香港中文大學
The Chinese University of Hong Kong

Faculty of Education
CUHK 中大教育

Exploring the experiences and needs of college students with Autism Spectrum Disorder (ASD)

Research Report

Department of Educational Psychology

Faculty of Education

The Chinese University of Hong Kong

February 2023

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Research Team

Principal Investigator:

Prof. Gary Lam Yu Hin
Assistant Professor, Department of Educational Psychology,
The Chinese University of Hong Kong

Co-Investigator:

Dr. Joanne Wong Chi Yan
Senior Manager (Clinical Service), SAHK

Research Assistants:

Ms. Sibyl Chan

Ms. Mia Zhang

Ms. Vincy Lee

Executive Summary

Background

This study is funded by the Equal Opportunities Commission (EOC) to explore the experiences and needs of college students with Autism Spectrum Disorder (ASD).

The study employed a qualitative interview approach to collect data from multiple stakeholders. Target stakeholders included college students with ASD, parents of college students with ASD, university teaching staff, professional support staff, and neurotypical students who had experience interacting with college students with ASD. There were a total of 30 college students with ASD, 8 parents, 10 teaching staff, 8 support staff, and 9 neurotypical students participated in this study.

Objectives

The research objectives of this study include:

1.   To investigate the needs and challenges of students with ASD faced in university

2.   To explore how university teachers, staff, and students perceive and treat students with ASD

Key findings

College students with ASD were found to experience the following challenges in their study and life around post-secondary education. Given the considerable diversity of student backgrounds, as well as varying degrees of ASD characteristics, the findings reported here were not intended to be all-encompassing or representative of the experience of the entire autism spectrum or ASD community. It should be acknowledged that the following themes described the major challenges and needs commonly identified by the college-bound individuals with ASD who were willing and able to speak about their experiences.

1. Learning and academic challenges

College students with ASD had difficulties with executive functioning that make them struggle with time management and higher order cognitive skills to meet the academic demands of post-secondary curriculum. Due to their ASD characteristics, they would benefit from structured and concrete learning strategies, but these were not commonly or consistently available in college learning. The COVID-19 pandemic also caused disruptions and sudden changes to the normal routines and university life, which caused stress and adjustment difficulties to many of the students.

2. Social communication challenges

College students with ASD encountered numerous challenges in the area of social communication, ranging from adopting effective communication skills in different social situations and developing relationships with others during their college life. Implicit social rules or expectations were complex for them to discern and understand, where miscommunication and misunderstanding would arise easily, which may result in embarrassing situations and socially inappropriate behaviors to others at times. Group work in academic courses were stressful to these students, as they found them challenging to form a group and coordinate work among groupmates, which led to further psychological distress and academic setbacks.

3. Emotional and sensory challenges

High academic demand might easily trigger emotional responses from students with ASD. School-related stressors included general worries about academic achievement, test anxiety, and peer pressure. Students also recalled stress related to the changes in university life and the broader society during the period of social unrest and recent years of COVID-19 pandemic. Specific sensory input and situations with high social demand also negatively impacted their emotions.

4. Transition and career challenges

It was common for students with ASD to have concerns and experience confusion, uncertainty, and struggle for their transition to post-secondary education and future career development. They would explore and select a post-secondary program based on their interests while also considering their personal strengths and weaknesses. Their preferences were at times related to their ASD or emerged from their past experience during early school years or childhood. Significant others (e.g., parents, teachers, mentors, and friends) and career counsellors also played a crucial role in providing career guidance or academic advice. In school-related internships or other types of work opportunities, these students encountered challenges in areas of executive functioning, social communication, and interviewing and presentation skills, which made them less competitive in gaining the necessary skills and experience to prepare for future career.

5. Others' misunderstanding

Inaccurate knowledge about ASD and special educational needs (SEN) in general led to people's misunderstanding or negative perceptions towards college students with ASD. Stereotyped and stigmatized images of ASD often involved either overly negative portrayals of autistic symptoms or savants with special talents, which misalign with the spectrum nature of ASD and its diverse presentations in reality. Others' misperceptions contributed to negative judgments, unfair expectations, and missed opportunities of college students with ASD.

6. Disclosure of ASD or SEN conditions

Other people's limited understanding of ASD and low sensitivity of their needs, coupled with institutional policies and the social climate that might be unfriendly or stigmatizing at times, hindered college students with ASD to disclose their conditions or seek help. They would rather pretend normal or hide their own difficulties for fear of others' hurtful treatment, which might further exacerbate their learning challenges and mental health needs.

7. Gaps in accommodations and services

Services and supports for college students with ASD received are varied. Common academic accommodations provided for students who disclosed their ASD condition included extra time and breaks for examinations, a special examination room, and assignment extension. Community-based services such as counseling, therapies, and case management would also be available to those undeclared students and whose needs would be better supported by outside professionals, such as social engagement and career development. Although positive examples were recalled by many students with ASD and stakeholders where students reported enhanced learning outcomes and satisfaction with school life, services generally lacked coordinated planning and systematic implementation, thus adversely affected intervention efficacy and student outcomes.

Recommendations

1. Efforts are needed to promote awareness and understanding of ASD and SEN in colleges and in society. Although the attention towards these students is on the increase, there is still limited knowledge related to their diverse presentations and various challenges in post-secondary settings and during the adulthood. An autism-friendly college environment is paramount to improving their quality of life and mental health.

2. Adopting a strength-based approach focuses on capitalizing on the unique strengths and abilities of college students with ASD, while also supporting their understanding of their own limitations and weaknesses that benefit their long-term whole-person development. It is important to recognize the rights to self-determination of transition-age young adults while balancing the need to provide support for their challenges associated with ASD.

3. More training and professional development for teaching and supporting staff in post-secondary education would better meet students' learning needs. Teaching strategies and learning tactics that are applicable to all students, with or without SEN, are recommended to maximize positive outcomes for diverse student bodies and to create an inclusive learning environment.

4. Interventions targeting social and communication skills should be conducted in real-life settings as much as possible. Involving diverse peers and incorporating authentic activities would help engage students with ASD in applying knowledge and practicing skills to increase their social competence and confidence.

5. A consistent and systematic support framework should be established for all groups of stakeholders to follow and navigate. Practice guidelines outlining the roles and functions of different stakeholders within the college community would allow a more transparent and well-coordinated provision of student services.

6. Interagency collaboration should be promoted to facilitate better transition and continuation of services. Coordinated communication and systematic procedures among institutions and community-based organizations would facilitate transition support before and after college.

Introduction

One of the goals of modern schooling is to prepare students of all kinds for becoming future generations of successful and educated members in the society. Among the diverse student bodies, students with disabilities are the most vulnerable and their rights should be protected to facilitate full participation and equity for these students to make meaningful contributions to the community. The United Nations has established *the Standard Rules on the Equalization of Opportunities for Persons with Disabilities* and *Convention on the Rights of Persons with Disabilities (CRPD)* to promote and protect equal rights for people with disabilities across different settings. The *Disability Discrimination Ordinance (DDO)* was enacted in 1996 in Hong Kong to provide legal protection to people against discrimination on the ground of disability, including in the area of education. The *Code of Practice of Education* under the DDO further clarified the roles and responsibilities for education bodies, including universities and higher education institutes, to set up policies and provide services to support the rights to quality education for students with disabilities. However, research on students with disabilities have largely focused on school-age populations, although their transition to higher education and beyond can still pose considerable challenges, leaving a huge service gap unfilled in post-secondary settings (e.g., Newman et al., 2011).

Individuals with Autism Spectrum Disorder (ASD), a neurodevelopmental condition that develops in early childhood and lasts life-long, often experience challenges in communication skills and social interactions, as well as behavioral patterns that are not easily discernible but considered atypical by other people (American Psychiatric Association, 2013). Students with ASD, among other types of disabilities, have been found to have most significant challenges and complex needs in post-secondary education (Lee & Carter, 2012). While traditional college and university programs tend to be more academically rigorous, the emergence of non-traditional alternatives in enrollment options, programs of study, and disability services and accommodations makes post-secondary education more accessible (Hart, Grigal, & Weir, 2010). Consequently, the number of students with ASD enrolling in post-secondary education is expected to increase significantly in the next decade (Newman et al., 2011; Jackson et al., 2018). In Hong Kong, the enrollment figures reported by the Education Bureau have reflected this increasing trend, and there were 191 students with ASD pursuing full-time accredited undergraduate or sub-degree programs in the 2019/2020 school year, compared to 132 and 177 in the previous two school years (Education Bureau, 2021). Both international studies (Drake, 2014; Newman et al., 2011) and local figures (Fan & Wong, 2018) suggested at least half of youth with ASD have participated in some form of post-secondary education, although many do not graduate on-time or may drop out from the degree. Despite often possessing the cognitive abilities to meet the academic demand, many university students with ASD reported high level of concerns in social isolation, bullying, loneliness, depression, anxiety, and other mental health problems (Camarena & Sarigiani, 2009; Gelbar, Smith, & Reichow, 2014; Jackson et al., 2018; White, Ollendick, & Bray, 2011).

Emerging literature in Western countries (e.g., USA, Australia) has shown that individuals with ASD described their university experience as difficult due to the complex social environment and high academic demands. Despite these challenges, many were hesitant to disclose their ASD condition or seek help because of discomfort or fear of being perceived as incapable, others' unacceptance or misunderstanding of their characteristics, and dismissal of their needs (Anderson, Carter, & Stephenson, 2018; Bolourian, Zeedyk, & Blacher, 2018; Sarrett, 2018). They experienced misunderstanding and mistreatment from people around them, such as faculty members, supporting staff, and other students. For

example, faculty and staff often have inaccurate information or at times stigmatizing attitudes towards students with ASD (Knott & Taylor, 2014; Sarrett, 2018). Helping professionals in university counseling centers and disability offices reported the lack of appropriate expertise and resources to provide better services and streamlined support as desired by students with ASD and their families (Anderson & Butt, 2017; Hu & Chandrasekhar, 2021). Other university students also have misconceptions and vague understanding of ASD. For example, many were reported to believe that ASD can be caused by vaccines and occurs only in children (Gardiner & Iarocci, 2014; Gillespie-Lynch et al., 2015; Tipton & Blacher, 2014). University students reported lower willingness to engage with people who exhibit autism symptoms (with or without a diagnostic label) compared to typically behaving peers (Butler & Gillis, 2011). Nonetheless, those who had closer relationships and contacts with people with ASD tend to report higher openness to them (Gardiner & Iarocci, 2014; Nevill & White, 2011). To facilitate equal access and participation of university students with ASD in education, efforts need to be made to promote better understanding and awareness of autism among different stakeholder groups in university campuses.

Local studies about the situation of university students with ASD in Hong Kong are scant. A local interview study with 9 college students with physical disabilities conducted in 2011 found numerous challenges faced by these students, including a lack of appropriate and consistent policies and infrastructures, insufficient support for teaching staff and learning resources, and inadequate services to promote participation and inclusion in university life (Mitchell, 2012). Nonetheless, no participants were identified to have any mental, intellectual, or learning disabilities, hence the experience of students with ASD were not represented and not known. Based on the report by the SAHK, one of the pioneer non-government organizations that developed specialized services for adults with ASD in Hong Kong, most of their service users had been through or had the potentials for post-secondary education, while they also showed significant concerns in mental health, social competence, career and transition support, and sensory needs (Fan & Wong, 2018). It is therefore important to explore the experience of university students with ASD and understand the landscape of important stakeholders and resources that contribute to the success and barriers of their college lives.

In the following, the objectives and the methods of the current study will be described, followed by the results presented in different themes and the recommendations.

Objectives

The current research has two objectives:

1. To investigate the needs and challenges of students with ASD faced in university
2. To explore how university teachers, support staff, and neurotypical students perceive and treat students with ASD

Methods

Participants

This study recruited five stakeholder groups, namely college students with ASD, their parents/caregivers, university instructors, support staff, and neurotypical students. Convenience sampling was used to recruit each target group. The research collaboration team at SAHK identified potential participants from their pool of existing clients and service users, who were provided the research information and voluntarily enrolled in the study. Recruitment flyers were also distributed in different university and community college campuses through their counseling centers, disability offices, mass mail or listserv, as well as personal connections of the research team. Interested participants were invited to complete an online enrollment form to provide brief background and contact information, who were later contacted for eligibility screening and interview appointment.

Inclusion criteria for college students with ASD included: (a) A self-report diagnosis of ASD (including Autism, Asperger's Syndrome, Pervasive Developmental Disorder-Not Otherwise Specified, etc.), and (b) current student or recent graduate (within one year of graduation) of a full-time program in a local higher education institute. A total of 30 college students with ASD (aged 18-39) were recruited from local universities and higher education institutes.

Target participants for parent stakeholder group included parents of a child with ASD who was a current university student or recent graduate. University teaching staff included professors, lecturers, instructors, and teaching assistants who had close contact with students with ASD in college. University support staff included counselors, psychologists, disability officers, social workers, and other helping professionals who provide support for students with ASD in the university campus. Neurotypical students included university students currently enrolled in a full-time program who do not have a diagnosis or self-identify as ASD, but had experience interacting with a peer identified to have ASD. There were a total of 8 parents, 10 teaching staff, 8 support staff, and 9 neurotypical students participated in this study.

Demographic information was collected from all the participants (e.g., age, gender). Students with ASD completed the Autism Spectrum Quotient (Baron-Cohen et al., 2001), translated to Traditional Chinese by Chan and Liu (2008), that yielded an Autism-Spectrum Quotient (AQ) score as a proxy for the degree of autism characteristics. Specific information related to college life (e.g., school, program, major) and prior contact or interactions with students with ASD were also gathered from different stakeholder groups where relevant. The tables below summarized the important background information about each of the stakeholder groups.

Table 1. Demographic characteristics of college students with ASD (Total n= 30).

Characteristics	n (%)
Age group	
18	3 (10%)
19	2 (6.7%)
20	4 (13.3%)
21	5 (16.7%)
22	5 (16.7%)
>23	11 (36.7%)
Gender	
Male (M)	19 (63.3%)
Female (F)	11 (36.7%)
Type of institutions	
UGC-funded Universities	17 (56.7%)
Self-funded Institutions	10 (33.3%)
Public Institutions (e.g., VTC)	3 (10%)
Program level	
Higher Diploma (HD)	5 (16.7%)
Associate Degree (AD)	3 (10%)
Bachelor's Degree (BD)	18 (60%)
Postgraduate Program (PG)	4 (13.3%)
Type of Major Subject	
Arts	5 (16.7%)
Science	6 (20%)
Social Science	1 (3.3%)
Medicine	2 (6.7%)
Education	3 (10%)
Engineering	7 (23.3%)
Business	1 (3.3%)
Media	3 (10%)
Others	2 (6.7%)
Year of Study	
Year 1	6 (20%)
Year 2	6 (20%)
Year 3	4 (13.3%)
Year 4	3 (10%)
Year 5 and above	1 (3.3%)
Graduated	6 (20%)
Postgraduate	4 (13.3%)
Comorbidity (multiple comorbidities could be reported)	
Attention-Deficit/Hyperactivity Disorder (ADHD)	7 (23.3%)
Specific Learning Disability (SPLD)	2 (6.7%)
Language Disorder	6 (20%)

Mental Illness	8 (26.6%)
Other Developmental Condition	1 (3.3%)
No Comorbidity	10 (33.3%)
Student hostel experience	
Yes	5 (16.7%)
No	25 (83.3%)
Work experience	
Yes	10 (33.3%)
No	20 (66.7%)

Table 2. Demographic characteristics of parents of college students with ASD (Total n=8).

Characteristics	n (%)
Age group	
50-59	6 (75%)
Undeclared	2 (25%)
Gender	
Female	7 (87.5%)
Male	1 (12.5%)
Marital Status	
Married	8 (100%)
Widowed	-
Separated	-
Occupation	
Retired	1 (12.5%)
Employed	2 (25%)
Others	5 (62.5%)
Educational level	
Primary Level	-
Secondary Level	4 (50%)
Tertiary Level	4 (50%)

Table 3. Demographic characteristics of teaching staff (Total n=10).

Characteristics	n (%)
Age group	
20-29	1 (10%)
30-39	5 (50%)
40-49	1 (10%)
50-59	2 (20%)
60-69	1 (10%)

Gender	
Female	7 (70%)
Male	3 (30%)
Occupation	
Lecturer	5 (50%)
Postdoctoral Fellow	1 (10%)
Professor	1 (10%)
Research Assistant	1 (10%)
Teaching Assistant	2 (20%)
No. of students with ASD whom they have taught	
0	1 (10%)
1-5	3 (30%)
6-10	3 (30%)
11-20	2 (20%)
21-30	-
>30	1 (10%)

Table 4. Demographic characteristics of support staff (Total n=8).

Characteristics	n (%)
Age group	
21-30	2 (25%)
31-40	3 (37.5%)
41-50	1 (12.5%)
Undeclared	2 (25%)
Gender	
Female	8 (100%)
Male	-
Occupation	
Student/SEN/Disability Officer/Coordinator	4 (50%)
Psychologist	2 (25%)
Social Worker	1 (12.5%)
Counsellor	1 (12.5%)
No. of students with ASD with whom they have interacted	
0	-
1-5	1 (12.5%)
6-10	2 (25%)
11-20	2 (25%)
21-30	1 (12.5%)
>30	2 (25%)

Table 5. Demographic characteristics of neurotypical students (Total n=9).

Characteristics	n (%)

Age group	
21	1 (11.1%)
22	3 (33.3%)
>23	5 (55.6%)
Gender	
Female	5 (55.5%)
Male	4 (44.4%)
Year of Study	
Year 1	2 (22.2%)
Year 2	-
Year 3	2 (22.2%)
Year 4	3 (33.3%)
Year 5 and above	2 (22.2%)
No. of students with ASD with whom they have interacted	
1-2	4 (44.4%)
3-4	2 (22.2%)
5-6	1 (11.1%)
7-8	-
9-10	2 (22.2%)

Procedures

Research protocols and procedures were approved by the Survey and Behavioural Research Ethics Committee at the Chinese University of Hong Kong. Informed consent process was conducted before the commencement of the research procedures and all participants signed an informed consent form to ensure their voluntary participation and rights. All participants were interviewed via their preferred means, either in-person at the locations most convenient to them or via an online meeting platform.

Semi-structured individual interview was adopted for the qualitative study. An interview protocol was used to guide the topics to be covered in the interview, while the open-ended nature of the qualitative interview also allowed flexibility for participants to describe their experiences and express their thoughts and perceptions from their perspectives (Brinkman & Kvale, 2014). To facilitate the communication needs and preferences of different individuals with ASD, alternative methods of expressing their first-person perspectives and ideas were allowed and encouraged (Lam et al., 2020; Tesfaye et al., 2019). A few participants benefited from the use of white board, printed interview questions, and visuals to complement their verbal expression.

The major research questions that drove the goals of the interviews were to understand the needs and challenges of college students with ASD and to explore the perceptions of other stakeholders interacting with these students. Based on the above objectives, the interviews were guided by the open-ended questions including: How has your experience been as a university student with ASD? What challenges or difficulties do you face? What are your support needs? How are they met? If unmet, why? How do other people (e.g., students, instructors, staff) in university see and understand you? What are some positive experiences you have? Interviews for other stakeholder groups mimicked the questions for college students with ASD, except that the questions were phrased to ask for

their input from their perspectives (e.g., What do you think are the needs and challenges of the college student(s) with ASD you know?).

All interviews were conducted in Cantonese Chinese, which were audio-recorded and later transcribed verbatim into word format. The research team read and familiarized themselves with the transcripts from all the stakeholder groups. In-vivo coding and memo writing were performed to identify salient contents that emerged from individual interview transcripts. Thematic analysis (Braun & Clake, 2006) was used to identify both unique patterns and common themes within and across different stakeholder groups. Thick descriptions with detailed information shared by participants during interviews were provided below to substantiate the trustworthiness of the different themes while offering important contexts for interpreting the data. The quotes presented below were translated from Chinese to English and were verbatim of participants' responses with only minor edits for readability. Identifiable information were removed where necessary.

Results

The study revealed 7 broad themes regarding the experiences and needs of college students with ASD. The major challenges experienced by college students with ASD can be categorized into the following domains: (1) learning and academic, (2) social communication, (3) emotional and sensory, (4) transition and career issues, (5) misunderstanding by others, (6) disclosure of ASD or SEN conditions and (7) gaps in accommodations and services. Participants also discussed the provision of services and accommodations to students with ASD during their college life and their quality. To further contextualize the findings, the demographic information showed a wide variety of student backgrounds across participants (e.g., academic subjects, school types, ASD characteristics); therefore, the current findings were not intended to be all-encompassing or representative of the experience of the entire autism spectrum or ASD community. The following themes described the major challenges and needs commonly identified by individuals with ASD who were willing and able to speak about their experiences in postsecondary education in Hong Kong.

Acronyms for each stakeholder group are following: "A" denotes quotes for college students with ASD; "P" for parents; "NT" for neurotypical students; "SS" for support staff, and "TS" for teaching staff. Brief background information is also included to provide more contexts to the quotes.

1. Learning and academic challenges

The most common difficulties identified could be broadly categorized as executive functioning challenges. The advanced level of academic standards in college would demand the use of different higher-order thinking skills and cognitive strategies to learn and manage tasks effectively. However, most students with ASD struggled with time management in various academic tasks:

> The problem is procrastination. ... Sometimes I will wait until the last minute to start. I don't have much motivation to start. I also feel a little bit anxious when running out of time. (A19, M, BD Year 3)

They also described difficulties in organization of academic information and coordination strategies of different tasks. Some indicated the need of long processing time, especially for digesting abstract concepts and integrating complex information in academic tasks. Others described challenges in scheduling and estimating the time for activities.

> The problem is my reading speed. I can comprehend but I am slow. ... For example, it takes me long time to organize my idea or write an essay after reading a lot of articles. (A30, F, PG Year 1)

> It takes me longer time to understand and organize these ideas because they are all interrelated, one thing leading to another and connecting to other ideas, such as thinking about the pros and cons, and other related meanings. (A22, M, HD Year 1)

Some reported having a short attention span and low concentration that impacted their learning and engagement.

> To some extent my notebook means a "stim toy" to me during lesson. … Sometimes, I will put on my earphones and listen to music when I do my homework or work on my own stuff. … I am just easily distracted by different things so I cannot focus in the lesson, but I am not those who are hyperactive and break rules or disturb the lesson. (A24, M, BD graduated)

Another major observation was related to their needs for structured, explicit learning experience that fits with their cognitive style. Many students with ASD commented that the classroom instructions and assignment guidelines they received were unclear and vague. They would benefit from directions that are explicitly stated with adequate details and clearly communicated to them. Concrete examples and visual displays would help with their learning and understanding. Strategies that enable them to review and practice learning materials repeatedly would also be helpful (e.g., lecture recording):

> How is a good paper supposed to be? I always bugged the professor for detailed requirements and expectations, because I want to perform well in the assignments. ... I think people with ASD also want to perform well. They just need some explicit instructions, a sense of security, and step-by-step guidelines so they can follow. (A30, F, PG Year 1)

> I know how to do when he/she teaches me in a very concrete way, guiding me to examine one by one, teaching me how to listen [to the sound], and which way I should adopt and how much force I should use. (A16, F, BD Year 3)

Since the outbreak of the COVID-19 pandemic, online teaching has become the norm among colleges and universities in the territory, which has significant impact on the learning experience of students with ASD. It took them a long time and extra effort to adapt to the online learning mode, such as resolving technical problems, overcoming environmental changes, and switching to different e-learning platforms.

> There was no advance notice for me that [an e-learning platform] has changed to another platform. ... I submitted my assignment to a wrong place, but when the second time came, I could submit my assignment correctly. (A07, M, BD Year 2)

> Last year, the examination was conducted via Zoom...I slept late the previous night because I was highly nervous about the [Zoom] settings. So nervous that I only started eating breakfast right before the examination. ... My mind was all over the place. I could not concentrate or sit still to work. I went to the toilet, took my medications, thought about how much medications I should intake, and suddenly wanted to put on my socks. I don't know. Maybe there are many distractions at home. If I can go back to school, a novel environment will allow me to focus better. (A28, F, BD Year 4)

The majority described online learning as less engaging and interactive that hampered their active involvement in lessons and learning motivation in general. The absence of in-person classes and on-campus activities also meant the lack of opportunities to get to know and keep up with peers:

> You would jot down many notes during the Zoom lesson, but you do not understand the concept. ... [Experiential learning activity] was not available because of the pandemic. We could only learn by watching the videos instead, which was not as effective as live [demonstration]. (A10, M, AD Year 2)

> A lot of times the face-to-face mode facilitates communication, but the relationship becomes estranged eventually [without in-person interaction]. (A26, M, BD Graduated)

Disruption to other activities and services that would otherwise be offered in normal circumstances also impacted the learning progress and outcomes of many students with ASD. However, some of the students mentioned the merits of online learning especially related to the relatively lower social and communication demand.

Conversely, online lessons enable me to be fearless as I used to not ask questions face-to-face. When having an online lesson, I can type out my questions and have more time to think before I ask. I also do not need to speak aloud, so I think online lesson is good for me. (A16, F, BD Year 3)

Many students with ASD also commented on the differences in college learning than in secondary school. For example, greater depth and breadth were expected in curriculum contents, while students were expected to manage one's learning independently and to be able to master a specific scope of subject knowledge within a short period of time. College teaching also involved less guided samples, past exam papers, and guidelines to follow. It could be somehow challenging for students with ASD to adapt to the more broad, flexible, and learner-directed ways of learning in college, which also contributed to poor academic performance, unpromising learning outcomes, or even challenging in-class behaviors in some of the students.

Compared to secondary school, I need to understand a tremendous amount of knowledge within a short period of time in college. … I also study in a professional major. I start from zero, and eventually learn to [make something]. … At the very beginning, I know nothing, so I need to ask for help a lot. (A10, M, AD Year 2)

There are many guidelines for me in secondary school life, such as a sample for me to follow. I can have a direction. Now in college, I do not have any samples for reference because there is new knowledge coming out every year. Many ideas and innovations are novel and abstract. Without any reference, I have to think by myself. (A12, M, HD Year 1)

I received a teacher's inquiry who reported plagiarism issues of a student with ASD. There were a lot of copying in the assignments. ... [Students with ASD] are used to rote learning. They are not familiar with the university policies, such as that no plagiarism is allowed. (SS01)

For first-year students, especially during the first week of the semester ... their timetables are not decided by themselves, which have already been automatically arranged to a full schedule. So, [a student with ASD] went to all the classes, where s/he learned about the many assignments in each class. Then, the student became very nervous, so overwhelmed that the student screamed and lay down on the floor. (SS04)

Despite the different challenges experienced in college learning, some students with ASD perceived that the academic difficulties were not as impactful, overwhelming, or negative than secondary school. Many also reported different positive aspects of college learning, such as enjoying the college environment and class, appreciating the opportunity for learning and expanding knowledge, and the extra-curricular activities.

University life is comparatively more free. Especially during holidays and semester breaks after examination, we don't have to do anything. … There is also a revision week before examination during which I don't have any classes and I can focus on revision. One thing I heard from dad which I don't know is true or not is that it is easier to pass and graduate than secondary school. There is so much pressure in secondary school, but not so much in university. Dad said the most important thing is to study seriously and complete all assignments. (A29, M, BD Year 1)

S/He actually is quite interested in and feel happy about taking the course in [non-major subject], and at the same time understand her/himself better and find the current major not suitable. (NT02)

2. Social communication challenges

Another major domain identified by college students with ASD was social communication challenges. In general, they described a variety of difficulties, ranging from using effective communication, understanding social situations, to developing appropriate relationships with others in a college environment.

Students with ASD expressed difficulties with initiating or maintaining a conversation with others. For example, some found themselves weak at expressing themselves, following others' topics, and keeping track of the important focus in a conversation.

I basically answer while thinking, which is similar to playing chess. I have to make a move without thinking, just like how I need to respond immediately without thinking. They are similarly difficult for me. I cannot stop to think before answering others. (A14, M, HD Year 1)

What makes others think [I have autism] can be attributed to my behaviour. I will spin at the corner when I do not know how to talk with others. … This behavior is less frequent now because I have more experience and know how to talk with others. For now, even if I do not know how to interact with others, I will do nothing and just look at you. (A05, F, PG Year 2)

Many also expressed low confidence in asserting themselves and getting their messages across in important situations related to their learning and college life, such as posting questions to instructors and resolving communication breakdown or conflict with other people.

I actually do not know how to handle something complicated. For example, I have to plan an activity for the student society, but I don't know how to communicate and coordinate with different people. ... I want to achieve something, such as organizing a successful activity. Though, when others have different ideas, sometimes I cannot accept, and there may be conflicts, which make me feel stressed. (A16, F, BD Year 3)

My practicum is to teach students in the school. However, I get nervous easily to communicating with others. ... Looking back to my practicum experience, my supervisor did not do well. ... For example, my supervisor did not provide clear instructions and rarely discussed my performance after class, which I did not learn that much. (A30, F, PG Year 1)

Understanding social situations with implicit rules or expectations was another major challenge to students with ASD. They were often caught up in situations where they said things or displayed behaviors that were inappropriate or not expected by others, which at times might be rude, embarrassing, disturbing, or challenging to others. At times, they might also display a higher tendency of certain routines or circumscribed preferences that are not readily understood or accommodated by others. After all, they found it challenging to understand other people's minds and intentions in complex social situations. They also tended to miss important social cues or misunderstand social rules, which did not come naturally to them, nor were these taught in school (A30, F, PG Year 1).

The problem is that there were some intimate behaviors such as kissing in the Orientation Camp (O-Camp). I have heard about these in news, but I do not want this to happen. This kind of sexual [*sic*] behaviors should only occur between family members. When this happened in O-Camp, I immediately went back to the dormitory. (A07, M, BD Year 2)

When they see someone smoking, they can snatch others' cigarettes. They do not know what to do and maybe just throw it away, but this is intimidating to others. (TS03)

In the library, a male student with ASD suddenly took the seat right next to a girl, without asking for her permission. … which made the girl very embarrassed. (SS01)

They would rate each other [after a group project], and the student with ASD gave a very low score to their own group. … S/He even said that in the WhatsApp group, which caused misunderstanding in others. … S/He did not consider what s/he should or should not say. S/He simply told me, "Mom, I think they actually did poorly." You cannot just say that and hurt others, right? (P02)

With these communication and social difficulties, students with ASD often faced challenges in interacting with others in and out of classroom. A salient theme emerged across most of the students about their struggles in group work in academic courses. Most of them expressed significant difficulties in forming groups as they were not good at communicating with others and expressing themselves, especially when they were not familiar with other students. They tended to be those "left out" (A21; A23) and needed teachers' assistance to form a group.

I had a conflict with my groupmates, so I withdrew from the group and did the project by myself. ... Because we cannot settle the conflict. Finally, the teacher allowed me to complete the course assignment individually instead of the group format. (A14, M, HD Year 1)

We need to indirectly tell, or suggest, other students to accept a student with SEN into a group. It is hard for us to protect the privacy of student with SEN while not letting others know that student has SEN. But if we do not tell, other students would easily think, "Why is that student so weird?" So we are caught in this dilemma. We sometimes say it indirectly, "That student is a bit special, so please help." (TS04)

It was also hard for them to work with different peers and coordinate work and communication within a group, which caused them extra stress and at times academic setbacks.

Sometimes, there is a conflict... mostly I have assigned work to my groupmates. The problem is other groupmates will have their own idea, so they probably want to use their version. (A26, M, BD Graduated)

The problem is that other groupmates always start their work late. I do not want to procrastinate until the last day to start working, but I do not know how to ask them to start working earlier... I do not get used to working overnight. However, my groupmates keep their routine. (A29, M, BD Year 1)

For example, we create a Google document and share it with groupmates to work together. We usually jot down our ideas after discussing them with others. However,

students with ASD will have their own idea and insist on following them even though we have banned that idea already. (NT04)

After all, many students with ASD expressed that they did not enjoy or want the group experience. Some questioned the very need for group assignments in college curriculum, and recalled instances where group assignments could be accommodated into individual work.

> We can have a choice. We can choose to cooperate with others to finish a group work or individual work to do a small task. Such practices allow students to choose by themselves, which would avoid stigmatization. (A20, M, BD Year 5)

Outside classroom, social and communication challenges impacted their relationships with peers, friends, or even family members. Many expressed the desire for developing friendships and romantic relationships, but they were faced with challenges and setbacks in socializing with others. They found it hard to know new people, make friends in new situations, and join in other social groups.

> It is hard for me to socialize with others because no one is willing to communicate with me. I've been alone for a long time, so I think if I have [a peer] partner to live together, I can learn from him/her and will know how to communicate with others eventually. (A07, M, BD Year 2)

> For me, I want to have peers of similar age to hang out with. Even though I get used to being alone, I still feel lonely and unhappy when I see others hang out without me, and I want to have a group of friends. ... It is ambivalent to me. ... On the other hand, I do not think I can handle that many interpersonal relationships because it is complicated when a group of people interact together. When I find myself unable to handle these relationships, I am not confident to join them anymore. (A08, F, BD Year 1)

> Some female autistic students of mine, they are teenagers who want to have boy or girlfriends, or they have their own sexual needs. That's very normal. Some of them told me they want to know friends, be in love, and know boyfriends, but they don't even have any friends. … [They don't understand] how classmates gradually turning to friends, and then getting to know each other to tell if the person suits me. Some of my students think a boy they just know can become boyfriend. Things can go very wrong when they don't grasp the social skills. (TS06)

Finding common interests or shared topics with others might sometimes be a barrier, as some students with ASD might not be interested in what the majority are.

> My [lack of] confidence in talking, and the problem with my contents in conversations. I am not interested in popular culture, such as listening to music or watching YouTube video clips. I instead browse online forums, like HKGolden, so I share fewer common interests with others. (A15, M, BD Year 3)

> I do not have any friends in university, seriously. I have only few friends, and we are not close at all, and maybe it is because of my personality. I always feel disconnected with peers of the same age. ... I thought everyone would focus on this issue [that I am interested in], but I realized that everyone has different hobbies after I met more people. (A06, F, AD Graduated)

> I once met my classmate from a dessert club. I tried to start a conversation with them. Still, I failed to get into the conversation even though I talked about dessert-related

topics. ... People who joined the dessert club are not interested in dessert, but they have an agenda of gaining a score to secure their place in the student dormitory. Talking about dessert topics does not make us friends. (A08, F, BD Year 1)

I mean, sometimes I will talk with my classmates because I am interested in [computer] programs designed by them, but we will not talk about something outside of our study. ... Actually, I think there is no need to work with others unless there is a group project, otherwise, I will handle everything by myself since what I am interested in are not the same as others. (A26, M, BD Graduated)

Some students struggled with sustaining reciprocal or two-way communication, resolving relationship conflicts, or keeping up with long-term interactions, which might make it more challenging to maintain friendships. While some might talk too much and be perceived as too pushy, others found it hard to come up with topics or verbal responses to maintain the conversation.

They do not know how to get into a group conversation. I observe that students with ASD always ignore others' willingness and feelings to talk because they will speak or ask questions as they like. That is a manifestation of lacking social skills. (NT07)

I treat all of my family members, friends, and classmates the same way, which may be why my classmates have blocked me [on social media]. I am too honest, so even members of non-governmental organizations are not willing to hang out with me. I realize that I may be too aggressive in communication … that others may not accept it. (A28, F, BD Year 4)

I cannot chime in or respond to others smoothly. When others speak, I become a conversation killer. For example, when [someone] makes fun of others, I chime in and add something, then the conversation is over. (A18, F, BD Year 4)

Incidents of bullying were recalled which illustrate the concerning aspect of social vulnerability in youths with ASD. They were treated unfairly or being taken advantage of because they were not aware of the ramifications of their actions or potential pitfalls in navigating social relationships:

Bullying happened, and some were more serious. These are not really physical type, but more of verbal or action/social nature. … In our [practical setting lesson], there are collaborative work where students have to work together to clean up afterwards. Some students with ASD often just wash their own stuff, and when they are done, they just go away. When other students see that, as they don't know about their ASD and the features, they think those students are selfish. … Nothing really happens in front of me, but … other students don't want to be in the same group with [student with ASD] and start verbally bullying him/her. (TS06)

There is always someone who takes advantage of him, such as borrowing things from him. ... They suddenly ignore my son after he has chipped in for a gaming console. Finally, there is no friend and money left for my son. (P01)

The fear of others' ridicule and discrimination might have been internalized in parents, causing them to either avoid putting their adult children in social situations or ask them to "compensate", at times overly, by doing extra work to meet others' expectations:

At that time, s/he did not join any [orientation] activities. I cannot remember, or I did not allow her/him to go. Because s/he does not know how to engage with others, s/he

> will feel sad if s/he finds himself being fooled. We are scared, because s/he is trapped by the disorder [*sic*]. (P03)

> I teach her/him not to be afraid to do extra work with no return and be more proactive to contact other classmates. ... S/He will help to assign work to classmates and is willing to go the extra mile to take up more work if there is no one willing to do it. ... [Though,] s/he said, "It's never been that intense. This assignment is the most exhausting by far." (P04)

At the same time, some students were apprehensive about socializing as many of them were worried about people's judgment and got tired of negative social interactions or exclusion over time. Burnout from masking and overcompensation of their autistic characteristics was observed.

> The difficulty is to follow others' moves well. I do not want to let others feel I am clumsy. I find I actually lag far behind others when we "dem beat" [i.e. chanting slogans with claps and steps to enhance team spirit]. ... I also find myself having problems with self-confidence. For example, I am not talkative and not good at body coordination. ... I don't know much about communication skills, such as having eye contact with others. I feel like others are not interested in me. Eventually, I just hang out by myself, and become more and more afraid of [interacting with others]. (A15, M, BD Year 3)

> I feel like I am not normal. Of course, I know I am not. The school teaches us that we should not think we are either normal or abnormal, as everyone is unique. Still, why others can interact naturally, and some of them seem to gain more energy in the social setting? For me, after talking to many people, which seems to me more like "tackling" other people, I will become so exhausted that I feel like just lying down. Don't even ask me to work the next day. So, I think I am not the same as others, yet I am not an introvert. I then start thinking about autism. Even though I have autism, I still have to integrate into society, such as making some friends and living the same as others. Otherwise, I will be excluded from society. I do not want this to happen. (A16, F, BD Year 3)

To some students with ASD, they were not very much interested in social relationships, not concerned about making friends, or not getting close to others. They expressed the desire for only a few quality friends or a small group. Some also described better social experience with those who they were more familiar with, had known for a long while, and respected their social boundaries and preferences.

> Making a friend is essential. However, having an ideal friend is hard because I want a friend who will not always bother me. I prefer sparing time for myself, which I hope is more private time. However, most people like to socialize, but I do not want it. (A15, M, BD Year 3)

> I do not have friends. ... I want some friends, if possible, I can ask for their help. ... Another reason may be that I am pessimistic. I agree that having friends are great, but being alone also feels contended to me. ... [My friends and I] have quite a shallow relationship and rarely interact with each other, but if someone wants to talk to me, I am willing to. (A14, M, HD Year 1)

Having familiar and supportive peers might also seem to help mitigate their problems in group work and social settings.

Since students will choose different courses each semester, classmates are "reshuffled" in each course. … So I probably will not meet the same classmates next semester. However, there is somehow "consistency" where there are two familiar peers I know because we study in the same program and similar courses, so I can have companions in the same course and in the same time slot. (A24, M, BD Graduated)

3. Emotional and sensory challenges

Another area of challenges faced by college students with ASD was related to their emotional and sensory sensitivity. Many described a general tendency of emotional vulnerability as they tended to get emotional easily. For example, some students indicated they often had sad and angry emotions (A30, F, PG Year 1). Many described their triggering experience by external events that caused their intense negative emotions. Some might direct their frustration towards themselves.

When I can't follow the instructions of my [practical subject] teachers, I will slap on and stamp on the chair, and then I will hit myself. Eventually, sometimes I will even have a meltdown. (A16, F, BD Year 3)

When I was studying in the Foundational Diploma program, I once forgot to go to school. Because of this, after I arrived at school, I felt very angry, so I had tantrums in front of everyone. (A14, M, HD Year 1)

Some students' mannerisms were perceived by others as very emotional and at times too intense or socially inappropriate. The reasons behind their emotional responses were also not immediately understood or accepted by others.

When someone doesn't understand what I am explaining, then I will use different ways to explain it. They think I am agitated, but I think I am really calm. I only think when I use different ways to explain myself, I may show more emotions. Nevertheless, I think I haven't been too agitated. But they will think so and ask me to "calm down, calm down." (A18, F, BD Year 4)

It's sometimes hard to tell from his/her facial expression whether s/he is happy or sad. In my impression, s/he has a flat tone of voice and not many expressions. … It's challenging for me to observe his/her emotions. … As I can't tell his/her emotional states at that moment, I may say something wrong that continues to make him/her angry or unhappy. (NT06)

Students with ASD described stressors about academic learning and school-related stress, such as worried about academic achievement, test anxiety, and peer pressure, which may sometimes impact their academic performance.

If I did not take an exam under special arrangement, I would sit in a hall with a few hundred people. I am quite timid, so if I take the exam in the hall, I think I will be more anxious and also the stress would become greater. …I think it really affects me. (A12, M HD, Year 1)

Another type of common triggers for their intense emotions were related to their sensory experience. Some students recalled specific sensory stimuli in certain contexts that made them uncomfortable and overwhelming. Examples might include fire alarm in student dormitory, background noise in the examination room, and balloons commonly used in student activities. In more extreme cases, the overloading sensory experience might cause

students with ASD to react emotionally in that situation. They might also become emotional while recounting the experience during the interview.

> Other people may be used to sleeping late. They go to bed at 2am or 3am and take a bath very noisily. This makes me get very agitated expressing myself in the [social media application] group. … It means, research showed that a poor emotional state will result in killing people! (A28, F, BD Year 4)

> You know, sometimes some people with autism don't like to be touched. … For example, I have seen some students attempt to pat him/her. He/she almost wanted to hit back. Of course, that typical student didn't know what happened and complained immediately. So, we could not treat it as a normal case of fighting. Since they don't understand the things to avoid about people with autism, these things could happen as well. (TS04)

Situations with high social demand were also common triggers for negative emotions in some students.

> Exactly, since they got so elated in [Orientation Camp], I was afraid that I was too agitated. Because of autism, I have serious emotional problems. These kinds of high-spirit activities will make my emotions fluctuate greatly. (A07, M, BD Year 2)

> For example, if you ask me to present in front of the class, I will feel anxious at that moment. Because the people around me and I myself will notice my shaky hands. It is very obvious. Sometimes, even if I don't think that my hands are shaking, my classmates in the audience said I am very anxious and my hands are trembling drastically. Also, I think sometimes I speak stammeringly. … I'm afraid of saying something wrong and someone will look at me. So, actually, I am a little bit afraid to look at others' faces and eyes. (A12, M, HD Year 1)

> Perhaps when I make jokes with him/her, when I find a photo of him/her on the internet and show it to him/her. After that, he/she asks me not to do that and don't look at it anymore. But I just keep showing it to him/her, and then my behaviour makes him/her angry. Because he/she has already told me directly that this is triggering to him/her. I start to be aware of it. (NT07)

There were also comments about the social unrest in Hong Kong and the COVID-19 pandemic that caused negative moods and emotional disturbance in some students.

> I stayed at home for a long while during the time of social movement. I was depressed, and even cynical that I refused to engage with others. I rarely talked to my classmates or initiated a conversation. … Later because of the pandemic, we needed to have class via Zoom. I might have trapped in home for too long, I wanted to know more friends of opposite gender. … Also in Zoom, it's difficult for me to use my facial expressions to express myself or voice out. Such a stark difference [with in-person interaction] made me very mad. I feel like I was being neglected. (A28, F, BD Year 4)

> Both my depression and social movement impacted me. ... Back in the day in 2019, I was overwhelmed by the social movement because it was a mess at that time. In class, I had seen some of my classmates in full gear, which made me feel scared. I remembered I thereby did not attend the class ... Probably people with autism are more sensitive to such an environment. It might be my association was stronger than others, so I was more sensitive than others. ... I remembered there was a policeman

near my workplace because of a case of falling objects. It might be a simple thing, but I would associate [that with the social movement and unrest going on]. (A06, F, AD Graduated)

I had an ordinary university life, because the anti-extradition [movement] had overridden the entire university. ... I did not want to see that happen. ... I felt like academics was intervened and disrupted by politics. (A07, M, BD Year 2)

When I was stressed, I would go see [a counsellor]. ... Different things stressed me out, perhaps academic matters. But I am mostly stressed about things other than academics, like politics, which gives me so much stress. Hong Kong is getting more ridiculous, making me worried about a lot of things. (A26, M, BD Graduated)

4. Transition and career challenges

College students with ASD narrated their experience with the transition after secondary school as well as their ideas about career development. Currently enrolled in a post-secondary program, these young adults constituted a selected group of youths with ASD who shared the common pathway of exploring emerging career interests in secondary school and making the choice to engage with the selected program in college. Overall, these youths mentioned how their choice of post-secondary program was related to their own interests and preferences as well as personal strengths and aptitudes, which emerged in their early school years and were developed through different life experiences. At the same time, some youths were also aware of their weaknesses and limitations, and executed their choices to decide on a pathway where they could work around the challenges. They cited examples from their exposure early in life (e.g., interest classes, secondary school activities, volunteer work, religious services) that had shaped their decision-making process, which is at times well thought-through but sometimes appearing haphazard.

I prefer a course that does not require a lot of memorization. ... Also, people observed that I am enthusiastic to help, and I am well-organized and enjoy packing things and setting up [for events]. … Moreover, I have religious belief, so I prefer a job that enables me to serve and practice my religion. (A12, M, HD Year 1)

I am certain to choose [University A] because I am familiar with it since I took a gifted education course in my secondary school there. ... I had considered [University B and C], but I intentionally performed worse in their interviews so that I could enter [University A]. (A07, M, BD Year 2)

In most if not all cases, students with ASD pointed out the crucial role of significant others, including mostly parents, but also teachers, mentors, and friends, to give them direct guidance on career decisions or serve as role models for certain career pathways. They also provided feedback to the youths to help them better understand themselves.

I have talked to my father because he has university life experience and knowledge. That is, my father and my secondary school teacher recommended me to study data science because it does not require many interactions, which is suitable for my future career. (A29, M, UG, Year 1)

Some commented that it was important to receive professional advice from college teachers and counsellors about their long-term career development.

I knew a professor who is willing to talk about career planning with me. I can ask for his/her advice even after the course if needed. I think it is very helpful to me. (A10, M, AD, Year 2)

To many, their public examination academic results were considered a reflection of their aptitudes and abilities, while serving as a limiting factor that might set the upper boundary of the available post-secondary program choices due to the highly selective and competitive admission process. Some youths also tried to maximize their personal assets by considering the vocational prospect of their program choices, which was often linked to questions such as whether there is an actual job matched with the area of study, how the program could open them up to a wide variety of job options, and the demand in the actual job market.

I have hoped to study mathematics since I was young. Still, I did not have a particular major preferred in the university. ... Also, I researched for other choices as I may become more interested in other subjects eventually. Since mathematics is a significant part of science and technology, it will be easier for me if I want to study a master's course in other areas in the future, like business. Or I can choose to stay in mathematics, as it gives me many options. I can choose to study math or even pure math like my teacher recommended, so I can have a wider scope of development. (A13, F, BD Year 1)

A few youths mentioned the importance of services available for students with SEN in the college programs. Youths and families might choose to prioritize institutions with more established SEN support and a friendly climate, which were said to be more important than other factors such as institution ranking and program reputation.

Another important area of post-school transition is vocational development. Some students with ASD expressed confusion, uncertainty, and struggle for future career.

I do not have much idea about the future now because I do not do any career planning. I have no idea what's after university. (A07, M, BD Year 2)

I want to have a job where I can gain some work experience. I want to try different jobs, so I can gain more and more experience. There are a lot of things I want to try. It takes time to try out and find out what I want to do. (A26, M, BD Graduated)

In other cases, many students with ASD, similar to their peers, started to have emerging thoughts about their vocational prospects. Some students took advantages of the college resources for credit-bearing internships, college student jobs, or even volunteer work to expand their work experience.

I will study hard in the first two years and get some internship or job related to data science in the last two years of my university life. Since gaining work experience may count some credit to my major. (A29, M, BD, Year 1)

Others looked for temporary or summer jobs in the community. There were also examples of non-governmental organisations (NGO) providing internship placement services specifically for students with SEN to help them secure opportunities that might not otherwise be easily obtained in open recruitment. Youths could gain work experience as well as familiarity with the social environment and etiquettes in the workplace.

Although I got reprimanded at work, the working environment is not as worse as I imagined. I have heard that the working environment is unscrupulous. ... However, I find it harmonious after all. (A18, F, BD Year 4)

On one hand, some students found the work experience successful and rewarding especially when the work was matched to their skills level and interests.

It is because I want to earn money... It is interesting because I have never worked before. Working as student helper would help me to become familiar with work. (A07, M, BD Year 2)

On the other hand, many youths described challenges at work similar to the domains identified in their college life, including cognitive challenges related to work tasks and sensory overload due to social demand.

Since my organization skill is weak, fewer people support me to become an engineer. They also feel hesitant for me to become a teacher because a teacher needs to be well-organized, which I am weak. … Now I am exploring different ways to teach. For example, I do better in private tutorial as this is a one-to-one setting, I try to break things down into smaller steps. (A18, F, BD Year 4)

On my first day of work, a customer asked me why I chose to do such a crappy job instead of studying. ... Kept nagging me, but I could not handle such an issue since I was the only one working there. … A woman also teased at me, "You will encounter these problems eventually. Why do you not adapt to this now?" ... That's why I was angry. (A08, F, BD, Year 1)

Social communication challenges were prominent in the work experience of students with ASD. Problems could range from misrepresenting themselves in job interviews, miscommunication or different expectations between youths and supervisors, and expressing themselves in ways that might cause embarrassment in others.

I was almost hired by a famous firm. … I think I only focused on explaining how to gain work experience but forgot to present myself to impress others [in the interview]. ... Job-seeking skills are not sophisticated enough, and I do not know what an employer is looking for. ... But at the same time, I find the existing interview and recruitment procedures used by human resource is not inclusive. ... Since the characteristics of ASD are invisible, you cannot tell from the appearance whether a person has ASD or not. When you do not make good eye contact, many HR personnel just will not consider you. (A24, M, BD Graduated)

My supervisor actually expected us to finish the work earlier. However, we left it to later, and did not make it earlier. Later, I received feedback from the supervisor, who said, "I do not expect you to spend so much time on this work." (A18, F, BD Year 4)

My mood swings. When I was exhausted, I wanted to return home and could no longer function. In fact, I cannot just skip work without reason. ... I once had a quarrel with my supervisor without keeping my manner. I called my family to complain loudly and rudely in the office without considering my image. (A28, F, BD Year 4)

Social communication difficulties at work were particularly worrying to many college students with ASD, as many of them indicated the need to look for a job or career with minimal social demand. Some expressed their concerns about potential problems they might encounter in future work.

I will become a "make-up artist for the dead" [i.e., an embalmer to beautify a dead body in local Chinese culture] if I were not admitted to university. ... I will be less stressed because this job does not require interaction and I can work alone. (A21, M, BD Year 2)

Sometimes, senior colleagues and bosses give out unclear directions that makes me feel like I am doing wrong. (A23, M, BD Year 3)

If someone finds a person with ASD weird, they can just arrange him/her to sit in a remote corner so he/she doesn't need to talk. … Other colleagues may find certain tasks boring, but he/she actually likes it and is willing to take up. If we can teach employers how to get along with colleagues with ASD and be more inclusive, it benefits both parties. … It means the employer knows what job roles and tasks best suit the colleague with ASD. (TS04)

5. Others' misunderstanding

College students with ASD recalled others' perceptions towards ASD as overwhelmingly negative. Most of them commented that people do not understand them or have little accurate knowledge about ASD, SEN, or mental health in general.

Even though the new generation has more mental health knowledge, it does not mean something is changing. (A24, M, Graduated)

More specifically, there were various types of stereotypes and stigmas towards ASD. Among these, many centered on the ways how the features of people with ASD were described or understood. For example, people with ASD were misperceived by many as "weird, stubborn, and don't need friend" (A07) and "staying in their own world; like 'bus enthusiast' (巴膠)" (A15). People also have inaccurate knowledge about the manifestations and etiology of ASD. On one hand, people commonly reacted to college students with ASD as if they were "too normal to be autistic". On the other hand, ASD was perceived as either extremely impaired (e.g., ASD is equal to intellectual disability (A13)) or talented, but missing out its spectrum nature.

University does not know how broad the spectrum can be, so it does not understand the actual needs of students with ASD. (A30, F, PG Year 1)

All these contributed to the stereotypical images of ASD that were often overly fantasized or at best not representative of the diverse presentations in reality. These inaccurate understandings did not only stigmatize the autism community, but also led to further negative repercussions on people on the spectrum, such as negative judgments, unfair expectations, and missed opportunities.

Many people find that people with ASD do not like to go out. Not all of them are the same. People think I am not classic autism because I am talkative. Most of the typical features of autism do not fit with me. (A06)

I will say Asperger's or autism images portrayed by the mass media give people too much "fantasy". They thought that people with ASD are very smart but not good at communicating with others, though this is not my case. ... There are a lot of wrong expectations, thinking they have a high ability to achieve academic success. It is not always true. (A01, F, BD Graduated)

My family members think I am mentally retarded. They do not understand what ASD is and are not willing to change their perceptions about ASD even if they listened to a psychiatrist about what ASD is. (A27, M, HD Graduated)

I have heard from some teachers that they think people with ASD are harmful to other students. Though I am not sure whether they are really talking about autism. (SS08)

They think people with ASD like to hide at the corner and keep silent. People also think they choose to be autistic. It's like how people think about depression. You just need to cheer up, and then the depression will go away. Similarly, they think if you can quit being "autistic" [i.e., In Cantonese Chinese, the term "autistic" also literally means "isolating oneself" or "hermit"], then you will not have autism. (NT02)

There were also many people who were not aware of what ASD actually is or what people with ASD really need. Some students' needs and concerns went missing under the radar due to others' ignorance of ASD or at times disinterested attitudes. College teaching staff rarely received any systematic training about SEN or ASD compared to the established teacher training in grade schools.

Who gets the attention [from teachers] are those who create a lot of troubles in class. Then people form an impression of that problem with that kind of person. This kind of stereotype is not always true. (A30, F, PG Year 1)

I have to tell professors about my needs because they may not be aware and ask about the needs of ASD proactively. (A08, F, BD Year 1)

People in university do not care about SEN. I am sure if I ask my university instructors, they won't think I have SEN. University professors do not think they need to understand, which is different in primary and secondary school teachers. (A24, M, BD Graduated)

Misunderstanding and ignorance collectively incurred negative impact on the learning and college life of students with ASD. Many cited examples of college teachers and support staff who lacked the sensitivity and specific knowledge about ASD as well as the actual skills to work with students with ASD, which made it more challenging for them to receive adequate support for their specific learning needs.

My teacher does not know how to teach a kid with ASD. I will have some emotional reactions during [learning activities] that I am angry with myself when I cannot perform well to the instruction from the teacher. ... I may have a meltdown, but the teacher does not understand and find me being rude. ... So I am very stressful about academics. The teacher will even question my ability to enter the [major] program. (A16, F, BD Year 3)

[The lecturer] may suggest some ways for me to adapt better. For example, I need extra time for [exam], but then he said, "You have to work overtime in your future job. You have to get used to it." ... That gives me a hard feeling because they ignore [my needs], though I understand he/she doesn't know what SEN is. (A18, F, BD Year 4)

At times, despite the availability and provision of services, other people still misconstrued the actual purpose and significance of services, which, in turn, discouraged college students with ASD to seek appropriate services or otherwise made them less confident or motivated in learning.

There is another counselor arranged for me [at school], but the message I got from [that another counselor] is that I am abusing the resources since I also visit [a similar professional] at hospital. ... I do not want to visit the counselor at school again since I received this message. But the counselor at hospital mainly caters my ASD needs while the counselor at the university mainly addresses my educational needs. … I do not think there is an overlap of resources. (A08, F, BD Year 1)

My teacher seemed to think [having autism or SEN] is not an excuse and doubted whether extra time is effective for me. ... I do think that 15 minutes play a key role in helping me to check the organisation of my work. It is vital for me to revise the content as my writing is too messy. (A28, F, BD Year 4)

I want to become a peer notetaker even though I also have certain [special] needs. My classmates would perceive [a volunteer peer notetaker for another student with SEN] as cheating for extra resources. They do not understand the needs of people with ASD or SEN and think they do not have any needs or they are just trying to avoid learning. Their negative attitudes made me feel very uncomfortable that time. (A08, F, BD Year 1)

Seriously, other people may think I am not that different than normal people, so why it is easier for me to receive "benefits". (A06, F, AD Graduated)

Some parents out there would say, why do your kids with SEN can [receive accommodations], but my kids without SEN cannot. They talk about equality all the time, but it's hard to have one standard for equality. We as parents of children with SEN just want to help them solve the problem. (P04)

Students with ASD also depicted a sense of social exclusion in the college environment, as well as discrimination (explicit and implicit), stigma (public, self, and affiliate types), microaggression, and unfair treatment in the broader society.

We suddenly talk about SEN and extra time arrangements. A boy said, "Oh! I have [SEN] too!"... But then he said he's kidding. I feel like, what [on earth], really?... He talks frivolously while we are seriously discussing. ... Even though I am okay with that, it is not the attitude I appreciate. (A18, F, BD Year 4)

My father does not want me to disclose my ASD condition because he fears stigmatization, even though he worked in the medical field. (A18, F, BD Year 4)

We kept telling the typical students to do a favor and tolerate this special student. S/He is not dumb or crazy, we have to keep reiterating that. We earnestly persuade the other students and hope they can accept and help that [special] student. (TS04)

Overall, this sense of nonacceptance and rejection had detrimental effects on college students with ASD. Some explicitly mentioned the need to pretend normal to avoid others' ridicule or judgment.

So I intentionally pretend to be normal people, and avoid speaking too bluntly. I don't want to offend other people. (A22, M, HD, Year 1)

I care about my image and "face". I want to keep a positive image in others, just like a normal, equal peer or friend. Therefore, I did not disclose to others my [ASD or SEN] condition. (A28, F, BD Year 4)

6. **Disclosure of ASD or SEN conditions**

In fact, most of the students overwhelmingly suggested that their reasons for not wanting to disclose their ASD condition or even intentionally concealing it were because of their fear of others' judgments and negative treatments, such as "getting hurt" (A08) or "not getting any additional help" (A10).

> I completely hid [my ASD/SEN condition] because I was afraid of being discriminated against. If I do not disclose it, and keep silent, others may find me aloof only, which is not a big deal. ... I think others find us [people with ASD] similar to the other people with disabilities, those who are weak and lack certain abilities. ... I feel very uncomfortable when others treat me as a weirdo. (A14, M, HD, Year 1)

> I will hesitate when sharing my diagnosis with others. ... I do not know how they will think about me. ... Others will have lower expectations on me just because of that thing [diagnosis]. (A18, F, BD Year 4)

Some also noted that it was not necessary for them to disclose or mention their ASD or SEN, simply because that was not a norm or needed.

> If someone ask me, or when absolutely necessary, I will disclose [my ASD/SEN]. I just won't talk about that intentionally, because Chinese people would not do that intentionally. I told my peers that I have problems in some aspects, but I won't be specific. Because I think it does not affect me even if I disclose or not. (A13, F, BD Year 1)

> I don't think there is a need [to disclose]. I don't like being labelled. If you always mention it, people would think you are "sadfishing". (A06, F, AD Graduated)

> Unfriendly policies or procedures and perceived ineffective support further discouraged students with ASD from disclosing their conditions to institutions, which might, in turn, impact the planning and provision of quality services.

> Many people do not want to disclose their ASD condition. I once applied to a college school... They requested me to submit many documents and undergo many check-ups. It's like they are facing a big trouble. I feel like after I disclose, I have to overcome so many different hurdles before I can get enrolled. ... When there are too many procedures to undergo, I feel unwelcomed. (A24, M, BD Graduated)

> At that time, my mother and I cared very much about how others thought of me. We did considered whether my SEN would affect if I would be admitted. (A28, F, BD Year 4)

> I want to declare my [child's] SEN condition in the application for overseas exchange programs, but there is no place to fill it. I can be [a student with] SEN to apply for an exchange program, right? (P02)

Other than negative effects of stigma and discrimination, some students also mentioned other reasons for non-disclosure such as privacy (A22, A25). Some individuals who had mild conditions or symptoms expressed the lack of actual needs to disclose.

> Someone asked me why I had extra time [in the exam]. ... I briefly told them [my situation] because we do not know each other very well. Only those who know me long enough can tell [about my autism]. (A23, M, BD Year 3)

In my class, because of confidentiality, even though I know some students with SEN, of course I know, I try not to show it. In case if I notice any problems, I will talk to the student privately. (TS04)

There are occasions where college students with ASD recalled how other people showed understanding and acceptance towards them. These included college instructors and counselors showing awareness and providing support, peers recognizing their challenges and accepting them, and family members being supportive.

My professor is already relatively better. All of the lecture materials and PowerPoint slides will be uploaded entirely online. At the very beginning when s/he knows I have this problem [SEN], s/he doesn't dare to cut things out of the notes. It's because in university, the PowerPoint slides may not always be identical to the lecture notes, where some slides may be cut. (A01, F, BD Graduated)

I told my teacher that I am a student with SEN. My teacher said s/he encountered many students with SEN and was willing to teach them no matter s/he knew about this situation or not. S/He understood we have the potential. I mentioned about my weak communication skills and asked if I can talk to her/him on WhatsApp. S/He said no problem, anytime. (A16, F, BD Year 3)

Supportive social environment of these kinds helped create a sense of openness and acceptance towards individuals with ASD, which made them feel more at ease revealing their condition to receive social support and understanding.

I told my best friend I am on the spectrum. ... My friend did not have any unusual reactions and just said, "Oh, I see." I feel like when I am willing to share something private, the friend is also willing to share his/her difficult family situation. We have mutual respect for each. (A12, M, HD Year 1)

Some students described the fact that they were more willing to disclose their conditions to peers with similar special needs or disabilities, whom they found more easily resonating with each other.

One student discloses his/her ASD condition to me. ... I think I feel comfortable interacting with people with ASD because we would not judge each other and would be more caring with each other. Relatively more comfortable, not completely though. ... We can understand each other. (A24, M, BD Graduated)

In other cases, they intended to disclose their conditions for obtaining learning support, individualized services, and tangible resources (e.g., accommodation plans, scholarships). Such kind of disclosure is contingent upon the specific needs that came up when formal documentation of SEN is required.

I have to retake an examination after the first semester of year 4. So, I think it's the time for me to apply for some supports for completing my Bachelor's degree. ... But when I first started, I did not want all the classmates and teachers to know my conditions. ... I am afraid that would affect me a lot. (A28, F, BD Year 4)

It is interesting to note that some students with ASD expressed that it was easier for them to describe their specific features or weaknesses than stating their ASD diagnosis, which might not be directly comprehensible to others and cause unnecessary confusion or misunderstanding.

I have ADHD obviously. I am apparently fidgety and all over the place. That's because I am hyperactive. That's straightforward. … However, I don't know how to explain my ASD condition [so others would understand], so I do not explain it. (A18, F, BD Year 4)

I never disclose [my ASD], but others may find me having mood swings instead of having autism. They probably think I am more likely to have depression. (A06, F, AD Graduated)

7. Gaps in Accommodations and Services

The range of accommodations and services received by college students with ASD varies tremendously. Those who had disclosed their condition to the institutions would receive formalized support services within the school setting, while other undeclared students might seek out community-based organizations for additional services that could meet their needs.

Many students mentioned the availability of academic accommodations catered for their learning needs. The most prevalent accommodations mentioned were related to the process of assessment, such as extra time and breaks during examinations, special examination room, and extended deadline for assignments. Other accommodations might function to assist students to access learning materials and participate in classroom learning more effectively.

The supporting staff will accompany me in asking the teaching assistant for the learning strategies to help me with comprehension and understanding the main points. (A22, M, HD Year 1)

Most students perceived accommodations such as extension of examination time and assignment deadlines as beneficial and thus need to be in place. However, these accommodations were also perceived as too generic, which sometimes could not benefit every student or suit the learning requirements of individual courses. Some students indicated, for example, common course requirements in university involved essay writing, which could be done at home in a self-paced manner with frequent breaks. In other words, the accommodations provided to the students were not monitored for its actual effectiveness or how the students benefited from them in reality. Beyond the provision of accommodations that are more remedial in nature, other students also hinted at the unavailability of more proactive, individualized academic interventions that could actually equip them with suitable study and examination skills.

When I saw the question, there were a few parts to resolve, which were not straightforward. ... I cannot figure out the logic of how one thing is linked to another. ... I find the break time during the examination helpful. I can read the examination questions, then close the paper and think about them. Also I can avoid over-thinking. (A12, M, HD Year 1)

I have the accommodation of extended time. I am happy with that psychologically speaking, though people say it does not make any difference. ... Because I already have this accommodation for so many years, I am still doing the same. ... However, I will be mad when there is a break that may disturb me and cut me off while I am in

the middle of solving a problem in examinations [of certain subject]. (A18, F, BD Year 4)

Several students noted the fact that the accommodations they received in college were no different than in secondary schools. These students were provided with special examination arrangements for public examinations that were approved by the Hong Kong Examinations and Assessment Authority (HKEAA), which were most often directly adopted by colleges upon formal documentations provided. However, some commented on the lack of specific and individualized evaluation of their learning needs in post-secondary settings.

Because the HKEAA has approved [my accommodation plan], college must give me [the same plan]. College will follow government organizations and give me all the same exam accommodations like what I had in public exams. ... But to be honest, these supports under the Hong Kong educational system are far from enough. If it is enough, we do not need the public to be aware of this issue. (A12, M, HD Year 1)

Across different institutions, individual casework and follow-up support was available to these students, although the intensity and consistency varied based on individual needs. Systemic barriers also pose challenges to quality SEN support services. For example, multi-tiered systems of support are implemented in primary and secondary schools as supported by the Education Bureau, while services in post-secondary settings are not mandated and thus vary across institutes. SEN training is also required for preparation programs and professional development for grade school teachers, but not in university and college teachers.

My secondary school teacher told me to be prepared that there are fewer supports in the university. … I have not visited [a counselor], but they need to serve that many students, so I do not think they can provide that individualized care as well as a social worker in the secondary school. (A26, M, BD Graduated)

Even though there are some group-based training programs, they just do some explanations. Is it that simple? I think teacher's experience and training quality [vary widely]. I've seen and I think some [therapists] know how to prompt step by step, but may not know how to target precisely. (A12, M, HD Year 1)

It's more challenging in university, because primary and secondary schools only deal with things within schools. … If we have to [make a paradigm shift of how to view and support ASD or mental health in general], we have to be very careful because there are many factors beyond our control in the university setting. (TS02)

I worry that programs targeting post-secondary settings may not be a good idea. I think promoting inclusion should not just apply to college settings. It should be promoted in the entire society. (TS03)

Individual support was provided by social workers, counselors, or SEN officers to help students problem-solve issues related to their learning, college life, and career development. Exceptional cases were also noted where in-house support could be arranged by an academic department to assign regular hours of teaching assistance to students with documented SEN. Support staff also assisted with coordinating with instructors and other professionals in and outside college as well as facilitated communication among stakeholders to ensure services and accommodations could be implemented. More specialized services were also available upon referral to outside professionals, such as educational psychologists, family therapists, and other mental health professionals.

[Supporting staff] will help us advocate for our rights, such as exam accommodations and coordinating with the university. ... At the beginning of a semester, they will also email our instructors to explain our situations and remind them to give us special care, which is helpful. … I will have regular meetings with the staff who follow up on our case. They also link us up with an Educational Psychologist for assessment of our learning needs, which is also helpful. (A16, F, BD Year 3)

Some students recalled receiving support and encouragement from instructors and teaching staff that not only made their learning more effective, but also contributed to their overall satisfaction in their post-secondary experience. Good teacher-student relationships appeared to be underlying the basis where students found the college instructors and their advice helpful.

The department head sent me an email to remind me to retake a couple of courses and asked if I needed any assistance. I therefore think of support for SEN. I would be happy if I can ask for help about anything. I can just email the professor or teacher to look for help if I have questions anytime. (A28, F, BD Year 4)

A professor cares about me a lot because of [my SEN]. ... S/He will even send emails to get updates about my recent life, which makes me feel so warm. When I was hospitalized in the previous semester, the department and [SEN support unit] coordinated well. They think my mental and physical health comes first, and everything else can be worked out. This works better than the staff in other departments managing free elective courses. (A16, F, BD Year 3)

Students also mentioned other programs that often combined intentional learning or therapeutic components with leisure and socializing activities. These provided opportunities for students with ASD to practice necessary skills for college success and expand their social networks, resources, and exposure in general.

The biggest support is to refer me to join different activities in other NGOs ..., where I could receive job support and join an internship. [College support unit] hosted some social training groups and an online exchange program where I could interact with foreign students. (A15. M, BD Year 3)

The college social worker hosted some group programs for communication. I remembered joining some kinds of a "barrier-free communication group". ... That's the rare occasion I would interact with others because this was required by the program. ... For example, when everyone was chatting, people needed to demonstrate how to give an open-ended topic and follow up on others' ideas to continue the conversation. (A14, M, HD Year 1)

Some examples of peer support or mentorship programs were noted in several institutions, where most students with ASD found the experience meaningful, rewarding, and beneficial to their personal development and inclusion into the college environment.

[A peer program organized by a student support unit] paired me up with two peers to talk to me and help me adapt to university life. They are helpful since they provide me with many suggestions for me to transfer to another major program. … I also receive mental and emotional support from them. (A08, F, BD Year 1)

I met [my friends] mainly from a service team [within a peer program organized by a student support unit] ... As a student with SEN myself, and having benefitted from this program, I want to use my first-hand experience to help other students with ASD.

We are running a project related to SEN … to organize a human library event. (A07, M, BD Year 2)

We recruit [university] students to become peer social coaches. … We allow time for students [with ASD] to practice with their social coaches the skills taught [in social skills group], hoping that they will improve in social skills and giving them a space to interact with same-age peers. … For some of our students who are already very verbal, they just need a safe environment, like our program, to interact with peers. They blend in quickly, and even initiate to hang out with others. … For others who are more quiet, with fewer friends, and go to school just for classes, this program serves as yet another environment for them to try interacting with other peers. (SS05)

Summary & Recommendations

The current study revealed that college students with ASD are faced with a number of challenges in their post-secondary education. The differences in their cognitive processing make them relatively more vulnerable to academic difficulties in high demand college curriculum. Their different social understanding and communication patterns easily lead to problems with working and interacting with others. Their sensory experience coupled with stressors in college life contribute to their emotional liability. Transitioning from secondary school to college as well as into future career development involve numerous opportunities, yet environmental changes and quick decision-making process may pose challenges to these young adults. The misconceptions and negative attitudes towards ASD in college and society at large further create barriers for these students to access opportunities and suitable services.

Students with ASD and other stakeholders in the college community have identified accommodations and services with emerging success, while also expressing concerns for more comprehensive support and systematic effort in promoting successful outcomes in individuals with ASD. The following recommendations are made:

1. Increasing awareness and understanding about ASD is an overarching theme that cuts across all domains of recommendations. Although students with SEN have gained more attention from the public in recent years, there is still a myth or at best misunderstanding that these students do not exist as adults. People lack accurate knowledge about ASD and SEN specifically pertaining to adulthood, including their presentations and characteristics, common challenges, and strategies to support them in college and employment settings. To promote an autism-friendly college environment, it is imperative that all people in different roles in school or employment settings, or in society at large, can become more aware and knowledgeable about these types of students. For example, general education or common core curriculum in university can be leveraged to introduce courses on diversity related to characteristics and needs of persons with SEN or mental health issues. Promotional campaigns in the form of talks, seminars, and human library are also some common examples that are currently in use.

2. Any efforts of services and interventions targeting college students with ASD need to take into considerations their specific needs during the developmental stage of young adulthood. It is important to balance the provision of direct support and respecting the autonomy of youths with ASD. It is understandable that individuals with ASD grow up to become adults can exhibit an extremely wide range of abilities in independent functioning, but this does not take away their rights to self-determination, such that their preferences, interests, and decision-making are to be respected to the largest extent possible. A strength-based approach should be adopted to capitalize on the unique strengths and abilities of each student as well as celebrate their successful experiences to further strengthen their long-term development. At the same time, practitioners and other stakeholders need to recognize any challenges and difficulties faced by individuals who may benefit from extra individualized support. A "watchful waiting" attitude may be useful to regularly engage the students and monitor their progress so that timely and appropriate support services can be provided to fit with their individual motivation.

3. More training and professional development should be delivered for both teaching and support staff in the post-secondary education sector. In addition to basic understanding of characteristics of ASD and SEN, specific classroom strategies and learning tactics that can be used to provide individualized support for students with

ASD should be targeted in the training. Most of their learning support needs, such as explicit instruction, concrete examples, flexibility in using multiple modalities of representations and expressions, are consistent with the principles of Universal Design of Learning (UDL), which not only cater for students with SEN but in fact benefit all students. Also, teaching staff would benefit from specific and detailed guidance on what strategies to use and how to maximize learning effectiveness. Promoting better awareness and attitudes towards these students would also translate to better understanding of their support needs and facilitation of student-teacher relationships.

4. The most prominent need that college students with ASD want to address is the opportunities for development of social competence and relationships, which should involve meaningful practice and application of social and communication skills that enable them to overcome social difficulties that they experience in real life. Ideally, practice and support should be conducted in real settings, with authentic interactions and on-the-spot guidance to assist them to build and sustain reciprocal social interactions in a step-by-step manner. Some notable programs were welcomed by students with ASD, such as social events organized by college student units during semester holidays (e.g., Christmas gatherings) and peer programs that gradually expand their social exposure and engagement with neurotypical peers and university life.

5. There is a lack of a consistent, systematic support framework that can set the common procedures for every party and stakeholder to navigate and follow. This results in both assessment of student needs as well as provision of services left to the sole discretion of individual practitioners or teachers, which are often not ideal when resources are not well-coordinated and accountabilities are unclear. A set of practice guidelines should be set up to delineate the basic parameters and common expectations for the roles and functions of each responsible party for consistent service delivery (e.g., despite the recent policy updates by the Education Bureau that facilitate the transfer of information about students with SEN from secondary schools to post-secondary institutions, how such data are used and inform the provision of college supports is still unclear). Standards used to develop such procedures should align with best-practice guidelines in ASD/SEN (e.g., "National Institute for Health and Care Excellence (NICE) guidelines" in the United Kingdom and "Evidence-Based Practices for Children, Youth, and Young Adults with Autism" by The National Clearinghouse on Autism Evidence & Practice in the United States) so that evidence-based practices can be adopted to the largest extent possible to maximize student outcomes. Such practice guidelines can better facilitate communication among all the stakeholders (e.g., available services should be promoted and made more transparent to students and college staff alike).

6. Interagency collaboration should be promoted to facilitate better transition and continuation of services across times and settings. In-house services currently available within individual institutions are not adequate enough to cater for the wide variety of support needs of students with ASD in both college and community settings. While the current service provision relies primarily on time-limited buy-out services or case referral to outside professionals, more structured and regular collaboration with community service providers would allow better utilization of existing resources of both parties (e.g., joint service programs between college student support teams and non-government organizations (NGOs) with specialty in SEN/ASD conducted in both post-secondary institutions and community-based settings). This will not only make services more easily accessible and familiar to students with ASD,

but also help facilitate transition support before and after college as well as their career and personal development outside of educational contexts. With the common practice guidelines and assessment procedures set up as described above, service coordination and communication of student information can be better facilitated, which could prevent problems such as service duplication and client dropout. Student progress and growth can also be monitored and intervened early along different developmental stages.

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University Needs and Experience

During the interview, we would like to know more about the experience of students with ASD in the university/college settings. What are the difficulties, challenges, and needs they have encountered?

A. Transition Experience [ASD/P]

1. Can you tell us about you/ your children's experience transitioning to college education after graduating from secondary school?
    o Major selection, school selection
    o Admission, orientation
    o Role change (from secondary student to college student)
    o Knowledge about the university (e.g., environment, study mode, life in university)

B. University Experience

1. Can you tell us about your/your children/ college students with ASD experience in college settings? [ASD/P/NT/SS/TS]
    o Learning (e.g., classroom, assignment, essay, group, presentation)
    o Social (e.g., meet friends, interaction with classrooms, dating, extracurricular activities, committee and organization experience)
    o Life (e.g., student dormitory, part-time)
- Others:
    o Time management, executive functioning
    o Emotion management, mental health
    o Financial/ Money issue
    o Sensory issue
    o Personal interest
    o Academic motivation
    o Family relationship
- (Graduated students) What is the transition experience after graduating from college? Any need? Difficulties or choices?
- (If students haven't graduated, leave this question to the end of the interview) What are your expectations of life approaching graduation? Any plan or arrangement?
    o For example, complete graduation requirements, career counselling, career development, further study, other life plans
2. As a parent of children with ASD, what difficulties and challenges did you have in their college life? [P]
    o Family interaction (e.g., parenting, looking after)
    o Family relationships (e.g., marital relationship, parent-child relationship)
    o Emotion/ Mental health (e.g., anxiety, depression)
    o Finance
3. Perceptions of College Students with ASD [NT/SS/TS]
    o What is your first impression of college students with ASD?

i. Communication
           ii. Interaction
           iii. Behavior (e.g., eye contact)
       o How do they disclose or explain their ASD condition to you or others?
       o Are they willing to disclose it? Reason for disclosure?
       o Any considerations/ concerns?
   4. Can you tell us about the difficulties and challenges you have experienced in
       interacting with students with ASD in college? [NT]
   - Communication
   - Interaction
   - Behavior understanding
   5. Can you tell us about the difficulties and challenges you have experienced in teaching
       students with ASD in college? [TS]
   - Teaching content (e.g., knowledge understanding)
   - Classroom management (e.g., lesson arrangement)
   - Teaching style (e.g., instructional style)
   - Language/communication
   - Behavioral issue
   - Emotional issue
   - Others
       o Collaborating with colleagues
       o Identification
       o Follow-up
       o Understanding students' background
   - As a teacher (or other teaching roles), do you have adequate knowledge and skills to
       serve students with ASD?
       o Do you find yourself needing support or help? (e.g., professional development,
          training)
       o Did you receive any support or help? How can you get receive those support
          or help?
   6. Can you tell us about the difficulties and challenges you have experienced in
       supporting students with ASD? [SS]
   - Counselling skills
   - Way of speech/communication
   - Behavioral issue
   - Emotional issue
   - Others
       o Collaborating with colleagues
       o Identification
       o Follow up
       o Understanding students' background
   - As a counsellor (or other supporting roles), Do you have sufficient knowledge and
       skills to serve students with ASD?
   - Did you receive any support or help? How can you get receive those support or help?

C. Support Needs

   1. After understanding the difficulties and challenges you/ your children/ college
       students have encountered, we want to know how you can resolve these issues:
       [ASD/P/NT/SS/TS]

2. Did you/ they receive any support or help? What did you/ they do to get this support?
3. Do you think you/ they need some support or help? Is there any other support or help you/ they desire (but you/ they didn't receive)? Any reason for the need? What hinder you/ they from getting this support?
    o Services (e.g., career planning, counselling, groups, courses, or talks)
    o Accommodations (e.g., extra time, assignment adjustment, computer assistance)
    o Classroom support (e.g., seating arrangement, handouts)
    o Additional personnel (e.g., peer program, volunteers, major academic support)
4. As a parent of children with ASD/ NT student/ teaching staff/ supporting staff, have you received any support or help? Do you find yourself needing some help? What do you do to receive the support?
5. Is there any other support you would like to get? (but you didn't get it) Why do you want it? What hinder you from getting this support?
    o Service (Emotional support)
    o Information
6. As far as you know, do you know what support students with ASD receive?
7. What can you do to help them to make things better?
   Is there anything that cannot be improved /difficulties and challenges that remain unresolved?

D. Other's Perceptions

In the college, how do people around you see how you/your children/ college students interact with other people: [ASD/P/NT/SS/TS]

1. How well do you think other people know about college students with ASD (and you/ your children/college students with ASD's needs)?
2. Do you/your children/college students with ASD have difficulty interacting/communicating with other people?
    o E.g., parents/relatives;
    o faculty members (e.g., professors, lecturers, teaching assistants);
    o supporting staff (e.g., counselors, psychologists, social workers, student support officers);
    o students (e.g., classmates, dorm friends, other students around)
3. Would you like to disclose/explain your (ASD) condition to others
    o Will you disclose it? Reason for the disclosure?
    o Are there any considerations? Concern?
4. Anything you want others to know more about ASD?

E. Positive Experience

We already knew the difficulties and challenges you/your children/ college students with ASD have. [ASD/P/NT/TS/SS]

1. Is there any positive experience during college life?
2. What do you/ they like the most in college?
3. What have you/they gained? / What did you/they learn?
4. Any other positive life experiences in general?
5. Is there any person who helped you/ them in the positive experience? What role do you/ they play in the positive experience?

6. [P/NT/TS/SS]: As a parent/classmate/teacher/supporting staff, what is your role in their happy/unforgettable/positive experiences during your college life? What have you got? What did you learn?

F. Recommendations

Finally, I would like to ask for your advice. As college students with ASD/ parent of children with ASD/college teacher/college student/supporting staff of a college student with autism: [ASD/P/NT/SS/TS]

1. Do you have any advice for college? (University staff? Counsellors?)
2. Do you think it is possible to create a friendly university for people with ASD?
3. Do you have any advice for parents?
4. As a parent of a college student with autism, what advice would you give to a person with ASD entering college?

Is there anything about your experience in college/your children/your college experience with college students with ASD that I didn't ask but you would like to share with me?

*Remark: ASD denotes question for college students with ASD; P for parents; NT for neurotypical students; SS for supporting staff &TS for teaching staff.

Demographic Information of College Students with ASD

Participant code	Gender	Age	Institute Type	Program level	Major	Year of Study	Comorbidity	Self-Report AQ Score
A01	Female	24	Self-financed institution	Bachelor's degree	Media	Graduated	N/A	29
A02	Male	21	UGC-funded university	Bachelor's degree	Medicine	Year 4	Language disorder	19
A03	Female	39	UGC-funded university	Postgraduate program	Social Science	Year 2	N/A	37
A04	Male	19	Self-financed institution	Associate degree	Science	Year 2	Language disorder	27
A05	Female	25	UGC-funded university	Postgraduate program	Education	Year 2	N/A	31
A06	Female	20	Self-financed institution	Associate degree	Art	Graduated	Mental illness	23
A07	Male	19	UGC-funded university	Bachelor's degree	Science	Year 2	Language disorder	40
A08	Female	18	UGC-funded university	Bachelor's degree	Science	Year 1	Mental illness	34
A09	Male	23	UGC-funded university	Bachelor's degree	Science	Year 2	Mental illness	39
A10	Male	21	UGC-funded university	Associate degree	Engineering	Year 2	N/A	25

A11	Male	31	UGC-funded university	Bachelor's degree	Media	Graduated	Mental illness	32
A12	Male	20	Public institution	Higher diploma	Others	Year 1	Other developmental condition	33
A13	Female	18	Self-financed institution	Bachelor's degree	Engineering	Year 1	ADHD	33
A14	Male	21	Public institution	Higher diploma	Others	Year 1	N/A	29
A15	Male	21	UGC-funded university	Bachelor's degree	Engineering	Year 3	N/A	38
A16	Female	22	UGC-funded university	Bachelor's degree	Art	Year 3	Mood disorder	28
A17	Male	23	Public institution	Higher diploma	Business	Year 2	Language disorder, Specific Learning Disability	21
A18	Female	22	UGC-funded university	Bachelor's degree	Engineering	Year 4	ADHD/ADD	26
A19	Male	22	Self-financed institution	Bachelor's degree	Media	Year 3	ADHD/ADD	28
A20	Male	23	UGC-funded university	Bachelor's degree	Education	Year 5	Language disorder	29
A21	Male	20	UGC-funded university	Bachelor's degree	Engineering	Year 2	ADHD/ADD, Specific Learning Disability	39
A22	Male	20	Self-financed institution	Higher diploma	Medicine	Year 1	ADHD/ADD	20

A23	Male	21	UGC-funded university	Bachelor's degree	Engineering	Year 3	Mental illness	29
A24	Male	24	UGC-funded university	Bachelor's degree	Art	Gradated	N/A	29
A25	Female	23	UGC-funded university	Postgraduate program	Art	Year 1	N/A	28
A26	Male	22	Self-financed institution	Bachelor's degree	Engineering	Graduated	Language disorder, Mental illness	41
A27	Male	22	Self-financed institution	Higher diploma	Science	Graduated	ADHD/ADD	35
A28	Female	23	Self-financed institution	Bachelor's degree	Art	Year 4	ADHD/ADD, OCD	35
A29	Male	18	Self-financed institution	Bachelor's degree	Science	Year 1	N/A	41
A30	Female	31	UGC-funded university	Postgraduate program	Education	Year 1	N/A	27