This desire to be known on an individual level may have been emphasized in our study by the nature of the specific research site, which has both a large housing operation in terms of beds and a large student body and student-to-staff ratio (averaging 64:1) in housing. This context may have elevated this expectation or desire in the minds of participants.

When considering expectations for campus housing that could increase satisfaction, a targeted few arose for institutional action. Other scholars have insisted that higher education institutions provide comprehensive support for individuals on the spectrum in the academic, social, and emotional domains in order to effectively integrate them into the campus environment (Gelbar et al., 2015). However, there are still many challenging environments in campus housing. Participants cited roommates, noise, and the space environment in campus housing as challenges. Noise and other sensory issues have been acknowledged as being particularly problematic for students with ASD. Given these challenges, higher education professionals have established transition support unique to students with ASD (Kuder & Accardo, 2018), and within campus housing, residence life professionals have created living-learning communities intended for students and allies of students with ASD (Hendrickson et al., 2013; Rians, 2018; Whitney et al., 2012) and special sensory-minded housing designs (Statton-Brooks & Eichler, 2020). We acknowledge that while some interventions have been initiated within the field in terms of programming and facility design, higher education professionals must do even more, and with more urgency, to address these pervasive challenges.

A final point for discussion relates to increasing knowledge, training opportunities, and overall understanding of people with ASD. Educators and students commonly confuse autism with other disorders, such as learning disabilities (Gillespie-Lynch et al., 2015), and many higher education professionals lack a basic understanding of the ASD community, which can contribute to students' unfulfilled expectations and decreases in overall satisfaction. The need for

staff training has been repeatedly highlighted (Ackles et al., 2013; Fisher, 2015; Hansen, 2011; VanBergeijk et al., 2008), but little integration into training programs (at the professional, peer, or student organization level) has so far been evident.

IMPLICATIONS AND RECOMMENDATIONS

Our participants' stories highlighted several educational support implications for practice and future research. Students emphasized their desire to be involved in peer mentoring and tutoring relationships. Housing and residence life professionals can take the first step by creating mentorship programs and training college peers. The National Autistic Society has published a resource guide for student mentors of ASD students (Mowat et al., 2011) that can be utilized to develop training for residential mentors. The guide also includes tips for communication and a list of helpful resources. Access to tutoring services within residence halls was also mentioned by multiple participants in this study. In large groups, tutoring can be overwhelming for students with ASD, so providing smaller tutoring sessions is an important recommendation for practice. LeGary (2017) offered three suggestions for how administrators and student tutors can best support students with ASD: variable hours of operation, accommodations for individual student schedules, and personal appointments.

Another recommendation to improve educational support is to provide more access to technology. Housing and residence life can help students with ASD in their academic studies by providing them with the necessary resources and tools to boost their success. As Knight and associates (2013) recommend, "some type of error correction and reinforcement should be 'built in' to the software for maximum benefit" (p. 2645). While some of these resources may be provided through the university, housing and residence life can fill in gaps by offering open-access computer labs in and around residential facilities. Overall, if residence life and housing professionals are better able to meet the needs of residents with autism they will likely bolster and improve their overall satisfaction.

Another implication for practice relates to developing higher education and residence life professionals in their one-on-one work with students on the autism spectrum. At all costs, higher education professionals strive to avoid harmful interactions with students; however, there are numerous alarming stories published online of housing professionals' negative interactions with students with ASD. Practitioners have robust resources to inform their professional practice with students with ASD so that they can avoid such negative interactions. One such resource is Wolf et al.'s (2009) book, which offers seven tools—including worksheets, assessment questions, and reflections—to aid their one-on-one support of students. For instance, a self-assessment called "My Areas of Difficulty Checklist" facilitates reflection for students on what in their college experience is causing stress. Domains in this self-assessment relate to learning and memory, attention and organization, communication, behavior, interpersonal skills, sensory challenges, emotions, wellness, and campus resources, including questions on housing. Such tools and others can help improve the professional practice of one-on-one support for students with ASD.

> *The number of students with ASD will continue to increase, and they and their families will continue to hold high expectations for higher education and university student housing.*

A quick online search reveals more than five million results for designing sensory-appropriate residence hall rooms or spaces for people with ASD. With so much community-generated guidance from parents, guardians, and former college students, there is an opportunity for higher education and housing professionals to take note and step forward. During new constructions or renovations, colleges and universities can work with architects and designers to incorporate sensory-minded spaces. Additionally, as a recent article posited, "Sensory integration—or how each person organizes themselves from a neurological standpoint—plays a role in everyone's life, even impacting their success" (Eichler & Statton-Brooks, 2020, p. 32). Just as accommodations are needed within the classroom environment, so too are they needed for students with ASD in the residential environment. These considerations for practice may help meet expectations related to space and noise within campus residential facilities.

A final recommendation for practice and future research is to expand and evaluate the training and education efforts of housing and higher education professionals. This area of scholarship continues to be a struggle in the profession, as recent critiques have cited limited data collection or small sample sizes. For instance, the communication coaching program (Weiss & Rohland, 2015) and the transition program (Shmulsky et al., 2015) are difficult to justify because of limited data. For practitioners, it would be easy to incorporate education and training for working with students with ASD alongside LGBTQ ally, QPR suicide, and undocumented student ally trainings. The College Autism Network offers free downloadable training resources for RAs.

Finally, it is important to reemphasize that these recommendations are made on the basis of the responses of seven participants who initially rated themselves as either satisfied or very satisfied with their on-campus housing experience. Future research ought to be conducted with students whose on-campus housing experience is less than satisfactory in order to determine if other unmet expectations are revealed.

CONCLUSION

As Kuder and Accardo (2018) reminded us, "The increase in the number of students with ASD in higher education is no longer a new phenomenon" (p. 9). The number of students with ASD will continue to increase, and they and their families will continue to hold high expectations for higher education and university student housing. Applying the findings from our participants' expectations related to academics, campus housing, community, roommates, and the student experience can help improve the overall college experience of these students. After all, if satisfaction remains a key performance indicator for housing professionals, as evident from its focus on major international housing-related benchmark assessments, we must consider and center residents from diverse social identities in order to improve the residence life experiences we offer. ■

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DISCUSSION QUESTIONS

1. As quoted by VanBergeijk et al. (2008, p. 1366), "Resident advisors may be the first to detect signs of depression or increased anxiety" in students with ASD "before it becomes an acute crisis." Given this, how should we prepare resident advisors to respond to concerns of depression and/or anxiety among students with ASD? How does (or how should) that response differ from the way we prepare them to respond to students without ASD?
2. Reflect on Richard Oliver's expectation confirmation theory, the theoretical framework used for this study. Thinking of your residence life department as a product, how can you set and manage expectations to improve satisfaction for students with ASD?
3. Reflect on the identity development of students with ASD and how it intersects with other aspects of their identity. How can your residence life department work to holistically develop these students?
4. A theme from this study was campus housing, with subthemes that included noise concerns and physical space. Do you believe your current housing facilities and policies regarding courtesy and quiet hours meet the needs of students with ASD? How can they be improved?
5. The article highlights practices that utilize an individual approach to working with students with ASD, including one-on-one mentoring, academic coaching, support via learning communities, and specialized classes. What practices does your campus employ? Are there any practices that your campus does not offer that they could? How could those practices be implemented?
6. What campus partnerships might your residential life program leverage to better meet the expectations of students with ASD?
7. The researchers in this study employed a phenomenological design, which is a qualitative technique focusing on the commonality of lived experiences. What approaches can residential life educators utilize to engage students with ASD in order to better understand their residential experiences?

Discussion questions developed by Jamie Workman, assistant professor of higher education leadership at Valdosta State University, and Brian Haggerty, senior associate director for residential life at the University at Buffalo.