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# Supports needed for college students with Autism Spectrum Disorder

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**SUPPORTS NEEDED FOR COLLEGE STUDENTS WITH AUTISM SPECTRUM DISORDER**

by

Jaclyn Schneider

A Thesis

Submitted to the
Department of Educational Services and Leadership
College of Education
In partial fulfillment of the requirement
For the degree of
Master of Arts in Higher Education
at
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Thesis Chair: Drew Tinnin, Ed.D.

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# Abstract

Jaclyn Schneider
SUPPORTS NEEDED FOR COLLEGE STUDENTS WITH AUTISM SPECTRUM
DISORDER
2020-2021
Drew Tinnin, Ed.D.
Master of Arts in Higher Education

The purpose of this research study is to better understand how colleges can aid in the success of students with Autism Spectrum Disorder using a needs-based assessment. Many studies have been conducted regarding the needs of students with learning disabilities and special education needs, but not much research has been done for students with Autism Spectrum Disorders (ASD). The number of postsecondary students with Autism Spectrum Disorders continues to grow each year, yet little research has been conducted in this area. The objective was to hear from college students and alumni that identify as having Autism Spectrum Disorder to find which services, supports, and accommodations were most helpful, which aided in their overall success, and what their biggest challenges were in college. A quantitative methods exploratory study concentrated on students diagnosed with Autism Spectrum Disorder was used to focus on the students' lived experiences. Surveys were distributed to examine their needs.

# Table of Contents

**Table of Contents (Continued)**

## List of Figures

# Chapter 1

## Introduction

### Overview

The number of young adults attending college with Autism Spectrum Disorder (ASD) has significantly grown over the past several years, and those numbers are expected to continue to increase in the years to come. This rapid increase causes a concern for college administrators and professionals (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). It emphasizes the need for them to increase their knowledge of the disorder, as well as the need for implementation of more programs and supports; not just for students with disabilities, but specifically for students with Autism Spectrum Disorder.

While research is limited, it is important to understand that individuals with Autism Spectrum Disorder have a wide variety, or spectrum, of needs and limitations. It is crucial to personalize each student's plan to meet their individual needs; to better serve these students and promote their academic success. (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011).

### Problem

Many studies have been conducted regarding the needs of students with learning disabilities and special education needs, but very little research has been done about the

transition period for students with Autism Spectrum Disorders (ASD). While there has been an increase in research efforts surrounding the needs of college students with disabilities on a larger scale, research directly examining the needs of post-secondary students with ASD is extremely limited.

With the number of school aged children diagnosed with Autism Spectrum Disorders significantly on the rise, and the number of higher functioning individuals with Autism Spectrum Disorders also experiencing significant growth, it is becoming apparent to researchers and educators that more information is needed in this area (Adreon & Durocher, 2007; Cox et al., 2017; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando, Huber & Oswald, 2016; White et al., 2017; White, Ollendick & Bray; 2011). Individuals diagnosed with ASD are expected to experience unique challenges; particularly difficulty with academics, social skills, organization skills, study skills, and time management. Leaving high school and entering college is complicated for most neurotypical college students, and even more-so for those identifying as neurodiverse. Learning to navigate college while balancing academic and non-academic stressors can be difficult without the proper supports, especially for the large number of these students are either reluctant to disclose their disability or are not able to self-advocate (Adreon & Durocher, 2007).

**Purpose Statement**

The purpose of this quantitative research study is to better understand how college professionals and administrators can aid in the success of students with Autism Spectrum Disorder using a needs assessment process.

**Research Questions**

To better understand how we can aid in the success of college students with Autism Spectrum Disorders, I will ask the following research questions:

1. What kind of programs, support services, and accommodations do students with Autism Spectrum Disorders need in order to be successful in college?

2. What is the biggest challenge for students with ASD at the college level?

**Assumptions and Limitations**

A possible limitation could be the sample size of the study; it could be difficult to get enough participants for the surveys, especially with the current situations surrounding the COVID-19 pandemic. The participants may have trouble articulating their needs and self-advocating on the open-ended questions. Only surveying students from one University is another limitation, as they may answer questions thinking only about the programs and supports that Rowan University has to offer. Also, not all college students disclose their hidden disabilities so we are only able to reach the ones that have self-reported this diagnosis to the school.

An assumption for this study is trusting that only individuals identifying as having Autism Spectrum Disorder will participate, and that the individuals being surveyed will answer all questions truthfully.

**Important Terms**

Autism Spectrum Disorder (ASD): noun. A developmental disorder of variable severity that is characterized by difficulties in social interaction and communication and by restricted or repetitive patterns of thought and behavior.

Neurodiverse: adj. displaying or characterized by autistic or other neurologically atypical patterns of thought or behavior; not neurotypical.

Neurotypical: adj. Not displaying or characterized by autistic or other neurologically atypical patterns of thought or behavior.

High-functioning Autism Spectrum Disorder (HFASD): individuals who are diagnosed with Autism Spectrum Disorder, but do not have a co-occurring intellectual disability, and have an IQ of 70 or higher.

Individualized Education Plan (IEP): a legal document under United States law that is developed for each public school child in the U.S. who needs special education. It is created through a team of the child's parent(s) and district personnel who are knowledgeable about the child's needs.

Americans with Disabilities Act (ADA Act): The ADA is a civil rights law (1990) that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public

4

**Organization of Remaining Chapters**

Chapter 2 of this study consists of a literature review of college students with Autism Spectrum Disorder. It describes the need for specialized programs and services specific to this population. Chapter 3 illustrates the methodology: research questions, methodological approach and design, data collection strategy, and procedures of gathering data for this study. Chapter 4 explains the results of the study and provides data to answer the research questions. Finally, Chapter 5 discusses the findings, recommendations for practice, and recommendations for further research.

**Chapter 2**

**Literature Review**

**ASD Diagnoses on the Rise**

The number of children diagnosed with Autism Spectrum Disorder has increased from 1 in 150 in 2000, to 1 in 88 in 2008; and now in 2020 research shows that 1 in 54 children are diagnosed with ASD (Center for Disease Control and Prevention [CDC], 2020; Rando et al., 2016). It is estimated that this increase means more that students with Autism Spectrum Disorders will be attending college in the near future (Adreon & Durocher, 2007; Cox et al., 2017; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). The reason for increases in these numbers is still unknown, although it is thought that it may be a result of professionals becoming better at diagnosing these individuals and providing early intervention services, where in the past these symptoms may have gone unnoticed and untreated. Another reason for the increase in neurodiverse students pursuing post-secondary education is that, thankfully, attitudes towards individuals with disabilities have changed over the past fifty years, and we now have laws in place, such as Section 504 of the Rehabilitation Act of 1973 and the American Disabilities Act of 1990, that guarantee students with disabilities the right to reasonable accommodations (Vogel, Fresko, Wertheim, 2007). Researchers have found that these individuals are less likely than people with other types of disabilities to enter two or four year colleges, and to obtain their degree, which of course is problematic and presents an urgent need for educators to take action (Cox et al., 2017; Roux et al., 2015; White et al., 2017).

**A Recognized Need**

Schools are beginning to allocate resources to target the unique needs of students with Autism Spectrum Disorders and to provide transition-based programs to help these students adjust to the college setting (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). Colleges and universities have recognized the need for specialized services and programs to better serve this population and ensure their academic success. The developmental and transition period for students with Autism Spectrum Disorders has, until recently, been understudied. The most important thing we can do as college professionals is become more knowledgeable about Autism Spectrum Disorder, and understand the varying services and support these students need to succeed (Adreon & Durocher, 2007; Cox et al., 2017; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011).

**Background**

The word "spectrum" suggests a range of different degrees or levels, meaning each individual with Autism Spectrum Disorder will have varying needs, some more severe than others (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). Autism Spectrum Disorder is a neurodevelopmental disorder and the areas of development that are most often affected are social interactions, communication, and behavior. These individuals often have restricted interests or repetitive behaviors. These students may have a hard time making

7

friends, understanding feelings, following acceptable social cues, and understanding sarcasm. They sometimes demonstrate repetitive, uncontrollable body functions and have intense interests, causing them to have trouble concentrating on anything else. A change in routine can also be a problem for these students. These students often need more non-academic supports than academic supports, and to be monitored regularly (Adreon & Durocher, 2007; Gobbo & Shmulsky, 2012; White et al., 2011).

High-functioning Autism Spectrum Disorder (HFASD) is defined as individuals who are diagnosed with Autism Spectrum Disorder, but do not have a co-occurring intellectual disability, and have an IQ of 70 or higher (White et al., 2011). While there is currently not a cure for Autism Spectrum Disorder, educational plans have proven effective in managing the students' symptoms. In addition, students are sometimes treated with medications, to treat symptoms that often co-occur with Autism, such as Attention Deficit Hyperactivity Disorder (ADHD), Generalized Anxiety Disorder, Aggression, and Depression. Students who experience these co-occuring disorders encounter a greater barrier for their success (Adreon & Durocher, 2007; White et al., 2011). It is suggested that colleges review a student's individualized education plan (IEP) from high school to see what supports have been helpful in the past, and use that information to implement an education plan at their institution tailored to the student's needs (White et al., 2017).

Individuals with Autism Spectrum Disorder, especially in the 18-25 age range, often have difficulty identifying their specific needs. It is extremely important for students and their parents to disclose information about their disability and advocate for themselves, so that they can receive the proper supports and accommodations. Many

8

students require support and coaching just to be able to explain their disabilities and accommodations needed (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018). Students with ASD who identify college as a transition goal and participate in planning while in high school have an increased likelihood of enrolling in college. Students who disclose their disability by the end of their freshman year at college have been more likely to graduate than those that disclose later in their college career (White et al., 2017).

The majority of students with Autism Spectrum Disorders that attend college, approximately 81%, attend a two year institution either exclusively, or prior to attending a four year institution (Roux et al., 2015). Students with Autism Spectrum Disorder are often encouraged to start their college career at a community college level, as it is thought that there they can get more individualized attention and that it is less intimidating to navigate a smaller college campus (Adreon & Durocher, 2007; Gobbo & Shmulsky, 2012; Roux et al., 2015). Two year colleges offer academic and vocational programs, are accessible, and offer basic-skill supports and training. More research is needed on the experiences of students with Autism Spectrum Disorder who attend two year institutions, and whether they receive the support they need to complete their two year degree or transition to a four year institution (Adreon & Durocher, 2007; Gobbo & Shmulsky, 2012; Roux et al., 2015).

Students with Autism Spectrum Disorder may be academically prepared, but find it challenging to handle non-academic stressors such as the classroom, residence halls, and other social aspects of a college campus. Things like having a roommate may be difficult for some students with Autism Spectrum Disorder, or using a communal

9

bathroom (Adreon & Durocher, 2007; Gobbo & Shmulsky, 2012; Roux et al., 2015). Students and families also need to consider the living arrangements that the student will be most comfortable with, and consider them possibly living at home for the first year while they adjust to their academic demands, to aid in their transition before adding the stress of living on campus (Adreon & Durocher, 2007; Gobbo & Shmulsky, 2012; Roux et al., 2015).

It is important for colleges and universities to develop and strengthen transition or bridge programs for students with Autism Spectrum Disorder that encourage successful transition into college and increase their experience and success rates (Adreon & Durocher, 2007; Cox et al., 2017; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). Students automatically receive special accommodations and supports when they are school-age under the Americans with Disabilities Act, but once they enter college it is up to the student themselves to disclose their disabilities and self-advocate for the services and special attention they will require, which can be particularly difficult for students with Autism Spectrum Disorders (Cox et al., 2017; Elias & White, 2018; White et al., 2017; White et al., 2011).

Students with Autism Spectrum Disorder who identify college as a transition goal and participate in planning while in high school have an increased likelihood of enrolling in college. Students who disclose their disability by the end of their freshman year at college have been more likely to graduate than those that disclose later in their college career (Cox et al., 2017; Elias & White, 2018; White et al., 2017). Students should be encouraged to take a college course while in high school to aid in the transition, or to take

10

a course over the summer to orient them. Visiting the college campus, studying maps, and becoming familiar are helpful activities as well to prepare for the start of classes (Adreon & Durocher, 2007).

**Previous Research**

While research regarding students with Autism Spectrum Disorder is limited, it is known that the needs of students with Autism Spectrum Disorder are unique and therefore, ASD-specific transition programming is necessary. It is also important that these transition programs are individualized, as the spectrum includes a wide range of individuals with different, personalized needs (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011).

The lack of research and limited data makes it hard to identify which approaches are most effective in aiding in the success of college students with Autism Spectrum Disorders (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). Several methods have been examined to determine the best approaches to enhance the college experience for students with Autism Spectrum Disorder, including: cognitive and behavioral interventions, social communication interventions, college transition programs, and other personalized accommodations, such as extended time for exams (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011).

11

## Conclusion

Adjusting to college can be a difficult task for any individual, but is particularly difficult for students with Autism Spectrum Disorder. It is important to understand the individuality of these students' abilities and needs. While some practices are helpful to a number of students with Autism Spectrum Disorder, there is not one uniform method that will work for to support all of these students. It is important to understand that individuals with Autism Spectrum Disorder have a wide variety, or spectrum, of needs and limitations, and it is important to personalize each student's plan to aid in their success (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). Students with Autism Spectrum Disorders are often more concerned with non-academic stressors than their academic studies. There is much hope that future research will bring the proper supports and programs to help students with Autism Spectrum Disorder achieve their goals (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011).

## Chapter 3

## Research Methodology

**Introduction and Research Approach**

The number of young adults attending college with Autism Spectrum Disorder (ASD) has significantly grown over the past several years, and that number is expected to continue to increase in the years to come. This rapid increase causes a concern for college administrators and professionals, and creates the need for them to increase their knowledge of the disorder, as well as more programs and supports; not just for students with disabilities, but specifically for students with Autism Spectrum Disorder. It is important to understand that individuals with ASD have a wide variety, or spectrum, of needs, abilities, and limitations (Adreon & Durocher, 2007; Cox et al., 2017; Elias & White, 2018; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011). Therefore, a quantitative methods exploratory study concentrated on students and alumni diagnosed with Autism Spectrum Disorder's experiences will be used to focus on the students' lived experiences. The study utilizes quantitative research to examine the needs of college students with Autism Spectrum Disorders, using survey methodology.

Additionally, some open-ended survey questions will be used to gain descriptive insight and allow the students to express their concerns freely. These research methods, combined, will allow us to get a true concurrent understanding of the perspectives and experiences of students with Autism Spectrum Disorder, the barriers they face, and how we as practitioners can be proactive in making sure these needs are met. Thematic analysis of responses to these open-ended survey questions will allow me to identify

themes within the data and gain insight as to how to help these students succeed (Linfield & Posavac, 2019; McMillan, 2016).

**Questions**

My research questions are:

1. What kind of programs, support services and accommodations do students with Autism Spectrum Disorders need in order to be successful in college?

2. What is the biggest challenge for students with ASD at the college level?

**Sample Selection**

Using purposeful sampling, surveys were distributed via email to all current students and alumni at Rowan University who have self-identified as having Autism Spectrum Disorder that are 18 years of age or older, regardless of their gender or race. There are currently approximately 125 students and 25 alumni on the spectrum registered with the Disability Resource Office. The survey was anonymous and completed online through Qualtrics Survey Software. The survey provided quantitative data in order to assess the support experienced by the students currently or previously registered with the Disability Resource Office that have a diagnosis of Autism Spectrum Disorder (ASD). Many students with ASD have trouble communicating or describing their feelings verbally, so an online survey allows students time to think about their responses, gather their thoughts, and type their responses instead of verbally articulating them (Biklen & Schubert, 1991). My goal was to have at least 30 individuals within the target audience complete the survey to reach statistical significance (McMillan, 2016).

14

**Site Access**

Permission will be gained from Rowan University IRB, the participants, and the Office of Disability Resources. The Office of Disability Resources' Autism PATH program will generate a list of contact information for students and alumni who identify as having Autism Spectrum Disorder, and the survey will be distributed via email directly from their office.

**Timeline**

Five weeks were allowed for survey collection. An additional three weeks was used to analyze the data, so the total timeline for the study was eight weeks.

**Instrument**

Quantitative data was collected electronically through an online survey using Qualtrics Survey Software. Qualtrics is described as the official surveying tool of Rowan University (Survey, 2019). First, the survey was sent to five individuals in the target group as a pretest to confirm the validity of the survey, and to test the survey before using it to collect data. Surveys were then sent electronically via email from the Academic Success Center to all students and alumni who self-reported their diagnosis of Autism Spectrum Disorder (136 individuals). This information was obtained through Rowan University's Banner Information System and the Disability Resource Office's AIMS software. The population for this study received an email explaining the nature of the project as well as soliciting their voluntariness to participate in the study (Appendix A). Anyone who wished to participate could click the link to the survey in this email, which

also brought them to the electronic consent form (Appendix B). The survey consisted of multiple choice questions as well as open ended questions (Appendix B).

**Data Analysis**

Survey responses were analyzed using Qualtrics Survey Software. The data collected was interrogated to identify themes in respondents' idealities to provide evidence for the proposed research questions. Assessing the students' views using quantitative measures while allowing open-ended responses was key in understanding their experiences and having more accurate data for this study.

The students were first asked demographic questions such as their student status, background, and living situation during the school year. They were then asked structured questions related to the services and resources provided to them to understand which contributed to their overall success. These questions were a combination of open ended and close ended to gather as much evidence as possible.

**Data Interpretation**

Once the data was quantified, results and commonalities in the students' responses were compared to draw conclusions about which services and supports are critical to their success. This data is displayed both visually and in a descriptive format in Chapter 4.

16

**Chapter 4**

**Findings**

The purpose of this mixed-methods research study is to understand how college professionals and administrators can better aid in the success of students with Autism Spectrum Disorder, using a needs assessment process. A quantitative methods exploratory study was used to collect and analyze data to determine trends among the students and alumni surveyed. The survey consists of both multiple choice and open-ended questions about the individual's demographics and college experiences. The data analyzed in the survey will show commonalities between current students and previous students that identify as having Autism Spectrum Disorder.

**Profile of Study**

Qualtrics, Rowan University's survey tool, was used to capture the college experiences of Rowan University students and alumni who identify as being diagnosed with Autism Spectrum Disorder. This survey was sent to 115 current Rowan University students and twenty-one Rowan University alumni through email by the Academic Success Center. Of the 136 survey recipients, eleven responses were recorded. This is an 8% response rate. This survey was designed to answer the following questions:

1. What kind of programs, support services, and accommodations do students with Autism Spectrum Disorders need in order to be successful in college?

2. What is the biggest challenge for students with ASD at the college level?

17

**Data Interpretation**

The first question included on the survey was to verify that the participants were over the age of eighteen, and to also ensure that they were voluntarily giving consent to participate in the survey. The following three questions were multiple choice and used to identify the respondent's student status; whether or not they were first generation, the mode of delivery of their programs, and if they lived on campus during their studies. This information was important to understand the individual's knowledge and exposure to college, the campus, and services offered.

Of the survey participants, four were classified as freshmen, zero as sophomores, one as a junior, zero as seniors, one graduate student, and five alumni. Nine (81.8%) of these individuals stated that one or both of their parents attended college, while two (18.2%) participants said neither parent attended college. Four (36.4%) respondents said that their program consisted of on-campus classes, while seven (63.6%) said their program was hybrid; consisting of a combination of both online and face to face classes. None of the respondents were fully online students. About half of the participants do or did live on campus during their studies; six (54.5%) did and five (45.5%) did not.

Four students identifying as freshmen means that 36.4% of the respondents have only had one semester of college experience thus far, which could be a limitation to this research, given the small amount of time they have spent in college and limited exposure to the campus. Their exposure could be further limited by the fact that their first year in college is during a global pandemic, where most classes, services and supports are only offered virtually. The other seven participants would be considered upper-classmen or alumni, which means that 63.6% of the participants have had significant experience and

exposure to college, and more than enough familiarity to know which services and accommodations are most helpful.

The fact that 81.8% of students surveyed stated that one or both of their parents attended college could indicate that individuals with ASD whose parents attended college are more likely to pursue a four year degree than first generation students with ASD. The two individuals that stated neither parent attended college likely would have had less exposure to post-secondary education, and could have struggled more with lack of experience and guidance on how to navigate college.

The next question asked participants if their high school prepared them for what to expect in college. Four (36.4%) participants said yes, two (18.2%) no, and five (45.5%) answered "somewhat". These responses are disheartening, and shows college readiness is definitely an area that can use an action plan or improvement by our school districts. The answers are displayed below in Figure 1.

19

**Figure 1**

*Did Your High School Prepare You For What To Expect In College?*
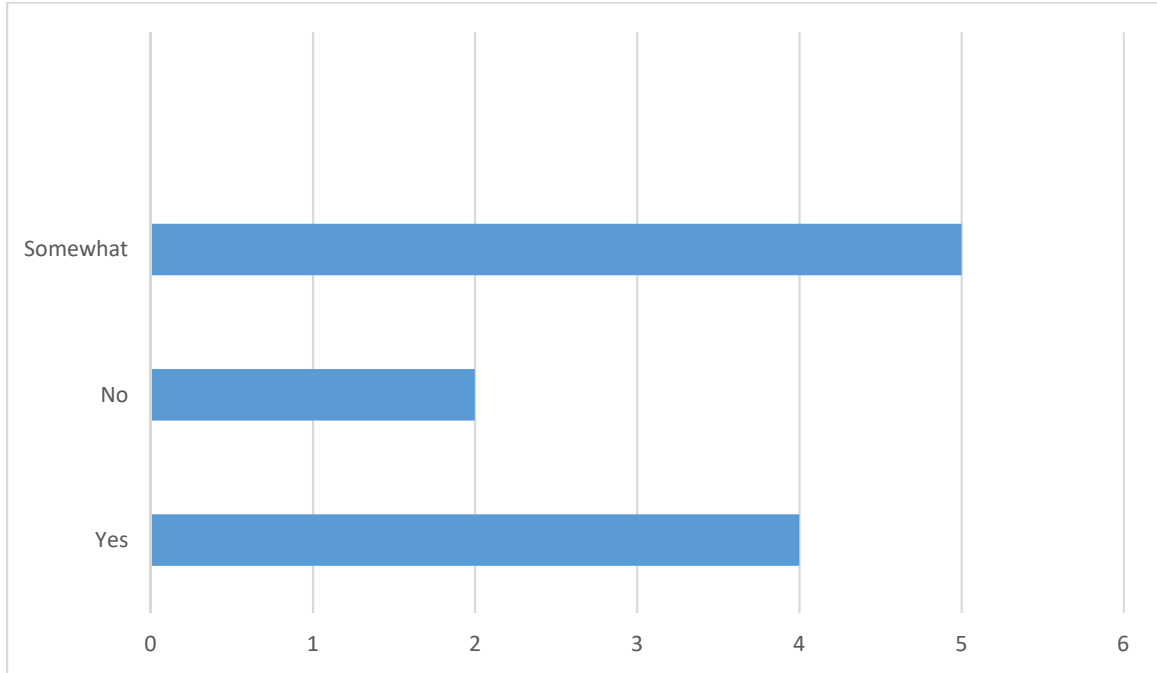


Question seven asked if the student attended a summer bridge program prior to their first semester at college. Two (18.2%) participants responded yes, seven (63.6%) no, and two (18.2%) were unsure. The students who answered yes to this question were asked an additional question about if the bridge/orientation program was helpful in getting acclimated to college. Both responded yes, which shows 100% success rate, as seen in the below in Figures 2 and 3.
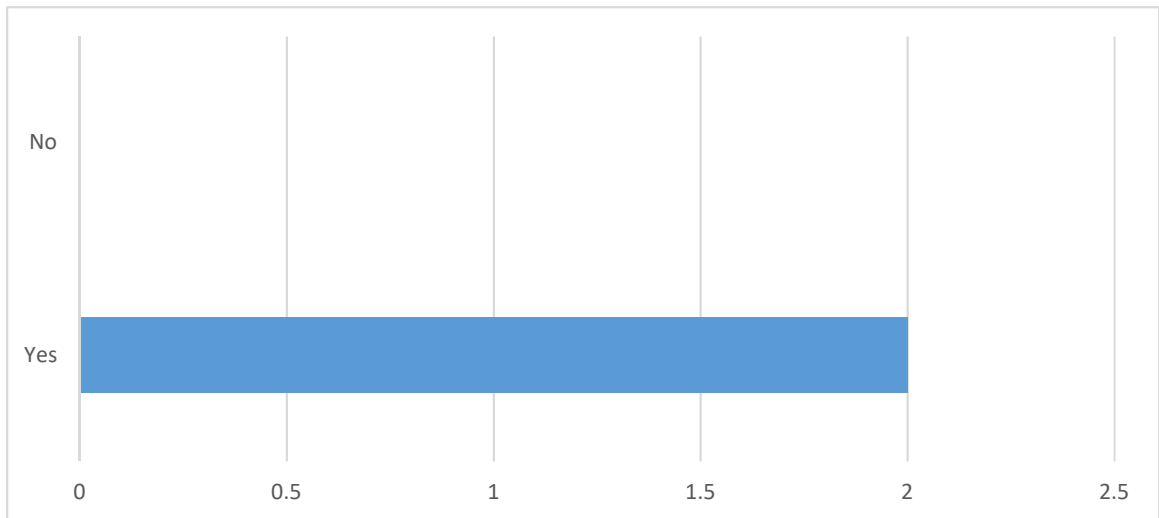
**Figure 2**

*Did You Attend a Summer Bridge Program Prior to Entering Freshman Year?*
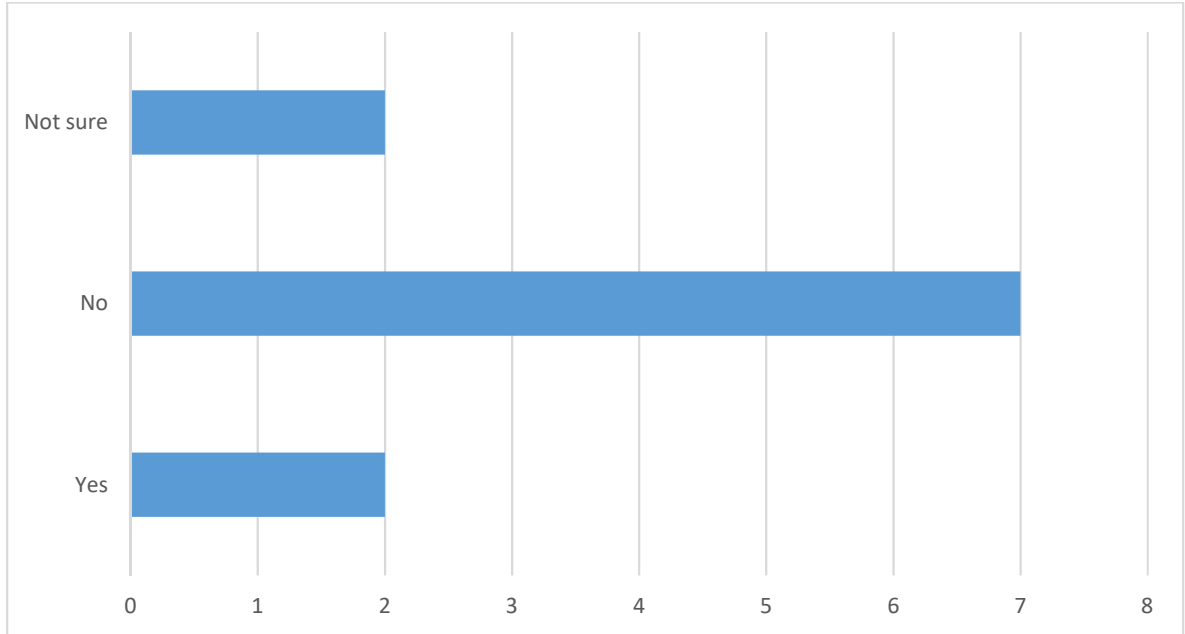


**Figure 3**

*If Yes, Was the Bridge/Orientation Program Helpful?*

The next question asked which resources the students have utilized on campus, and the participants were told to select all that apply. Academic Advising was selected the most, with nine responses (81.8%). The next most popular resources used were Tutoring and Testing Accommodations, tied with seven responses (63.6%). Academic and Housing Accommodations followed with six selections (54.5%), Career Readiness and Success Coaching both had five selections (45.5%), Virtual Drop-in Hours with four (36.4%), Summer Bridge Program with three (27.3%), and then the following all had two responses (18.2%): ProfPartners, Student Success Workshops, and Alumni Hours. The option for none was not selected by any participants.

**Figure 4**

*Which Resources Did You Utilize On Campus?*
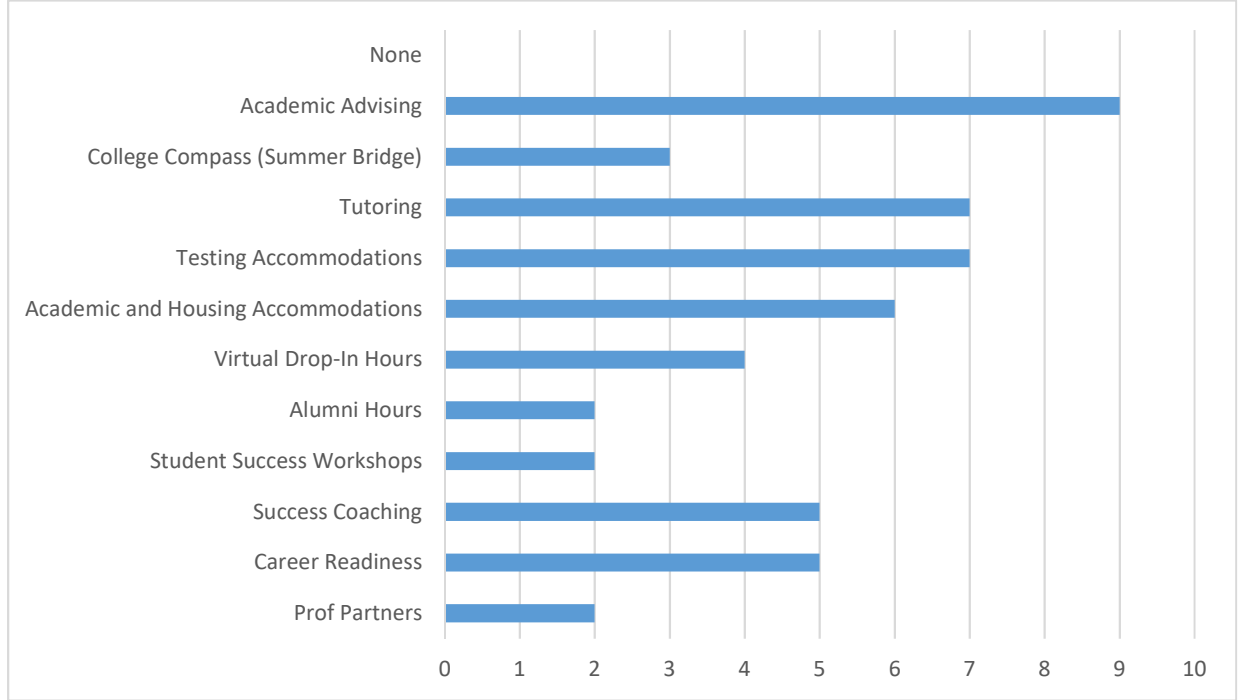


Following the question about which resources were utilized, was "Which of the Resources Utilized Were Most Helpful?" Again, the participants were asked to select all that apply. The numbers are in line with the previous responses: Academic Advising 20.6%, Testing Accommodations and Tutoring 14.7%, Success Coaching and Academic/Housing Accommodations both had 11.8%, Career Readiness 8.8%, ProfPartners 5.9%, and Student Success Workshops, Alumni Hours, and Summer Bridge Program all had 2.9%. None of the participants selected "none" as their answer.

**Figure 5**

*Which Resources Helped You The Most?*
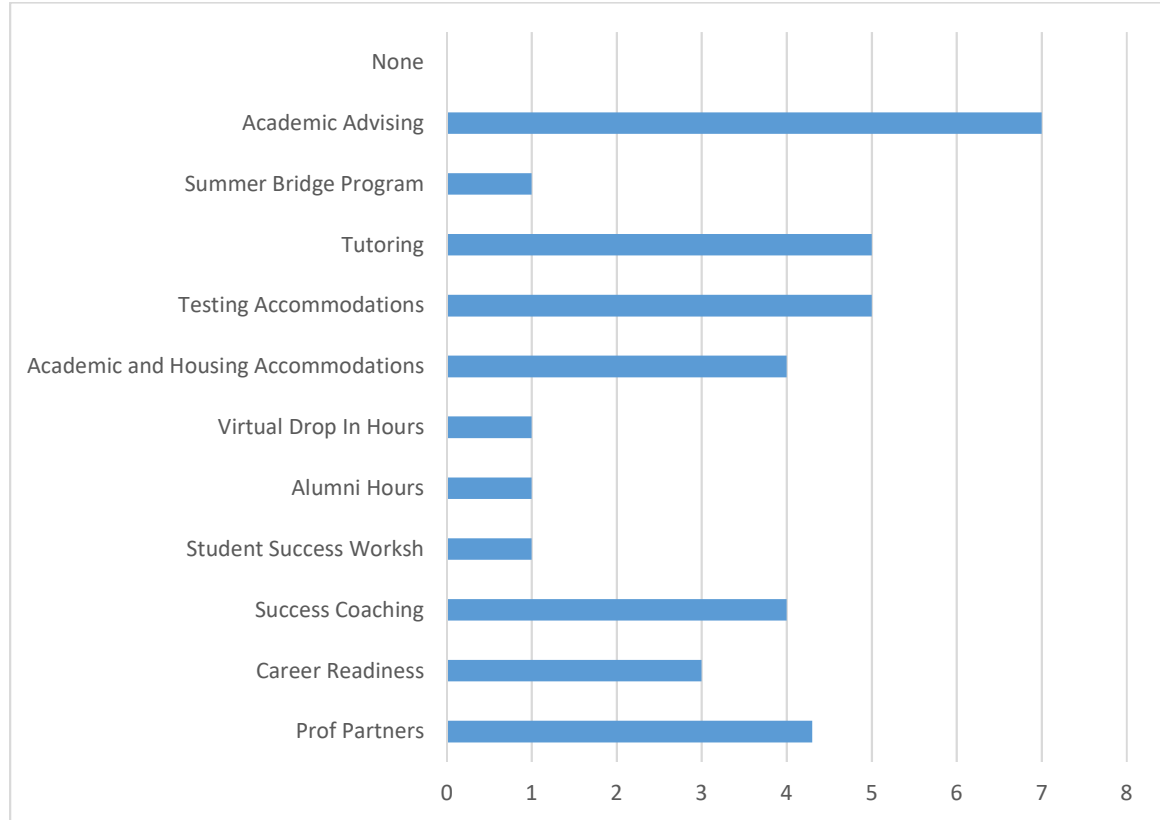


My next question asked the participants which of the fore mentioned resources were not helpful. Testing Accommodations, Tutoring, and Academic Advising all had one response (9.1%). The rest of the options had zero responses. Students could select all that apply, so I cannot tell if these selections were from the same individual.

**Figure 6**

*Which Resources Were Not Helpful?*
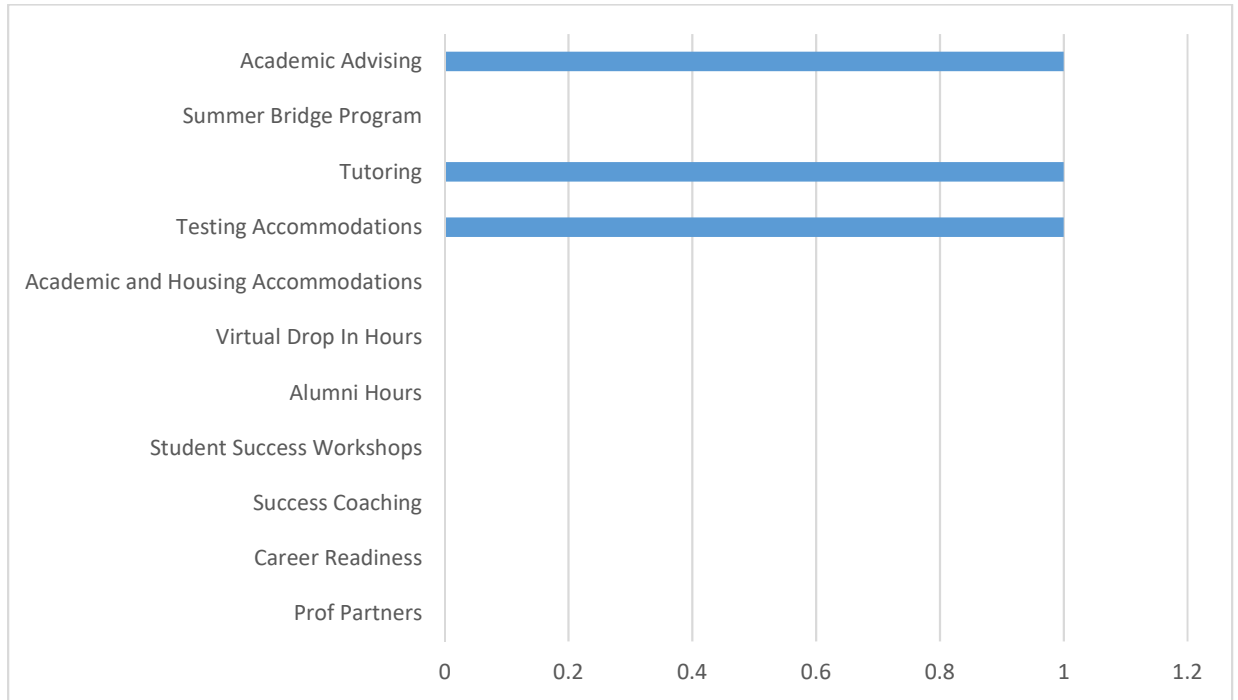


Question 12 on the survey was an open-ended, short answer question which allowed participants to enter their own responses freely. It asked "What Was Most Helpful in Transitioning to College?" This was not a forced question, and nine out of the eleven participants responded (81.8%). Two individuals said Academic Advising (18.2%), two mentioned reality in their response (18.2%), and two said a lot of these resources did not exist when they were in college (18.2%). The other participants mentioned Chill and Chat (an emotional support group), Academic Accommodations, and Canvas (the learning management system) being easy to navigate. The recorded responses are seen below on Figure 7.

**Figure 7**

*What Was Most Helpful In Transitioning To College?*
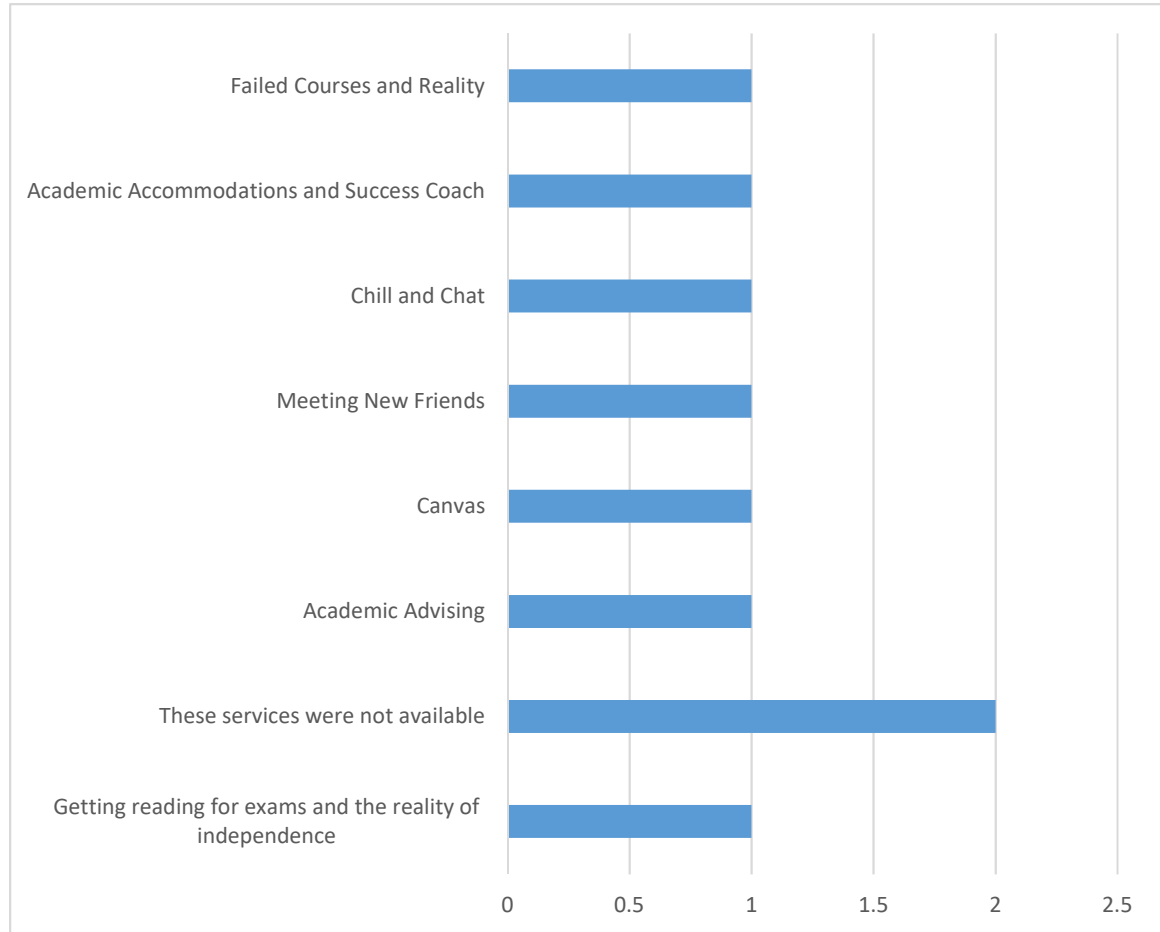


The next question was multiple choice, and asked participants which area was most challenging for them in college. This time they were only allowed to select one response. Time Management and Social Skills were tied for most difficult, each with three responses (27.3%), followed by a tie for Study Skills and Academics with two

responses (18.2%). Only one student identified Organization Skills as the most challenging aspect (9.1%).

**Figure 8**

*Which Area Would You Say Was Most Challenging For You?*
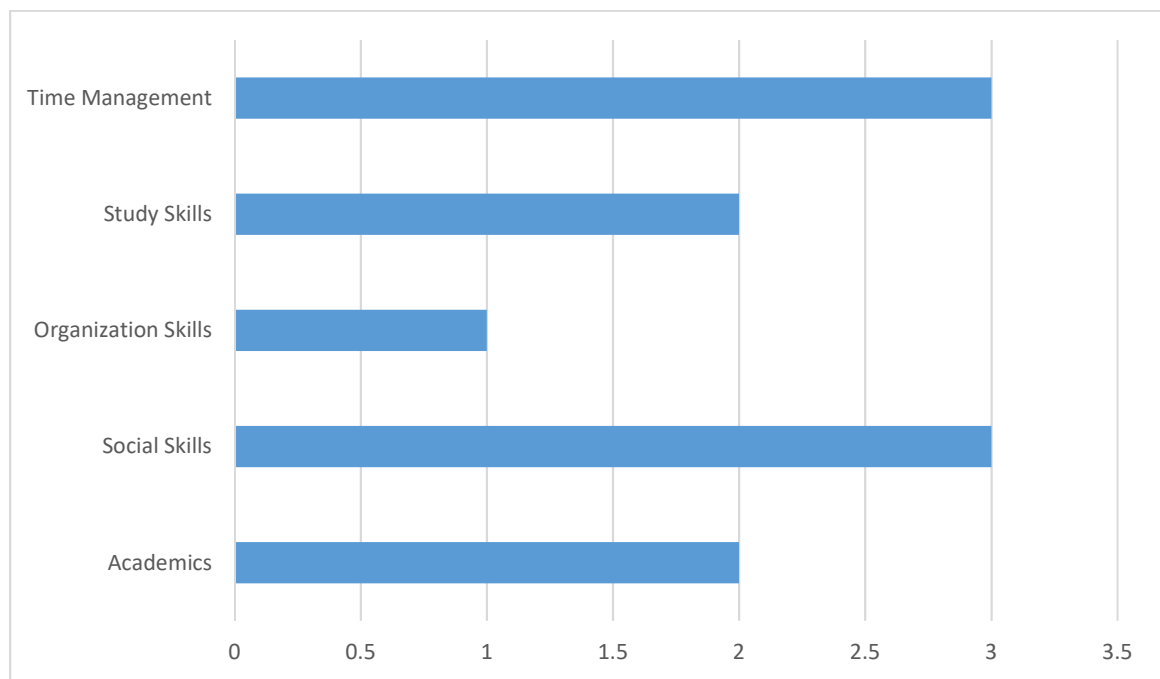


Question fourteen was another open-ended, short answer question. It asked participants which accommodations were most helpful. 45.5% identified extra time on tests and assignments as most helpful. Career Services was identified by 18.2% of participants, and 9% said early course registration was most helpful. The rest of the answers can be seen in the Figure below.

27

**Figure 9**

*Which Accommodations Were Most Helpful?*
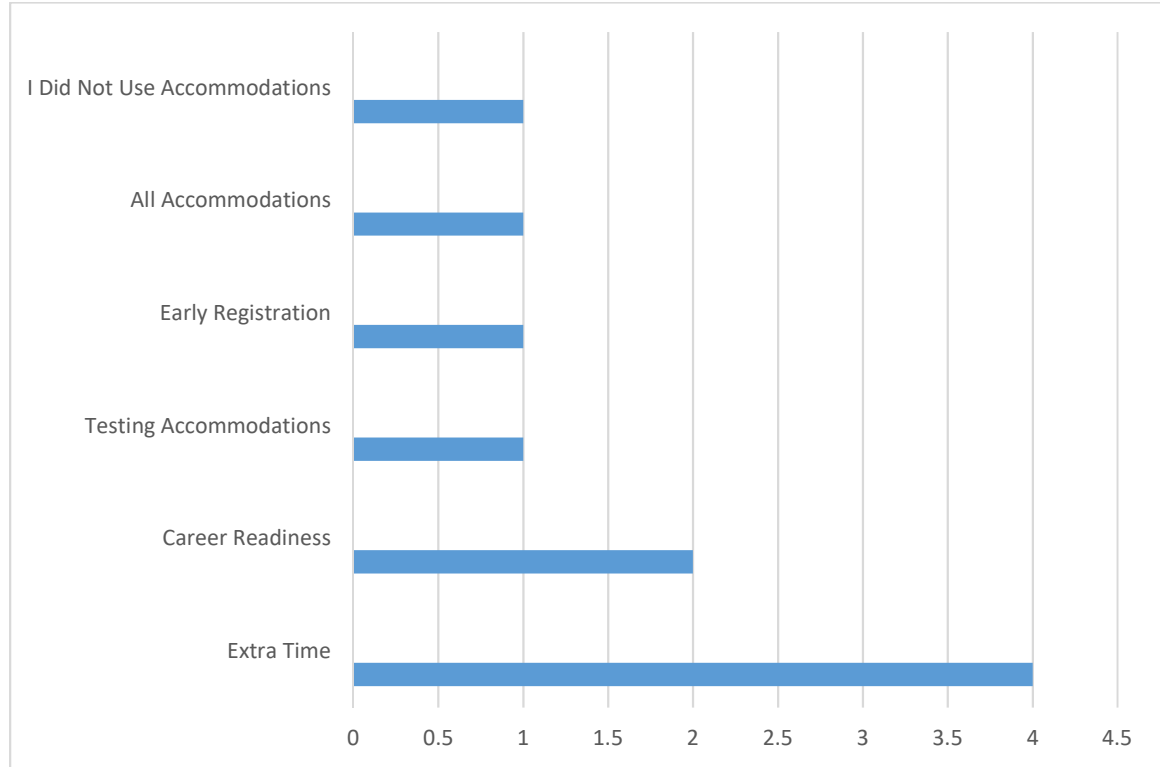


Lastly, the eleven participants for this study were asked if there was a program, resource, or support on campus that they wish they had taken advantage of, and if so, to list it. 27.3% said they wish they would have utilized the Office of Career Advancement. Other mentions include College Compass Summer Bridge Program, the Writing Center, Tutoring, Chill and Chat, and Stress and Anxiety Student Support Group (SASS). Responses are shown below.

**Figure 10**

*Is There A Program, Resource, Or Support That You Wish You Had Taken Advantage Of?*
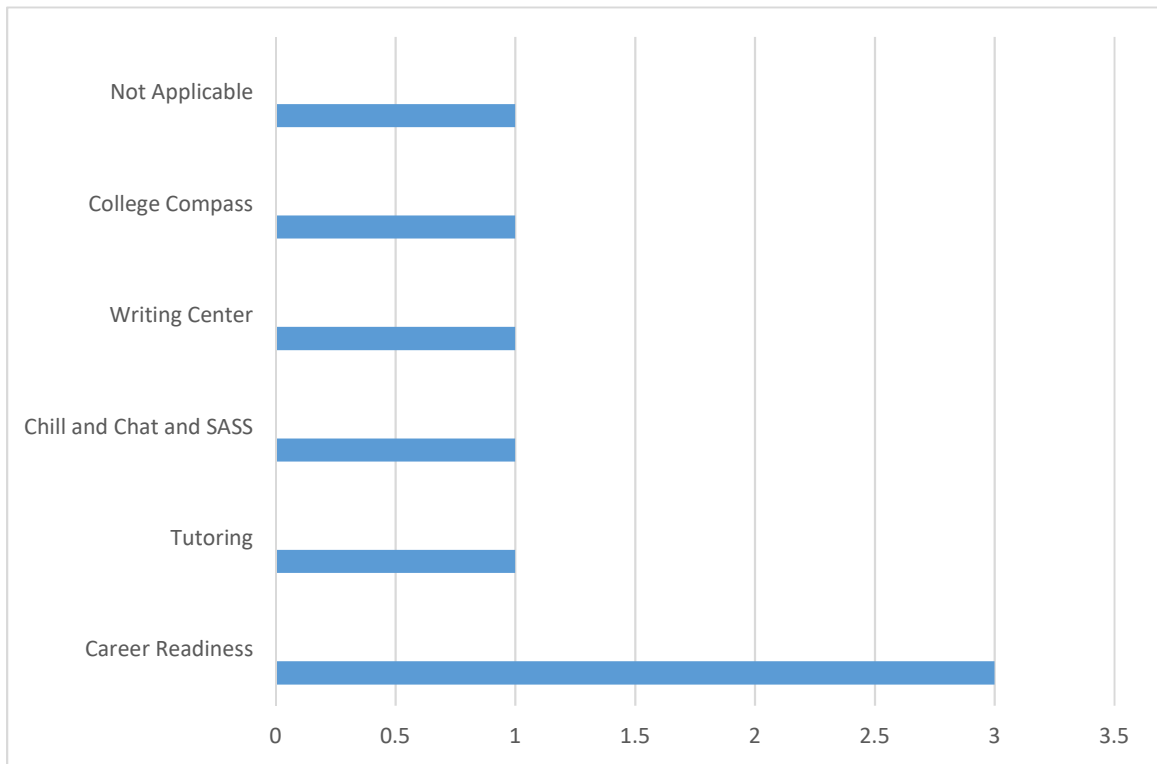


*Findings*

The first research question asks, "What kind of programs, support services, and accommodations do students with Autism Spectrum Disorders need in order to be successful in college?" The data indicates that academic advising is critical for these students, being it was identified as both the most utilized (81.8%) and most helpful service (63.6%) on campus. Many researchers have shown the importance of academic advising when it comes to student retention and success. Tinto's retention and student

departure theories support this finding, as he declares students need individual academic support to be successful in college (Patton, Renn, Guido, & Quaye, 2016).

Academic advisors play a critical role in helping a student find their sense of belonging, an area that Tinto proclaims is a major influence in student persistence. Persistence is necessary to motivate students to do well, and increase their efforts to persevere. Tinto states that a student's sense of belonging is mostly formed by their experiences and interactions on campus with faculty and staff, which includes advisors. It is imperative that the advisors serving our students with ASD find out what motivates each individual to persist, and figure out what they can do to enhance their motivation, as student persistence should be their primary focus (Tinto, 2016).

Academic advisors and other professional staff on campus can shape a student's sense of belonging by creating a warm, welcoming environment that feels supportive and inclusive. This needs to happen as soon as possible, preferably at orientation, as an early sense of belonging and self-efficacy will promote student engagement on campus that will advance students' development and learning outcomes. This could happen through direct interaction with faculty and staff, learning communities, and social organizations that allow students to connect with other individuals like them; in this case, other students and professionals with ASD (Tinto, 2016).

Having extra time on tests and assignments was another area that was identified by the respondents as being essential to their success. In two separate questions, 45.5% of participants identified testing accommodations as being most helpful service offered at Rowan University, and as the most helpful accommodation offered. Testing

accommodations that are most often used are extended time for the exam and a separate, quiet space for test taking. A previous study conducted on college students with disabilities and their perceptions of various types of testing accommodations also found that extended time was identified as being the most helpful, academically, followed by separate room testing and extra breaks (Lewandowski, Lambert, Lovett, Panahon, & Sytsma, 2014). Students with Autism Spectrum Disorder often have trouble focusing, are easily distracted, are sensitive to bright light and loud noises, and experience learning difficulties in general, so it is no surprise that these accommodations are perceived as extremely helpful.

Tutoring was tied with testing accommodations for the most utilized and most helpful services or accommodations, again, in two separate questions. 45.5% of participants selected tutoring, putting it in the top three most helpful service on campus. Tutoring is available for over two hundred courses at Rowan University. A popular, useful tutoring resource is the Writing Center. Essays and research papers are required in most college courses; which is a main reason why Introduction to College Composition is recommended to be taken during students' first semester. Students who do not understand the basic college composition skills will likely struggle in most of their classes moving forward (Cherney, 2017). The Writing Center provides tutors to assist students with developing effective writing techniques and to build confidence in their work. Writing tutors help students with brainstorming, organizing their paper, making revisions, and checking citations. Students who take advantage of these services strengthen their writing skills over time, which is useful both in the classroom and in their future careers.

31

A Summer Bridge Program did not seem to be advertised or available to all of the students, as indicated in the survey, but 100% of the students who attended a summer bridge program said it was helpful in getting acclimated to college. Summer Bridge Programs are designed to aid in student readiness and better prepare students for their freshman year academically, socially, and financially. They provide the tools and support needed to navigate college (Sablan, 2013). Only 36.4% of students surveyed said that their high school prepared them for what to expect in college. A Summer Bridge Program would be especially helpful to those students who said they did not receive support and preparation from their high school to provide a thorough orientation to campus life and resources, academic advising, academic coursework, academic support, and social support to build strong networks among students and faculty to adopt a greater sense of connection to the institution (Quiroz and Garcia, 2018).

The Office of Career Advancement (Career Readiness) was identified throughout the survey as a resource students utilized, a resource that was most helpful, and as a resource they wish they had taken advantage of. Rowan University's Office of Career Advancement offers support to both current students and alumni. They provide various workshops, career counseling, resume assistance, interview preparation, career exploration tools, and a platform for searching jobs; just to name a few. The university now offers the Autism PATH program, which incorporates career readiness and job placement speficially for students and Alumni on the Autism Spectrum to help them transition from the classroom to the workforce. Many individuals with Autism struggle to become employed or maintain employment because of their difficulties with social skills, adapting to change, and hyper-sensitivities, so is very important that students and alumni

are aware of these resources offered, and utilize these supports to better serve themselves and prepare them to be gainfully employed.

The Society for Human Resource Management (SHRM) recognizes the global and national increase in individuals with ASD as well, and claims that many major corporations have already begun recruiting and training employees with Autism, including Microsoft, SAP, and HP Enterprise/DXC Technology, which all are computer software companies. These employers recognize the worthiness of the specific skill set employees on the Autism Spectrum tend to have: attention to detail, good memorization skills, reliability, and loyalty (Oesch, 2020). This is great news for our growing number of college students, and shows there is a demand for their particular skill set.

The second research question asked "What is the Biggest Challenge for Students with Autism Spectrum Disorder at the College Level?" The data indicates that time management and social skills were the most difficult, each with 27.3% selected. Next was another tie between academics and study skills, each with 18.2% selected. Organization skills was selected by one student (9.1%). Each of these areas are of importance and could significantly impact a student's college experience. The lack of structure, that is somewhat new to college students, can be problematic for all students, but specifically students with Autism Spectrum Disorder. Students should take advantage of the success coaching program, as indicated in some responses, to learn tips and tricks on how to better manage their time and become more organized, and to develop individual plans for social and academic development. Some participants responded that programs such as Autism PATH, Prof Partners, and College Compass did not exist when they were in college, which means we are making strides in the right direction by now offering these

supports. Additional specialized programming highlighting skills for time management, socialization, organization, and study habits are needed.

**Chapter 5**

**Discussion and Findings**

It is important to understand that individuals with Autism Spectrum Disorder have a wide variety of needs and limitations. No two students are the same, especially when comparing students on different levels of the Autism Spectrum. Thematic analysis, however, allows us to better understand which areas these students struggle the most with, and which resources and supports have proven to be the most beneficial for their success. Academic Advising, Tutoring, and Testing Accommodations were among the top three responses for most helpful services. Not falling far behind was Academic and Housing Accommodations, Success Coaching, and Career Readiness. Students also identified social and emotional support as being helpful throughout the survey, through programs such as ProfPartners, Chill and Chat, and Stress and Anxiety Student Support (SASS). All of these resources combined will be able to suit varying needs, and ensure these students' educational, and ultimately, their occupational success.

Areas that were the most challenging for these students were time management and social skills, followed by study skills and academics, and last but not least, organization skills. This is useful information when considering new or improved programs and services. Students with Autism Spectrum Disorder may find it difficult to handle non-academic stressors, as indicated here with their responses. Socialization is a huge part of college, and having a lack of social skills or etiquette can prove detrimental to their experience. Understanding the challenges these students face is the first step to

35

implementing programs and supports to improve their college experience and ensure their success.

**Recommendations for Practice**

Colleges and universities need to develop, strengthen, and promote transition or bridge programs for students with Autism Spectrum Disorder that encourage successful transition into college and increase their experience and success rates (Adreon & Durocher, 2007; Cox et al., 2017; Gobbo & Shmulsky, 2012; Hewitt, 2015; Kuder & Accardo, 2018; Rando et al., 2016; White et al., 2017; White et al., 2011).

Individuals with ASD often suffer from poor executive functioning. Education surrounding time management skills would be beneficial for students with Autism Spectrum Disorder. Topics such as utilizing a planner, note taking, limiting distractions, procrastination, breaking assignments into smaller tasks, managing a work-life balance, etc. would teach them how to use their time wisely and make these tasks less of a daily struggle for them.

Programming for socialization would also prove helpful to students with Autism Spectrum Disorder, as they often have difficulty reading social cues, making friends, understanding sarcasm, self-advocating, dealing with change in routine, etc. Programs including more face-to-face interactions, focusing on social communication skills, self-advocacy skills, and how to manage stress and anxiety would better prepare students with ASD to communicate with professors and peers, to identify and advocate for their needs, and to increase their independence.

**A Need for Further Research**

Research directly examining the needs of post-secondary students with ASD is extremely limited and has been known to consist of small sample sizes. The number of college students with Autism Spectrum Disorders is continuing to grow and not enough information is known to provide the best services and support to these individuals. Research in this area may also provide inconsistent results, due to the unique needs of each individual with Autism Spectrum Disorder. Additional research is needed to identify trends and identify which services are most successful in supporting college students with ASD.

This study was conducted during a global pandemic, which has negatively impacted this research. My low response rate of only 8% is a limitation, as my goal was to have at least 20% of the target audience complete the survey to reach statistical significance. The COVID-19 pandemic has caused individuals to work and study remotely for the last twelve months. These students and alumni may have been less likely to participate in electronic surveys due to the fact that they have already spent endless hours on the computer and are experiencing somewhat of a technology burnout or pandemic fatigue. I would encourage others to conduct similar studies after the pandemic has ended to attempt to engage more participants.

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**Appendix A**

**Survey Participation Invitation Email**

Dear Rowan University Students and Alumni,

My name is Jaclyn Schneider, and I am a graduate student at Rowan University in the masters of Higher Education program, as well as an intern with the Autism PATH program. I am currently researching how colleges can aid in the success of students with Autism Spectrum Disorder. This research will be used in part of the completion of my thesis and graduate program.

I am reaching out to you with hopes that you would be interested in assisting in my research. To participate in this study, a short survey will need to completed electronically (linked below). Your answers and participation will remain anonymous and confidential.

My goal from this survey is to have a better understanding of which approaches, supports, programs, and accommodations students with ASD need in order to be successful in college. This is an area I am very passionate about and hope that this research will be helpful for college professionals in the near future.

The online survey can be accessed through Qualtrics, here:
https://rowan.co1.qualtrics.com/jfe/form/SV_bavtongwJ0gmIbb

This study has been approved by Rowan University IRB PRO-2020-250

If you have additional questions, please feel free to reach out to myself at Schneiderjm@rowan.edu or the Principal Investigator, Dr. Drew Tinnin at Tinnin@rowan.edu.

I thank you all in advance for your participation!

Sincerely,

Jaclyn Schneider

**Appendix B**

**Consent and Instrument**

Q1. Consent to Participate in Research

You are being asked to participate in a research study that is intended to determine how colleges can best support and aid in the success of students with Autism Spectrum Disorder. This research study only consists of this 16 question survey. Participating in this study is voluntary, and there are no additional expectations for subjects who complete this survey. No identifiable information will be collected from this study, and if you choose to participate, your response will be completely anonymous. If you begin the survey, but wish to stop, you can exit the survey at any time. This survey is mostly multiple choice, and should take 10 to 15 minutes to complete.

You may contact Jaclyn Schneider (schneiderjm@rowan.edu) or Drew Tinnin (Tinnin@rowan.edu) if you have questions about the research. You may contact the Glassboro IRB office at 856-256-4058 if you have any questions about your rights as a research subject. Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop.

This study has been approved by Rowan University IRB PRO-2020-250

I consent to participating in this research study (1)

I do not consent to participating in this research study (2)

End of Block: Informed Consent Form

www.manaraa.com

Start of Block: Supports Needed for College Students with Autism Spectrum Disorder

Q2: What is your current student status at Rowan University?

- a. Freshman
- b. Sophomore
- c. Junior
- d. Senior
- e. Graduate student
- f. Alumni

Q3. Did either of your parents attend college?

- a. Yes
- b. No
- c. Not sure

Q4. What format was your program?

- a. On campus
- b. Online
- c. Hybrid (both)

Q5. Did/do you live on campus?

- a. Yes
- b. No

Q6. Did your high school prepare you for what to expect with college?

- a. Yes
- b. No
- c. Somewhat

Q7. Did you attend a summer bridge program prior to entering freshman year?

- a. Yes
- b. No
- c. Not sure

Q8. If so, was the bridge/orientation program helpful in getting acclimated to college?

- a. Yes
- b. No
- c. Not applicable

Q9. Which resources have your utilized on campus? (select all that apply)

a. ProfPartners (social support)
b. Career Readiness (resume, mock interview, job search, etc.)
c. Success Coaching
d. Student Success workshops
e. Alumni Hours
f. Virtual Drop In Hours
g. Academic and Housing Accommodations
h. Testing Accommodations
i. Tutoring
j. College Compass Summer Bridge program
k. Academic Advising
l. None

Q10. Which services helped you the most? (select all that apply)

a. ProfPartners (social support)
b. Career Readiness (resume, mock interview, job search, etc.)
c. Success Coaching
d. Student Success workshops
e. Alumni Hours
f. Virtual Drop In Hours
g. Academic and Housing Accommodations
h. Testing Accommodations
i. Tutoring
j. College Compass Summer Bridge program
k. Academic Advising
l. None

Q11. Which resources were not helpful? (select all that apply)

a. ProfPartners (social support)
b. Career Readiness (resume, mock interview, job search, etc.)
c. Success Coaching
d. Student Success workshops
e. Alumni Hours
f. Virtual Drop In Hours
g. Academic and Housing Accommodations
h. Testing Accommodations
i. Tutoring
j. College Compass Summer Bridge program
k. Academic Advising
l. None

Q12. What was most helpful in transitioning to college?

Q13. What was the most difficult part of transitioning to college?

Q14. Which area would you say was most challenging for you?

    A. Academics
    B. social skills
    C. organization skills
    D. study skills
    E. time management

Q16. Which accommodations were most helpful? _____

Q17. Is there a program, resource, or support that you wish you had taken advantage of but didn't? If so, please list it here: _____