

# Transition to Higher Education for Students with Autism: Challenges and Support Needs

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## Abstract

Increasing pieces evidence suggest that learners with autism spectrum disorder (ASD) and their families experience limiting challenges in their transition at different developmental and academic levels in life. It is not clear, however, what the specific challenges that limit their successful transition are, despite parents' and teachers' efforts to support them. The current study sought to investigate the factors challenging students with ASD in transitioning to higher education. The study adopted a phenomenological qualitative research design with a total of 10 first-year students with ASD in higher education institutions in Nigeria. The one-on-one interview was conducted, guided by a semi-structured interview schedule. Data collected were analyzed using content analysis, through the inductive thematic procedure. The results revealed five main themes, which include: academic functioning difficulties, social difficulties, structural issues, mental health problems, and lack of resources and supports. Each major theme was discussed based on the emerging subthemes. The findings of the study suggest an increased need for academic, social, materials, and environmental supports for students with ASD who transition to higher education institutions. More supports should be put in place to help learners with autism develop personal resources that will encourage their success in higher education institutions.

**Keywords:** Autism spectrum disorders, higher education, transition challenges

## 1. Introduction

The inclusion of students with disabilities in higher education has been increasing (Brett, 2016; Swart & Greyling, 2011). Internationally, the evolving education and disability legislation is making an important move towards promoting greater opportunities for individuals with disabilities, to enroll in, and complete higher education (Brett, 2016). Higher education policy across the globe has changed considerably following the amplified focus on inclusive practice in recent times (Brett, 2016; Järkestig Berggren, Rowan, Bergbäck & Blomberg, 2016). Additionally, the Rights of Persons with Disabilities adopted by the United Nations in 2006, attests to the importance of better educational prospects for persons with disabilities (Järkestig Berggren et al., 2016; Morley & Croft, 2011). Hence, there is an increasing number of individuals with disabilities, including those with Autism Spectrum Disorders (ASDs) who enroll in higher education (Barnhill, 2016; Bell, Devecchi, McGuckin & Shevlin, 2017).

ASDs are a constellation of life-long neuro-developmental disorder, characterized by deficiencies in social communication skills, as well as patterns of restricted or repetitive behavior and interests/activities (American Psychiatric Association, 2013). As outlined in the DSM-5 (American Psychiatric Association, 2013), autism, Asperger's syndrome, high functioning autism, autism spectrum condition and pervasive developmental disorder not otherwise specified (PDDNOS) are within this spectrum. Common symptoms of ASDs include obscurity in social and or communication skills; a preference for structure; hardness managing deviations from routines; impairments in executive functioning, such as planning and problem-solving; and hyper-sensitivities (Demetriou, DeMayo & Guastella, 2019). Approximately, about 1 in 68 children, and 1 in hundred adults are in the spectrum of ASDs (Brugha et al., 2011; Brugha et al., 2016; Christensen et al., 2016). With the increase in the prevalence of ASD over the recent times (Cox et al., 2017; Gelbar, Smith & Reichow, 2014), it is expected that individuals with ASDs seeking to enroll in higher education are likely to continue to rise (Kuder & Accardo, 2018; Pinder-Amaker, 2014; Thierfeld Brown & Wolf, 2014).

However, given the difficulties associated with ASD conditions, there is an impending threat of securing admission into and completing courses at higher education institutions. Studies suggest that difficulties associated with ASD often create significant difficulties in primary and secondary educational settings (Bolourian, Stavropoulos & Blacher, 2019; Fleury et al., 2014; Mandy et al., 2019). As the students with ASD navigate such difficulties across school grades the associated impairments can also create more challenges, especially in the higher education setting, where routines and structure often differ, educational spaces are also much larger and overwhelming, and access to support always demands an increased level of self-awareness, personal skills and student's ability and willingness to self-disclose (Knott & Taylor, 2014).

Additionally, higher education may present an array of barriers to transition among students with ASD while (Barnhill, 2016; Brown & Coomes, 2015; Knott & Taylor, 2014; Kuder & Accardo, 2018). For instance, Hewitt (2011) highlights that higher education may be the first-time students with ASD are required to advocate for themselves to access supports or accommodations. Hence, the need for independence in higher education may pose increased challenges to smooth transition into higher education institutions among students with ASD. Transition is any event, or non-event that is consequential to change in relationships, routines, assumptions, and roles (Schlossberg, 2011). According to Schlossberg's transition theory, elements of transition include both forms of transition and process of a transition (Schlossberg, 1984). Schlossberg proposed that the transition process is guided by the 4 S's (a situation, self, support, and strategies) (Evans et al., 2010; Schlossberg, 1984). In this study, we adopted a broad definition of transition, to cover the transition into higher education and the influencing physical and social factors that threaten transition in students with ASDs.

As students enroll in higher education, they must adjust to new surroundings, become familiar with new physical and social environments as well as the academic demands of the institutions (Strand, 2019). Studies indicate that compared to typically developing ones, students with ASD are more likely to experience difficulties coping with postsecondary experiences. Though about 46% of learners with ASD demonstrate normal intelligence quotient (IQ) to attain optimum academic height (Centers for Disease Control and Prevention, 2012), lower percentages of ASD students are retained across postsecondary school graduation and subsequent employment (Shattuck et al., 2012). These suggest poor transition outcomes, explicating the underpinning higher education transition difficulties.

Consequently, evidence has identified transition as difficult for students with ASDs (Anderson, Sosnowy, Kuo, and Shattuck, 2018). Further, it has been shown that individuals with ASD experience significant transition challenges across the lifespan (Bolourian, Stavropoulos & Blacher, 2019; Mandy, et al., 2016; Friedman, Warfield & Parish, 2013). Transition difficulties in the ASD population limit their academic progress, functional participation, and independent functioning (Marsh, Spagnol, Grove, and Eapen, 2017). Increased transition difficulties account for drop-out and poor school and adulthood outcomes in students with ASD (Ciccantelli, 2011; Wehman, et al., 2014). Additionally, learners with ASD may show more emotional and behavioral symptoms sequel to transition compared to those with other disabilities (Marsh, et al., 2017; Schall, et al., 2012; Lequia, et al., 2015).

On the other hand, a smooth transition may lead to positive educational outcomes, such as vocational competence employment perspectives, independence, and increased social competencies (Schall, et al., 2012). The long-term outcomes include self-determination and self-advocacy, school and community inclusion, and completion of higher education courses (Anderson, Sosnowy, Kuo & Shattuck, 2018; Schall et al., 2012). Obtaining a post-secondary education could tender many advantages to students with ASD, including the choice to improve one's ability to earn a better income and creating and building a lifelong social network (Ciccantelli, 2011). This points to the need for a smooth transition to higher education in students with and without ASD.

Higher education transition has attracted considerable research interest in developed countries (Anderson, Carter & Stephenson, 2018; Dipeolu, Storlie & Johnson, 2014; Grogan, 2015; Schall, Wehman & McDonough, 2012; Sims, 2016). In Nigeria and other African countries, research into the full education and development of individuals with ASD is still evolving. A student with ASD in Nigeria makes academic progress through secondary schools, only through the efforts of the parents. The communities are poorly knowledgeable on issues of the development and learning of students with ASD. Thus, students in the spectrum may suffer additional challenges such as peer rejection, exclusion, loneliness, and academic failure. Higher education institutions rarely provide adequate services to support the learning and transition of students with ASD. Hence, the few students who continue education to the college level may face more challenges than their peers in other countries.

Yet, as the students are navigating the impending changes, they are expected to persist and complete their course and graduate with a good GPA. Hence, while the transition to higher education has been widely researched (Anderson, et al., 2018), there seems to be little or no research considering challenges associated with the transition to higher

education in the Nigerian context thereby leaving a significant gap in the literature. This is especially important due to the increased number of students with ASD enrolling in higher education, and the critical need for higher education institutions to develop an in-depth perception of the experiences and needs of students with ASD to implement best practices in transition support. Furthermore, limited studies have investigated the experiences of persons with ASD in higher education directly for transition challenges (Alverson, Lindstrom & Hirano, 2015; Anderson & Butt, 2017; Baric, Hemmingsson, Hellberg & Kjellberg, 2017). The current study capitalizes on the students' perspectives to investigate the challenges associated with transitioning to higher education in students with ASD.

## **2. Method**

### *2.1 Design*

The study adopted a qualitative approach (Neubauer, Witkop & Varpio, 2019). Specifically, a phenomenological research design was used. Qualitative methods are recommended for their ability to explore the depth and complexity of phenomena (Guest, Namey & McKenna, 2017). A phenomenological method yields itself to a systematic reflection on the participants' lived experiences (Maxwell, 2013; Shi, 2011). Hence, information about the transition experiences of students and a deeper understanding of students' meaningful learning were sourced from the students' perspectives.

### *2.2 Participants and Sampling*

Using purposeful sampling we drew 10 first year students with ASD in higher education institutions in south-East Nigeria. Specifically, the purposeful sampling technique was augmented by snowball sampling, in which the participants identify other possible candidates who fit the study criteria (Groenewald, 2004).

### *2.3 Data Generation Tool and Trustworthiness*

A semi-structured interview with four open-ended questions was used to guide the data collection process for the study. The foundational questions built on the students' perspectives and include: (i) describe your experience about transition since your entry into postsecondary education institution. ii) What do you think are the most important issues about the social experience of being a college/university student with an ASD? iii) What do you think are the most important issues about the academic experience of being a college/university student with an ASD? iv) What are the biggest challenges you face as a student with an ASD? In addition to these questions, the interviewer was also able to ask further questions to discover the perceptions of participants more. For trustworthiness, we observed the six phases of qualitative data generation and analysis as highlighted in an earlier study (Nowell, et al., 2017).

### *2.4 Data Analysis*

Thematic content analysis was used to analyze data for this study. Data were coded inductively to find recurring categories that defined perceived transition challenges. We identified patterns across the codes and reflected on the underlying meaning to cluster codes and form themes that were consistent across the personal interview. This was meant to bring out the key issues, as well as similarities and differences both within and between participants.

All data were analyzed following Nowell, Norris, White, and Moules, (2017) prescriptions for establishing trustworthiness in six-phases of thematic data analysis. The phases include Phase 1: Researchers familiarizing selves with data; Phase 2: Generating initial codes; Phase 3: Searching for themes; Phase 4: Reviewing themes; Phase 5: Defining and naming themes and Phase 6: Producing the report. Observing these phases in the cause of this research enabled the researchers to ensure trustworthiness concerning credibility, transferability, dependability, and conformability of the study outcome (Nowell, et al., 2017). We familiarized ourselves with the data set line-by-line reviewing the data from each group; generating initial codes; Searching for themes; Reviewing themes; Defining and naming themes, and producing the report.

### *2.5 Ethical Considerations*

The researchers received ethical approval from the faculty of Education, University of Nigeria, Nsukka, Nigeria to conduct this study. All participants signed informed consent forms before participating in the study. Participation in the study complied with the ethical rules of using human subjects in research. The research had no negative impact on the participants or the researchers. Data collected in the study were handled without the participants' details.

## **3. Results**

Five overarching themes emerged from the inductive coding process. Each major theme is made up of subthemes. These were labeled:

- Academic functioning difficulties
- Social difficulties
- Structural issues
- Mental health Problems
- Lack of resources and supports

All of these themes contributed to the challenges experienced by students with autism in higher education institutions. The following segment discusses each theme and the sub-themes and provides student quotes to illustrate each theme / sub-theme.

### ***Theme 1: Academic functioning difficulties***

Participants identified that they encounter difficulties in different areas of academic functioning. Such difficulties are summarized in three sub-themes: Assignment completion, and poor organizational skills.

#### **Sub-theme: Assignment completion**

The majority of the participants reported analogous challenges to their academic functioning to include assignment completion. They pointed out factors around the completion of the assignment in high education that limits their participation and completion of the assignment to include working in small group and having to submit the assignment as a group and or having to submit an assignment in a fixed time. *"having to complete and submit works as a group is daunting and overwhelming, sometimes I will let it be.... They despise my contribution" "I don't like working in groups; It allows them to notice my limitations; most time I forfeit the assignments"* These indicate that students with ASD may miss a good number of assignments as a result of avoidance behavior. Fixed time for assignment submission also generates considerable difficulties. Students with ASD admitted that they often run out of schedule and most lecturers reject their submissions. This may constitute a considerable challenge for educational progress.

Furthermore, participants recorded that not knowing how to pace with peers/collaborators during the assignment is a big challenge that worsens the issues with assignments. In cases where the assignments are to be submitted individually, students with ASD may have an unequal need for guidance and clear instructions compared to peers without ASD. Sometimes they may not grasp the instructions, thereby limiting their working pace and ability to meet deadlines for assignment submission. *"If I can get the instruction clearly on what exactly to do, then I will find it easier to do what is expected." "Knowing what's expected of me is quite challenging. Most lecturers take for granted that some students need time to understand what they've said or what they want"*

#### **Sub-theme: Poor organizational skills**

Another subtheme under academic challenges is poor organizational skills. The participants recorded that they have difficulty in organizational skills such as time management, academic planning, problem-solving, and self-regulation as well as having to establish and sustain a balance between academic demands and self-care. They submitted that they need more processing time in all academic exercises, including examination, and learning. They further find it difficult to make use of self-regulation and academic planning skills necessary for time management. Motivation difficulty and procrastination also are challenges to academic progress during higher education as indicated by the participants. Some exemplary verbatim quotes to this effect are:

Participant 1: *"I enjoy doing one thing over time and this makes me run out of deadlines." "Sometimes I am demoralized and....." "I have too many academic activities to plan for and I have difficulty planning for them. I tend to consider this pace is not the right for me"*

Participant 9: *"I can say I lacked motivation for learning and attending the many lectures awaiting me. I cannot always organize myself to cover all academic expectation and take care of myself, while at home, my mum used to help and guide me in many areas, it's now I appreciate my mum most"*

### ***Theme 2: Social Difficulties***

Data showed that social functioning constitutes a considerable challenge. Data in this respect yielded three subthemes including social/interpersonal skills challenges, social participation challenges, and Confusing social clues.

### **Sub-theme: social skills challenges**

The students reported that they found it difficult to initiate and sustain social interactions, to express themselves to others, and to make new friends. They also mentioned that they are afraid about their failure and success in social situations thereby making them feel isolated and lonely in the school. Some of the identified challenges in this area include difficulty making friends, the hardness of self-expression, difficulty in self-advocacy, and awareness of problems.

Participant 9: *"Knowing the right time and way to be thrilled /excited with friends is a challenge, often keeps me isolated and lonely, has been a very difficult process for me, I always feel I am different, and others also know and act by it. They hardly accept my hand in friendship, and I am also being careful, so I do not expose my predicaments"*

Participant 7: *"As a matter of fact, I always count my word and I avoid any situation that would make people listen to me. At the time it is pretty difficult getting to explain my reasons for not meeting deadlines to lecturers"*

### **Sub-theme: Social participation challenges**

According to the interview data, students with ASD find it difficult to find people with similar interests to mingle with. This limits their participation in social and recreational activities. In a broader school system like most higher education institutions, students with ASD find it difficult to participate in socially-oriented academic activities such as group discussion classes, peer-assisted learning, and working in groups. Another overarching challenge was a social stigma. Social-communication difficulties make involving in group-discussions, or group assignments difficult for students with ASD. Inter-personal communication challenges are also associated with heightened stress. They also identified difficulties with peer-relationships, friendship, and peer support.

Participant 1: *"You know when you are not sure of your being accepted, you are skeptical about social situations, no matter what it means. I normally experience difficulty involving in things that would let people validate my social skills such as group discussion, or seeking academic help from peers.....I will always be myself and never disclose my disability.....It is not just easy to have another student assist you !"*

Participant 5 *"If you find clubs frightening, like myself, it will be difficult to socialize, especially if you're also frightened off by societies like I am"*

Other challenges related to social participation which came out strongly was Confusing social clues and difficulties understanding social situations. Challenges with social clues such as poor understanding of body language and gestures were among the difficulties that the students experienced in the university.

For example, participant 3 submitted *"my difficulties in understanding unspoken language limit my relationship with peers and cripple my ability to develop social network"* Participant 3: *"I wish I could learn to fit into some complex social situation.... at least I can be sure I am following"*

Students also identified social stigma from peers, lecturers, and administrative workers as challenging. One of the participants expressed how stigma dealt with his emotion and lead him to avoid self-disclosure.

Participants 2: *"I had a terrible experience with social challenges at the beginning of the year. I didn't want to be treated differently, as if I have a kind of disease, or am a lesser person. So, the best thing for me was to hide my disability identity, it was better for me to manage my disability instead of giving people an avenue to look down on me"*

### **Theme 3: Structural Issues**

School physical structure was also a conspicuous point. Participants were consistent with the complexity of higher education institutions. Two subthemes under this theme are difficulties navigating lecture venue distances and overwhelming school environment.

#### **Sub-theme: difficulties navigating lecture venue distances**

The majority of the students interviewed saw the issue of lecture venues as a challenge that created much stress during their first year in higher education institutions. While some said that they were always confused about the venues where lectures took place, others said that they detested the moving from one lecture hall to another for specific courses. Some exemplary quotes are:

Participant 4: *in those days many times I was in one venue and lecture will be going on another place, they won't tell me.....the distance that one had to walk to get to the lecture venue is unbelievable.....I mean.....I was discouraged.*

### **Sub-theme: overwhelming school environment**

The participant surprisingly echoed that higher education schools were complex and that they find it difficult to operate in complex environments. For instance, as participant 2 stated:

*"I was always thrown off-balance by the school environment. It was too complex for me and most times I preferred to be in my room"*

Participant 6: *"Lectures and tutorials in this school are always noisy, crowded and lousy to the point that I find it difficult to concentrate and comprehend. I tend to have difficulties processing the lecture stuff above the environmental distractions such as noise. A big challenge during quizzes and exams was to find a quiet place to read without distraction.....These were quite limiting both academically and socially"*

### **Theme 4: Mental Health**

The study participants reported having mental health issues enough to interfere with their daily activities during their first year in higher education. Some of the mental health challenges identified were Isolation/loneliness, stress, anxiety depression, sinking feelings. He articulately described a psychosomatic response to stress and anxiety related to the performance pressure to meet a certain level of achievement.

Participant 5: *The homework assignment was not too stressful, but the strain of performing well on the exams to make a better GPA was a source of intense stress that worsened my anxiety: Coping with a whole lot of materials to learn get me stressed up and ill, physically. Perfectionism aggravated my emotional condition and I got depressed. Managing my emotions became an emergency as I was incapacitated in getting acclimatized with the workload and the unfriendly environment"*

Participant 4: *"Due to lack of family members or close friend, I kept feeling lonely and down-cast..... at different instances I was depressed and moody, crying always as I wished to go back home"*

When stress and anxiety levels are extremely high, students may display anxious and unacceptable behavior on campus. One student (participant 1) related her distress when her lecturer refused to help him: "I've had a shouted in weeping at the corridor of an office when a lecturer walked away from me and refused to assist me.

### **Theme 5: Lack of Resources and Support**

Most students who participated in the study described their experiences of lack of materials and support that impacted negatively on their academic progress. Lack of material aids, lack of disability support, and lack of academic support.

### **Sub-theme: Lack of material aids**

All the students with ASD who participated in this study expressed their limitations due to a lack of material resources to support the learning and social limitations of ASD conditions.

Participant 8: shared her experience with a lack of support. *"Some of us that have this problem are only in the school for the sole efforts of our parents. Like myself now, anything that my parents cannot provide for me can never be accessible. The government does not recognize the extra need we have for academic progress. I lack resources such as note-taker, and other learning aids....."*

### **Lack of disability support**

There was a total lack of disability support staff in tertiary institutions as reported by the participants. Participants disclosed that they have not accessed any assistance from nor are they linked to any disability support staff. Accessing timetables, time management skills, special arrangements for exams and assignments, lecture or classroom aids for behavioral issues, peer mentoring, note-taking for classes and exams, raising class awareness of ASD, advocacy, and referral to other services were lacking in the higher education system in Nigeria. As narrated by some of the participants:

Participant 10: "For support, no support service is in place in my institution. I don't know about others.....Nigeria's case is different in this respect."

Participant 6: "...no one is interested in the challenges we pass through. I hail my parents for their efforts and support while I was in the secondary school...my secondary school teachers were also awesome.....University is the hardest time I have ever experienced with regards to support. Nobody cares about your progress"

### **Lack of Academic support**

No support is received from the lecturers in terms of alternative arrangements, adjustments in teaching style to accommodate our learning needs, and the importance of flexibility and support that addressed the specific needs of individual students. Participants recorded that teaching styles often follow lecture methods which they find difficult to follow. No flexibility in academic activities such as assignment submission time, examination, or teaching-learning methods was enjoyed.

Participant 2: *"No flexibility in terms of learning, assessments, and academic routines. In fact, I can remember the agony I passed through the day I missed a quiz for not getting the right information. Every explanation I made to the lecturer was to no avail"*

Participant 10: *"I think if persons like me will be successful in the university or any other institution of higher learning, lecturers need awareness and orientation. Currently, they do not support us as needed. Maybe because I look physically normal."*

### **4. Discussion**

Little is known about the challenges faced by students with ASD who transition to higher education in Nigeria. The current study investigated the challenges experienced by higher education students with autism in Nigeria. Ten students with ASD who were in the first year of higher education institutions in Nigeria participated in face-to-face semi-structured interviews. The content analysis of qualitative data indicated five overarching themes, which include: difficulty in academic functioning, social challenges, structural issues, mental health, and lack of resources and support. The students generally felt their difficulties in these areas interfere with a smooth transition from secondary to tertiary education schools.

These emerging themes provided rich illustrations of the difficulties and challenging experiences of students with ASD at higher Education schools. Overall, the students with autism self-reported poor academic functioning during their transition period. It was clear from the interview that completion of the assignment and poor organizational skills were the major academic challenges experienced. Specifically, difficulty working in a small group and having to submit the assignment as a group and or having to submit assignments in a fixed time has come of the factors identifies as limiting assignment completion. This is well expected, given the social communication deficit in individuals with ASD. Earlier studies conducted in other countries have also identified similar challenges in students with ASD in higher education.

For instance, Cai and Richdale (2016), in their study on the experiences and support needs of 23 students with ASD enrolled in two universities and four colleges in Australia, found that transition from secondary school was among the greatest challenge for students with ASD. The study further highlighted that irrespective of the amount of support received from parents, transition problems account for a lot of academic challenges experienced in the university by students with ASD. Gurbuz, Hanley & Riby, (2019) also examined the social and academic experiences of university students with ASD in the UK and found significant academic challenges in students with ASD compared to non-autistic students. However, the result of the present study negates the finding of other studies that found that students with autism the enjoy their academic work, received good academic grades, or had good study (Gurbuz et al., 2019; Gelbar et al., 2015; Jackson et al., 2018). Though these studies indicate fewer academic challenges, it is not unexpected that their academic performances may vary from the Nigerian context, given the difference in availability of support.

Poor organizational skills emerged as a significant challenge to transition into higher education. It was clear from the data those difficulties in organizational skills such as time management, academic planning, problem-solving, and self-regulation as well as having to establish and sustain a balance between academic demands and self-care. Anderson, Carter, and Stephenson (2018) indicated high rates of academic and non-academic difficulties in university students with ASD. Nuske et al. (2019) suggest that transition challenges increase with an increase in the educational level and as the academic workload and social pressure increase. Hence, as the student transition to tertiary institution, there seem to be an increased need for organizational skills that will enable the students to make important academic planning, manage their time, problem-solve and self-regulate for academic and social successes. In a situation where the student experiences difficulties in these areas, it challenges transition success. Similarly, a study shows that transition failure may be a by-product of unmet needs areas such as adaptive functioning, executive functioning, processing speed, emotion regulation, attention control, and repetitive behaviors among others (Nuske et al., 2019; Sutton-Young, 2015).

Social functioning difficulties found in this study include difficulty in social interactions, and lack of interpersonal skills, lack of social participation. Students reported difficulties in social/interpersonal skills challenges, social participation challenges, and Confusing social clues as challenges to a smooth transition to higher education. This result supports earlier findings relating the making and sustaining friendships. Studies show that though there is the desire to form and maintain friendships in ASD, they experience difficulties in initiating and sustaining the social relationship (Myers, Davis, Stobbe & Bjornson, 2015; O'Hagan & Hebron 2017; Mazurek 2014; Tobin, Drager & Richardson, 2014). Such social challenges which could lead to social isolation and loneliness that undermine transition success in higher education. Orsmond et al. (2013) suggest that social participation is a central facet of university life.

Our finding, that poor social participation is a challenge to transition success in higher education with ASD is in line with other studies identifying social participation difficulties as challenges to adaptive functioning on persons with ASD in the university (Gurbuz, 2019; Myers, Davis, Stobbe & Bjornson, 2015; Shattuck, Orsmond, Wagner & Cooper, 2011; Van Hees, Moyson & Roeyers, 2015). The results also correspond with the general research outcomes that throughout adulthood, individuals with ASD continue to struggle with issues related to communication, social skills, repetitive behaviors, resistance to change, and social participation (Levy & Perry, 2011; Magiati, Taya & Howlin, 2014). The scarcity of social relationships and nonparticipation in social activities lead to high levels of loneliness and increased mental health challenges as the students develop a heightened awareness of social isolation during adolescence and early adulthood (Mazurek, 2014; Tobin et al., 2014). The consciousness about their social difficulties reduces the students' confidence to socially engage with others and to devote further efforts to building and sustaining friendships as well as participating in helpful social activities.

The present study also identified issues relating to school structure such as difficulties navigating lecture venue distances and overwhelming school environment. This is in line with Gurbuz, et al.(2019), who indicated that the university environment is unpredictable and overwhelming to students with ASD. This finding may be peculiar to the Nigerian context as most higher education in Nigeria is not structurally inclusive for students with a special need. Traveling a long distance from one lecture hall to another may get students with ASD to get stressed and overwhelmed and may increase daily demand for social support due to students' deficit.

The increasing daily demand for social success in the university creates considerable mental health issues such as stress and anxiety. We found that mental health issues are among the limiting challenges to a successful transition to higher education. Stress and anxiety arise due to other challenges and put the students in a vicious cycle. Students felt overwhelmed, and stress, anxiety, and burnout as they experience difficulties navigating the academic and social challenges of higher education. Hence, the study confirms the earlier ones which found that higher education transition constitutes increases students' vulnerability to anxiety, stress, and depression (Pinder-Amaker, 2014; Friedman et al., 2013). Other pieces of evidence show that stress in students with ASD is related to managing the planning and routine failures, handling increased academic and social demands in unfamiliar situations, and organizing own time and tasks (Glennon, 2001; Pugliese & White, 2014). Gillott and Standen (2007), found that no matter the cause, increased levels of stress, anxiety, and depression impede the ability to cope with everyday stressors and demands, thus impedes transition success.

Lack of resources and support that hamper transition success emerged in the areas of lack of material aids, lack of disability/social support, and lack of academic support. Van Hees et al. (2015) had a similar finding when he found that students with ASD in higher education need support services through a personalized approach, supportive environment with Sufficient Planning, and Clear Communication. The finding of the present study is contrary to LeGaryJr, (2017) who found that undergraduate students who self-identified as having ASD in England perceived that they received emotional, instrumental, and informational support that helped to buffer college-related stress and facilitate academic success. The contradiction in the two results is not surprising as the Nigerian case may not be comparable to developed countries like England. Inadequate social, material, and academic support undermine transition outcomes in the universities and colleges in Nigeria and may be accountable for poor enrollment of students with ASD in higher education.

Wheeler (2011) suggested that academic support may be in the forms of providing the instructor's lecture notes or a note-taker to collect important information, providing study guides for tests, allowing a longer verbal response time from the student, and allowing for important exchanges of information to be done in written form. Providing students with a "social buffering" object which might include a computer, book, or another object that initially might seem distracting or "out of place"(LeGaryJr, 2017).



### Practical Implications of the study

The finding of this study has implications for higher education administrators, professors, and other lecturers, parents, and the government. There is a need to be aware of possible supports that a student with ASD might need to participate in class and complete class work. A first-year orientation program for students with ASD should be organized to enable the transitioning students with ASD to be aware of the elements and supports available to many first year students. This could help reduce adjustment problems in the college. Supports that focus on executive function and social interaction strategies in higher education may be offered to increase the students coping skills.

The lecturer who teaches students with ASD can offer advanced negotiation of the deadline for tests and assignments, provide a note-taker, allow work assignments to be done at a slower pace, providing models and step by step instruction, providing extra time to take tests, and provide readers, scribes (or technology that reads and takes notes) and a separate "quiet" place for tests. Students with ASD can be paired with peer mentors who assist with feedback and provide "proof-read" information for meeting deadlines for work assignments.

Emotional, instrumental, and informational supports that helped to buffer college-related stress and facilitate academic success are needed (LeGaryJr, 2017). Planning tools, clear communication, and concrete information are needed for students' understanding of what was expected of them, and to their development of new routines as they transition to higher education. Coaching and mentoring during the transition to, and in higher education is necessary for overcoming transition challenges. Coaching can focus on support with making choices enhancing study approaches, daily and vocational organization and skills, clarifying ambiguities, and providing feedback on difficulties and advice.

Written rules for asking questions and other classroom logistics should be provided to support students with ASD. The use of hats, sunglasses, and tinted lens glasses, earplugs or earphones, and assistive technologies should be encouraged. Alternative writing tools during tests and assignments may help reduce stress and minimize challenges. Using a computer for in classwork, tests and assignments might also be an appropriate accommodation for improved academic outcomes. Academic advisors and counselors can be trained to attend to the sensitivity of students with ASD. They can closely guide and assist the students as they make important academic decisions, especially during the first year. Faculties admitting students with ASD can make their curricula and teaching styles friendlier to students with ASD. Explain expectations clearly and specifically, provide explicit consistent structure to classes (Gobbo & Shmulsky, 2016).

### 5. Conclusion

From the findings of the study, we conclude that students with ASD transitioning to higher education experience a range of challenges in the dimensions of academic and social functioning, school structure, mental health, and lack of support. Stakeholders in higher education and disability practice should work together for more inclusive environment, materials and practices in higher education in Nigeria and other countries that are backward in these areas. Students with ASD require effort to support and timely planning for higher education transition.

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