



# Comparing Academic Challenges, Compensatory Strategies, and Motivational Factors in Autistic and Nonautistic High School Students

Gary E. Schaffer

# Presentation Objectives

01

Examine the challenges to academic achievement encountered by autistic and nonautistic high school students.

02

Identify the most common compensatory strategies and sources of strength autistic and nonautistic students use to ensure their academic success in high school

03

Compare what internal and external motivational factors autistic and nonautistic high school students perceive as contributing to their academic success

04

Discuss whether there are significant differences between autistic males and females regarding their academic challenges, strategies, and motivational factors

05

Identify practical strategies to help autistic students succeed in high school and beyond the secondary educational classroom

# Autism

# What is Autism?

Autism, or Autism Spectrum Disorder (ASD), is a neurodevelopmental condition characterized by challenges in social interaction, communication, and repetitive behaviors.



# What is Autism?

Autism characterized, in varying degrees, by difficulties in socialization:

**Sharing of  
interests/emotions**



**Back & forth  
conversation**



**Initiation of social  
interactions**



# What is Autism?

Autism characterized, in varying degrees, by difficulties in communication:

## Limited Eye Contact



## Understanding Gestures



## Limited Vocabulary





# What is Autism?

Autism characterized, in varying degrees, by difficulties in repetitive behaviors:

**Lining up chairs or cars**



**Self-Stimulation**



**Self-Stimulation**



# What is Autism?

Autism characterized, in varying degrees, by difficulties in restrictive interests:

Knowing every  
capitol city in the  
world



Having an extreme  
knowledge of bees



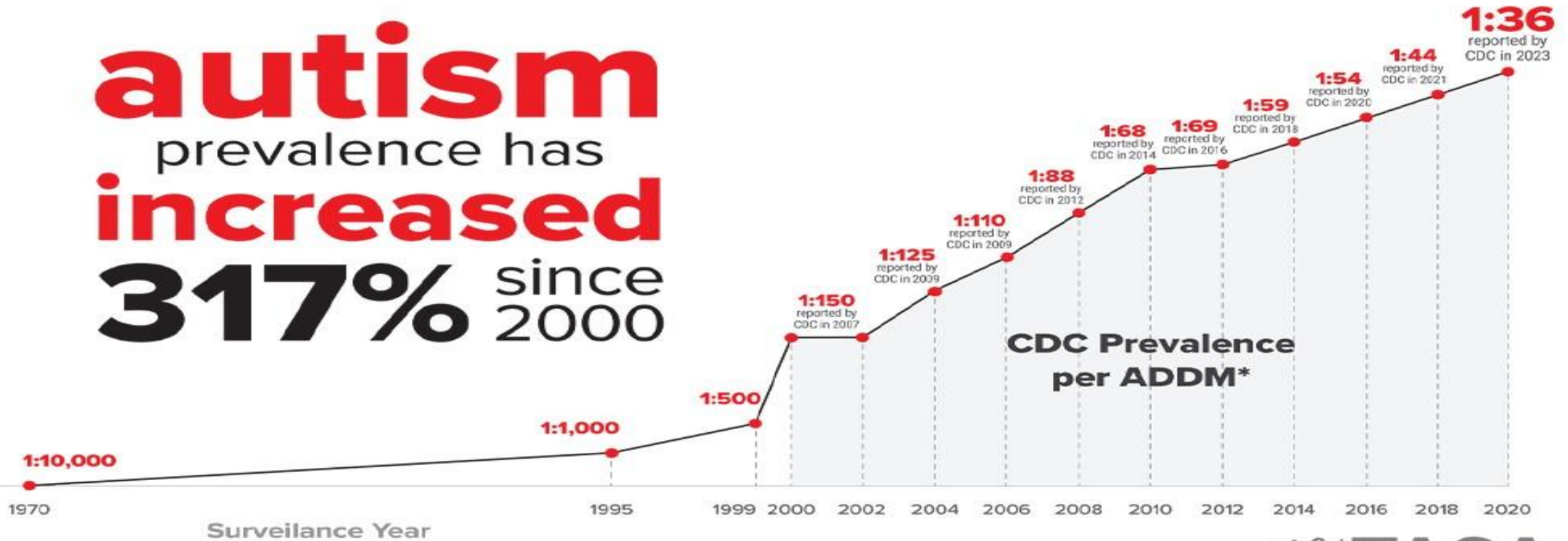
Knowing everything  
about New Wave Rock  
(album release dates, band  
members)





# How many Children are Diagnosed with Autism Annually?

**autism**  
prevalence has  
**increased**  
**317%** since  
2000



\*ADDM (Autism and Development Disabilities Monitoring Network)

# How many Children are Diagnosed with Autism Annually?

*Which children were more likely to be identified with ASD?*

Boys were 4.5 times more likely to be identified with ASD than girls.



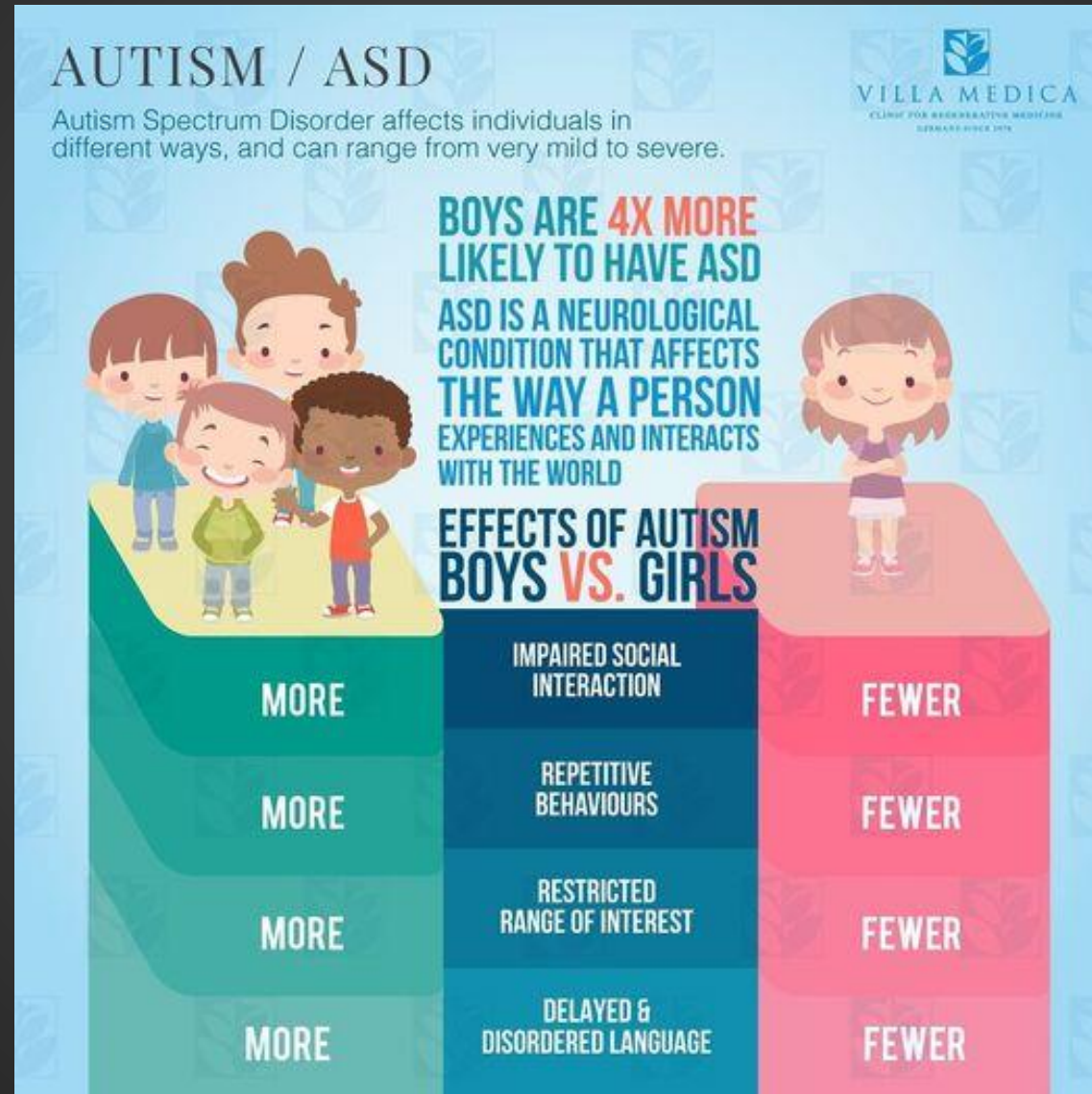
White children were more likely to be identified with ASD than black or Hispanic children. Black children were more likely to be identified with ASD than Hispanic children.

**1.2x**  
MORE LIKELY among white vs  
black children

**1.5x**  
MORE LIKELY among white vs  
Hispanic children

**1.3x**  
MORE LIKELY among black vs  
Hispanic children

# Gender Differences Identified in the Literature







# Autistic Students in High School



# Lack of Literature on Autistic Students in High School

- ✓ Little is known about the experiences of autistic youth in high school
- ✓ **3X** as many published intervention studies exist on autistic students ages **6-14 years old** compared to students ages **15-22**.
- ✓ Across **37** studies on high school and college students with autism in 2017, no studies exceeded **35** participants → lack of generalizability in findings.
- ✓ Most research on autistic high school studies qualitative and not quantitative in nature

# Why is More Research Needed On Autistic High School and College Students?

1. Core goal of secondary education is to prepare students for college and career readiness
2. Approximately 50,000 autistic students graduate high school annually but only 17,500 (35%) attend college.
3. Since 2012, it is estimated that as many as 433,000 autistic students have enrolled in college.
4. By 2025, it is estimated that there will be up to 800,000 to 1.1 million autistic high school students who will complete high school but **NOT** earn a college credential.

Cox, B. E., Thompson, K., Anderson, A., Mintz, A., Locks, T., Morgan, L., Edelstein, J., & Wolz, A. (2017). College Experiences for Students with Autism Spectrum Disorder: Personal Identity, Public Disclosure, and Institutional Support. *Journal of College Student Development* 58(1), 71- 87.

<https://muse.jhu.edu/article/646663>

# Why is More Research Needed On Autistic High School and College Students?

## College Students with Autism

### Enrollment Growth Relative to 2010

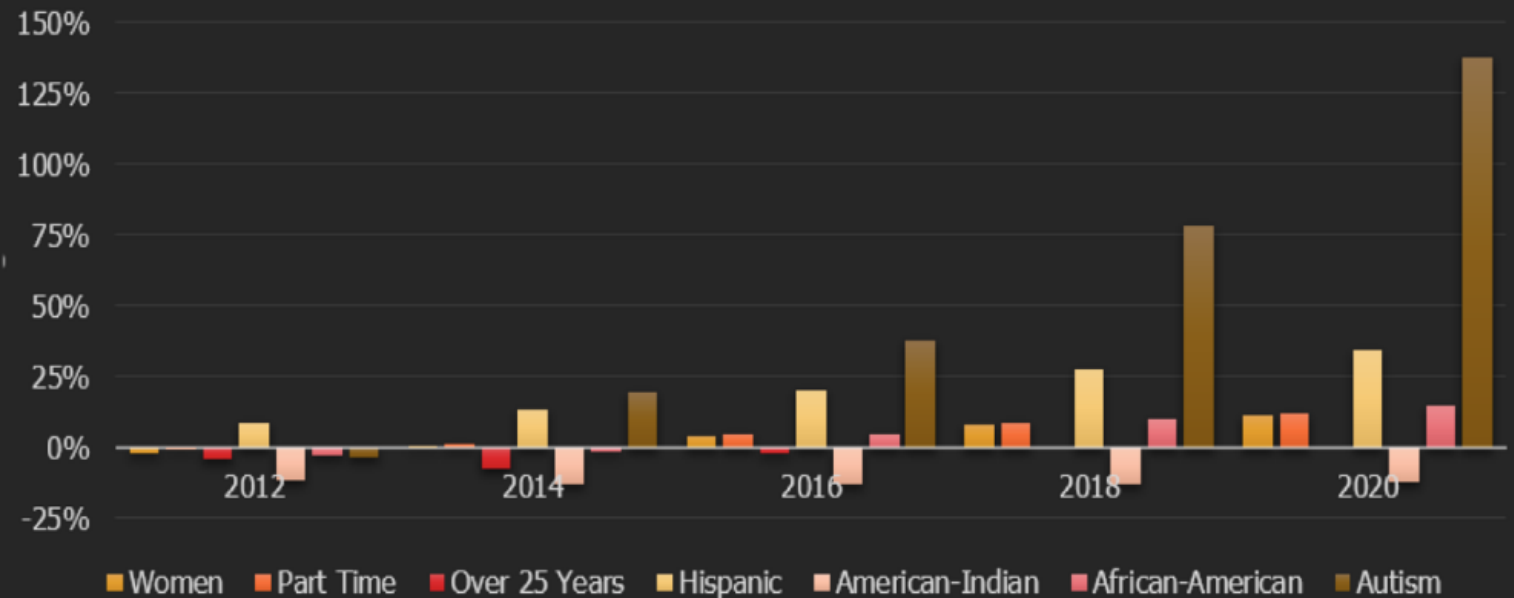
**Recent Estimates**  
16,000<sup>1</sup> or 143,500<sup>2</sup> or 389,500<sup>2</sup>

**By year 2020:**  
**up to 433,000<sup>3</sup>**

<sup>1</sup>Wei, Wagner, Hudson, Yu & Javitz (2015)

<sup>2</sup>Extrapolation from White, Ollendick, & Bray (2011)

<sup>3</sup>Extrapolation from 2014 CDC data



*Over the next 10 years, enrollment growth for college students with autism will outpace enrollment growth for most other student populations.*

# College Graduation Rates Comparison

Nonautistic Students	Autistic Students
59% will graduate with a bachelor's degree	38.8% will graduate with a degree

(Newman et al., 2011; National Center for Education Statistics, 2021)



# Employment Rates Comparison

Nonautistic Students	Autistic Students
63% employed	47% employed

(Newman et al., 2011; Ohl et al., 2021)

# Suggested Barriers to Success

1. High schools are **50%** larger than middle schools



2. Colleges tend to be even larger than many high schools



3. High schools and colleges often chaotic, noisy, and involve adapting to different environments and instructors for different classes (lack of consistency and predictability)



# Suggested Barriers to Success

4. Autistic student students often have deficits in:

A) Organization



B) Time Management



C) Socialization



D) Sensory Sensitivity



5. **68%** of students with autism drop out of college, fail to apply for admittance to higher education, or are not accepted into four-year postsecondary education programs.

# Suggested Barriers to Success

6. While **73%** of high school students with disabilities take part in their transition–planning into adulthood, it is estimated that only **23%** of autistic high school students participate in such planning (Fiedler & Danneker, 2007; Shogren & Plotner, 2012).
7. While adolescents with autism were included in transition–planning meetings **85%** of the time, they only led the transition team in **5%** of cases (Hatfield et al., 2018). Research has shown that students with autism who participate in transition–planning en route to college are more likely to enroll in postsecondary education and experience enhanced success in college (Wei et al., 2015).

# Previous Research

**Previous research (Newman, 2007) has found that the most common learning supports provided to autistic secondary students include:**

1. Monitoring of progress by a special education teacher
2. Receiving support from a teacher's aide or other personal aides
3. Increased feedback

**Most frequently reported accommodations include (Newman, 2007):**

1. Receiving additional time to complete assignments
2. Having alternative tests or assignments
3. Slower-paced instruction

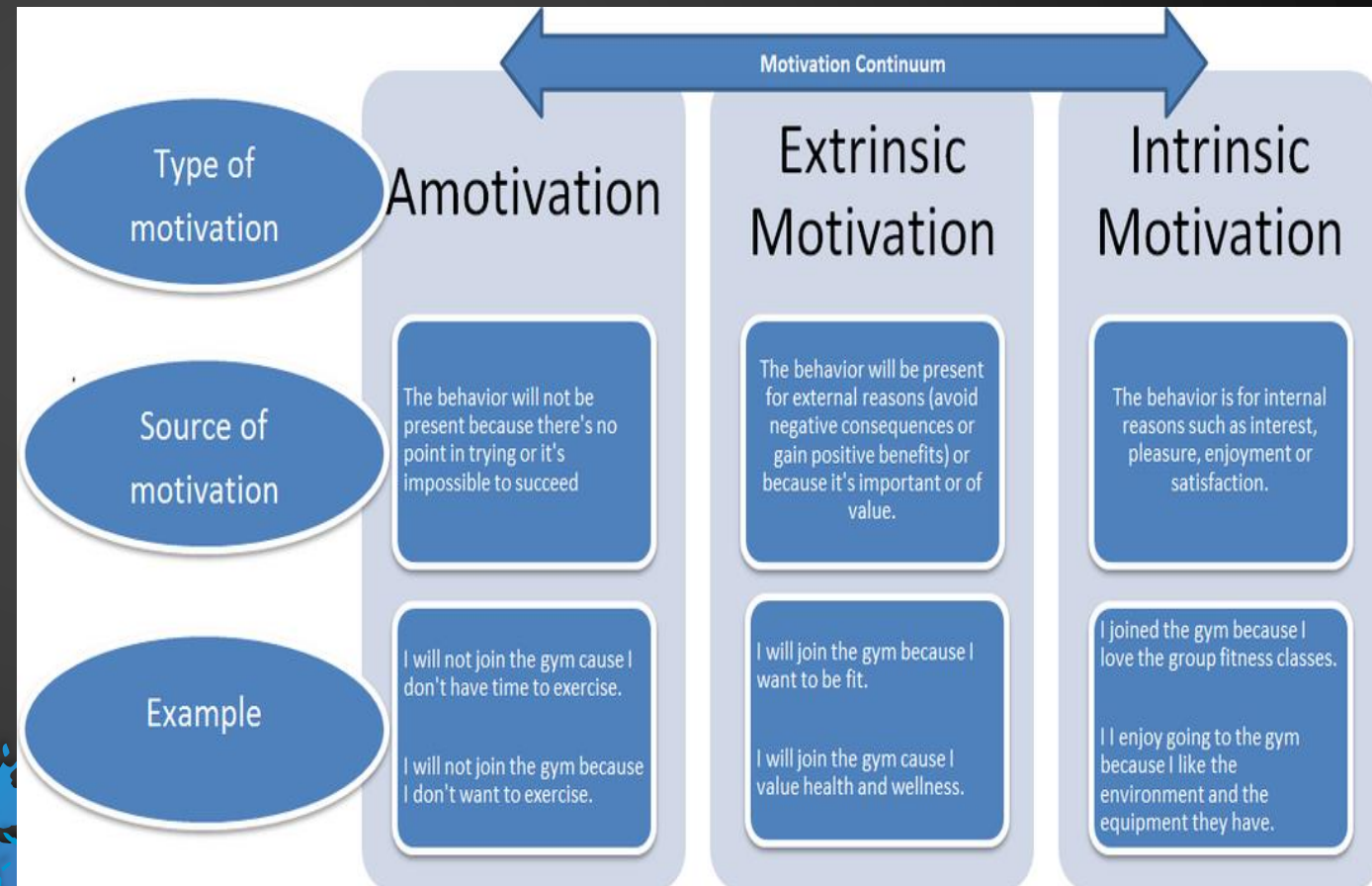


# Previous Research

- **Motivation** is the process that initiates, guides, and maintains goal-oriented behaviors.
- Since 1950s growing interest in motivation and academic achievement of high school students.
- Belief that motivation falls on a continuum
- Intrinsic motivation more conducive to learning than external motivation

## Amotivation determinantal to:

- Academic achievement
- High School Graduation
- Pursuing High Education
- Gaining Employment



# Previous Research

Youth who possess greater levels of intrinsic motivation are found to have:

- Greater levels of autonomy
- Academic persistence
- Engagement
- Performance
- Less anxiety in completing homework
- Lower school dropout rates
- Better grades



# Previous Research

**Most common reasons for students wanting to succeed academically include:**

- Wanting to maintain a high GPA
- Fear of failure
- Proving to self that they can succeed
- Earning respect from teachers, parents, and peers

**Most common factors that decrease students motivation:**

- Receiving a poor grade
- Boredom with coursework
- Feeling depressed or anxious



# Previous Research

- Most studies on motivation have focused on nonautistic students or students with intellectual and learning disabilities
- Only **five** studies have explored motivational factors in autistic high school and college students with most obtaining the perspectives of:
  - >Parents
  - >Teachers
  - >Other professionals

These studies did not obtain the direct insights of students with autism and only **three** were conducted in the United States

(Chou et al., 2017; Chou et al., 2019; Cai & Richdale, 2016; Daniel & Cooc, 2018; White et al., 2016)

# Previous Research

Previous research has suggested that:

–High school and college students with autism have lower levels of motivation compared to nonautistic students due to their:

- >Restricted interests
- >Deficits in socialization
- >Deficits in communication
- >Limitations in shared interests

Sharing of interests/emotions	Back & forth conversation	Initiation of social interactions
		
Knowing every capital city in the world	Having an extreme knowledge of bees	Knowing everything about New Wave Rock (album release dates, band members)
		

\*No studies exist on internal and external motivational factors, autism, and academic success

# Our Research

# The Research Team



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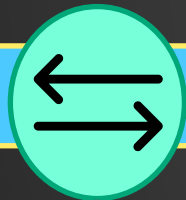
Employment &  
Development Specialist



# Timeline for Studies

**2008**

Desire to independently research autism, compensatory strategies, & motivation in college students



**2008 - 2012**

Topic changes to an independent graduate study on college students with ADHD, compensatory strategies, & motivation

**2013**

Study on ADHD, compensatory strategies, & motivation published in Journal of Postsecondary Education & Development

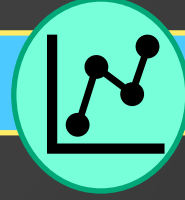


**2016**

Researchers from Southeast Missouri State reach out and want to replicate the ADHD study on autistic students

**2016 - 2019**

Ongoing data collection & analysis on autistic high school and college students



**2021**

Publication #1



**2023**

Publication #2

**2023**

Submitted Publication #3

Journal of  
Postsecondary  
Education and  
Disability

Volume 26(1), Spring 2013

JOURNAL OF POSTSECONDARY EDUCATION AND DISABILITY • Volume 26(1) • Spring 2013 • Pages 1 - 100

**AHEAD** Association on  
Higher Education  
And Disability®

# ORIGINAL 2013 PUBLICATION ON ADHD BELOW → AUTISM STUDIES

Journal of Postsecondary Education and Disability, 26(1), 89 - 99 89

## PRACTICE BRIEF

### Assessing Compensatory Strategies and Motivational Factors in High-Achieving Postsecondary Students with Attention Deficit/Hyperactivity Disorder

Gary Schaffer  
Lansing School District

#### Abstract

Research speculates that high-achieving college students with attention deficit/hyperactivity disorder (ADHD) may demonstrate a set of compensatory strategies and experience areas of difficulty and motivational factors that differ from the general ADHD populace. This Practice Brief used informal surveys with seven undergraduates with ADHD who had achieved a cumulative GPA of 3.0 or higher. Their feedback provides insight into factors related to their challenges and successes. This article creates opportunities for more formal investigations of these factors in follow-up studies and informs suggestions for professional practice.

*Keywords:* College students, Attention Deficit/Hyperactivity Disorder, high achievement, compensatory strategies

#### Literature Review

Prior to the 1970s, attention deficit/hyperactivity disorder (ADHD) was thought to be a disability that primarily existed in childhood (Barkley, Murphy, & Fischer, 2008). However, research now estimates that approximately 50% to 70% of children who have the disorder maintain symptoms into adulthood (Ramsay & Rostain, 2006). Although students with ADHD are less likely than their peers to graduate from high school and attend college, the number of postsecondary students with the disorder has risen considerably since the 1960s with approximately 2% to 8% of postsecondary students self-reporting ADHD (Weyandt & DuPaul, 2006).

has found that postsecondary students with ADHD

have decreased fun-  
demands of colleg  
likely to report ac  
cits, organizationa  
esteem, and decre  
non-disabled peer  
Savino, & Fulwiler  
Chaplin, & Bergm

Even though cc  
likely to report hav  
have examined acad  
students with the c  
genstein et al., 199



# Primary Research Studies

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DOI: 10.1002/pits.22926

RESEARCH ARTICLE

WILEY

## Perceived obstacles and strategies to academic success for autistic and nonautistic high school students

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### Correspondence

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### Abstract

Despite an increasing number of autistic children entering and graduating from high school, there remains limited research in this area. This study surveyed 162 autistic and nonautistic high school students. Participants were asked about their perceptions regarding their compensatory strategies, everyday hindrances, and areas of perceived strength. In controlling for background characteristics of gender, minority status, autistic and nonautistic status, compensatory strategies, experience on similar sources of success, and academic success. Differences between autistic and nonautistic students are discussed. Results for male and female respondents are also presented.

### KEYWORDS

academic success, autism, autistic



Journal of Inclusive Postsecondary Education

Volume 3, Issue 1

## Perceptions of High School and College Students with Autism Related to Their Obstacles and Strategies to Academic Success

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### Abstract

Despite an increasing number of young adults with autism pursuing postsecondary education, limited research has been devoted to high-functioning students with autism transitioning to college and attending postsecondary education. This preliminary study surveyed 109 high school and undergraduate students with high-functioning autism. Participants were asked about their perceptions regarding their compensatory strategies, everyday hindrances, areas of perceived strength, and areas of academic and career interest. Results of this study add to the existing literature by revealing significant differences between responses for high school and postsecondary students. Additional significant differences are noted between male and female respondents.

**Keywords:** autism; high-functioning autism; high school transition; transition to college

### Plain Language Summary

- Despite a growing number of young adults with little research has been devoted to high-functioning students transitioning to and attending higher education.
- This study surveyed 109 high school and undergraduate students with high-functioning autism. Participants of this study shared their thoughts on the strategies they used, everyday hindrances, academic and career interests.
- Results of this study add to what we know about the experiences of high school and college students. Both male and female students also responded differently.



PERCEPTIONS OF HIGH SCHOOL STUDENTS

1

MANUSCRIPT UNDER REVIEW

## Perceptions of Autistic and Nonautistic High School Students Regarding Factors that Impact Their Motivation to be Academically Successful

Gary E. Schaffer<sup>1</sup>, Anthony J. Faber<sup>2</sup>, Shahrokh M. Shafaie<sup>2</sup>, and Darin Stageberg<sup>3</sup>

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SLIDESMANIA.COM

# Research Questions Across Studies

1. What are the major perceived obstacles to academic success for autistic and nonautistic high school students?
2. What are the most common compensatory methods and strategies used to enhance success in school by autistic and nonautistic high school students?
3. What are the most self-identified sources of strength for autistic and nonautistic high school students?



# Research Questions Across Studies

4. What internal and external motivational factors do autistic and nonautistic high school students perceive as contributing the most to their academic success?
5. Are there significant differences between autistic and nonautistic high school students in relation to the internal and external motivational factors they attribute to their academic success?
6. Are there significant gender difference in participants' responses for autistic students?

# Participants

Total = 162 participants

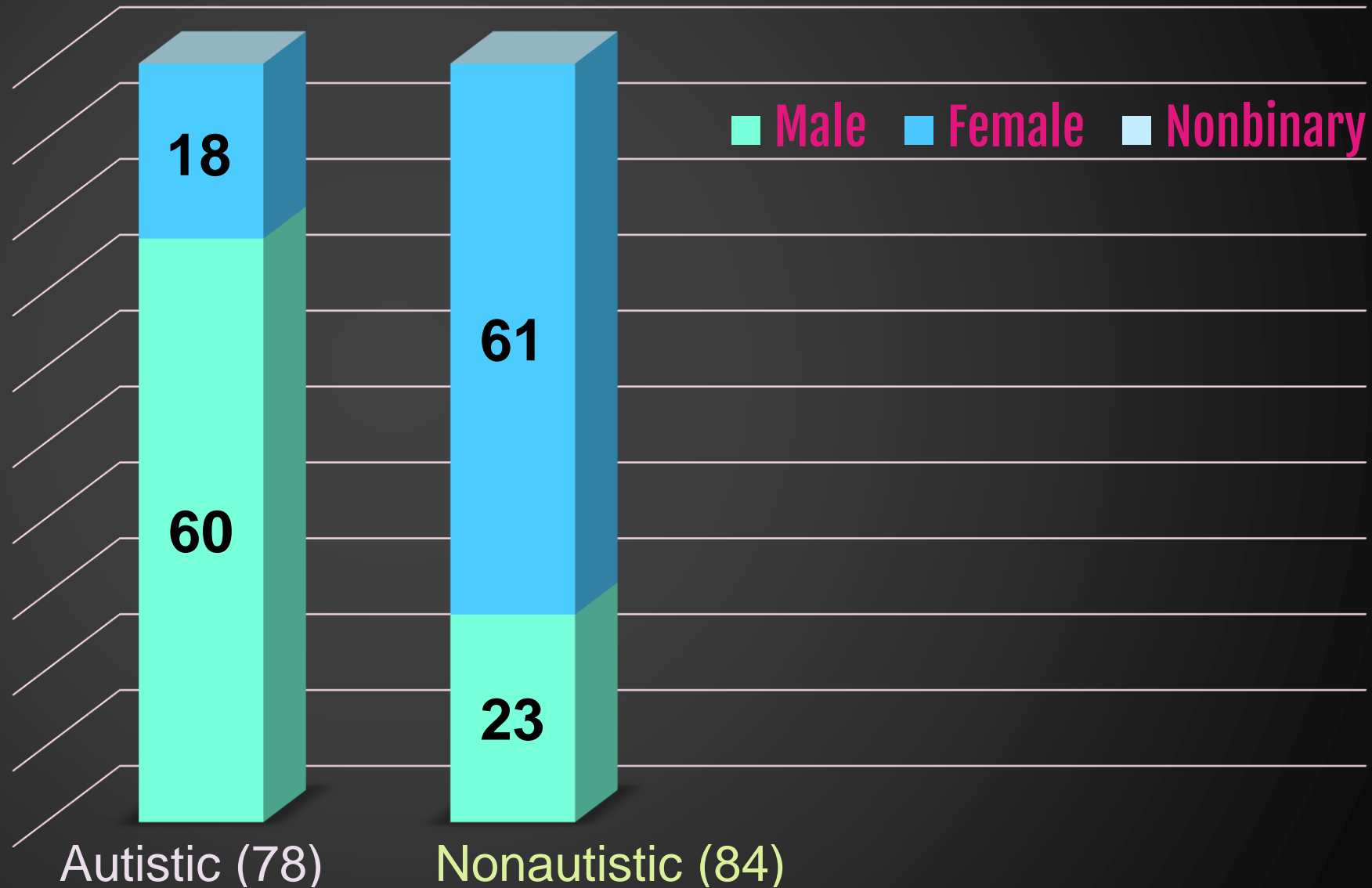
- ✓ Nonautistic students recruited from 57 Midwest high schools
- ✓ Autistic participants recruited from the Interactive Autism Network (IAN) Database
- ✓ Diagnosis of Autism was validated through IAN via parent report and medical records

IAN was:

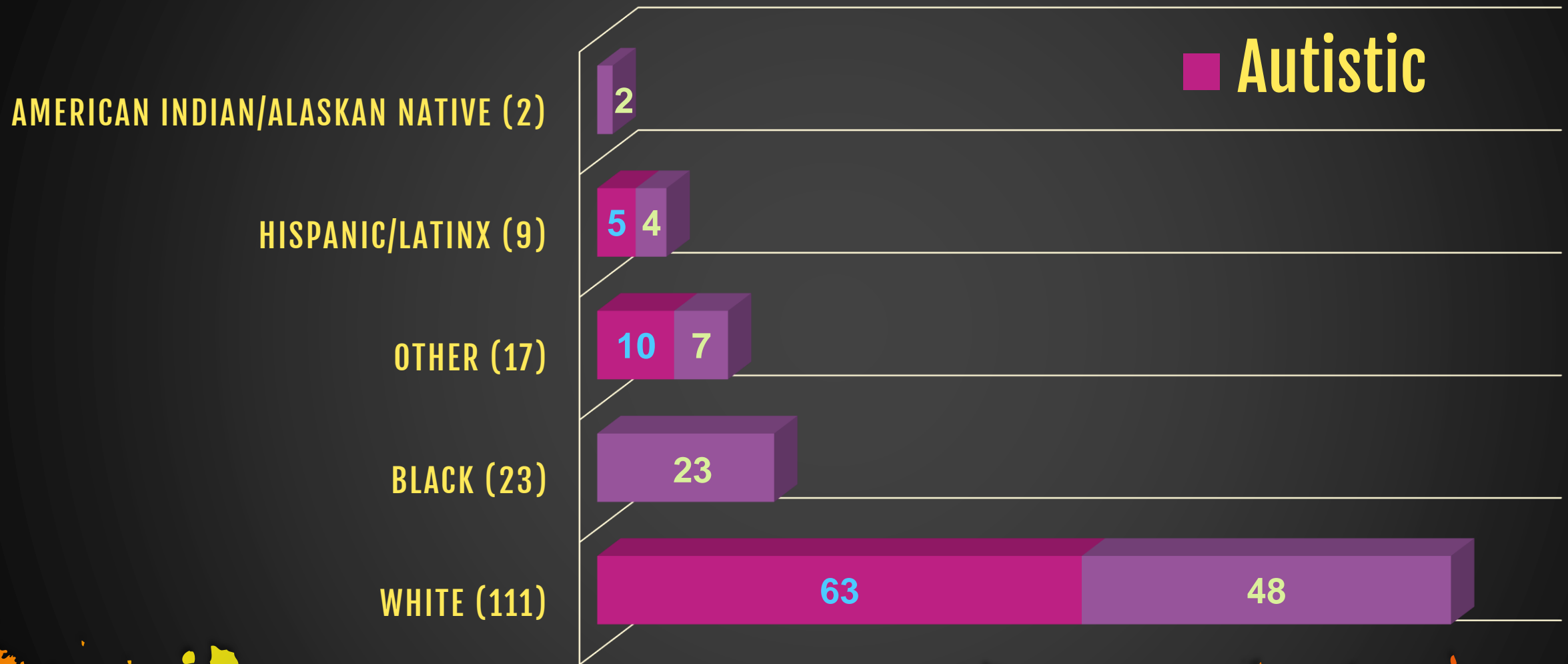
- ✓ An Autism database consisting of more than 20,000 autistic children and adults
- ✓ Governed by Joh Hopkins Medicine Institutional Review Board



# Participant Demographics ( $n=162$ )



# PARTICIPANT DEMOGRAPHICS





# PARTICIPANT AGES

NINETEEN (4)

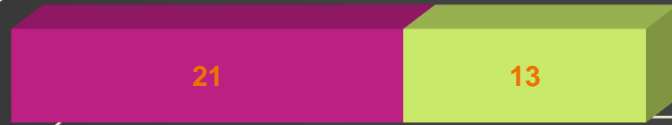


■ Autistic ■ Nonautistic

EIGHTEEN (17)



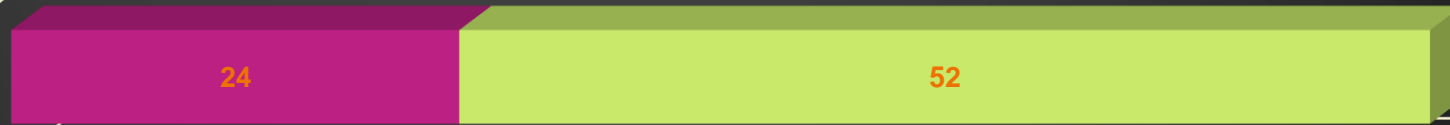
SEVENTEEN (N = 34)



SIXTEEN (31)



FIFTEEN (76)



# Data Collection Measures

Across three studies, five questionnaires were developed and used

1. Perceived obstacles to success questionnaire
2. Methods and strategies to ensure academic success questionnaire
3. Source of strength questionnaire
4. Sources of motivation questionnaire
5. Factors that decrease motivation questionnaire

# Data Collection Measures

Across three studies, five questionnaires were developed and used

1. Perceived obstacles to success questionnaire
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4. Sources of motivation questionnaire
5. Factors that decrease motivation questionnaire

# Data Collection Measure

## Obstacles to Success Questionnaire

**33** Items that are common barriers to academic success

### Example:

*“Some issues that cause problems for me and prevent my academic success include....”*

*“Being forgetful”*

*“Zoning out in class”*

## Methods to Ensure Academic Success Questionnaire

**39** Items that are methods used to assist in students in being academically successful

### Example:

*“In order to help me be academically successful...”*

*“I maintain an everyday routine”*

*“I use highlighters”*

## Sources of Strength Questionnaire

**10** Items that asked students to identify what they are good at

### Example:

*“In your opinion, what are you good at?”*

*“I am very observant in my area of interest”*

*“I pay great attention to detail”*

## Sources of Motivation Questionnaire

**15** Items -eight internal and seven external motivational factors for wanting to be academically successful

### Example:

*“To what extent do each of the following factors motivate you to be academically successful...”*

*“To make my parents proud”*

*“To get into a good college”*

## Factors that Decrease Motivation Questionnaire

**32** Items -eight internal and seven external motivational factors for wanting to be academically successful

### Example:

*“Factors that decrease my motivation to do well in school include...”*

*“Boredom with coursework”*

*“Feeling anxious”*



# Types of Data Analysis Used

1. Univariate analysis
2. Binary logistic regression
3. ANCOVA

**\*Use of a binary logistic regression allowed for the statistical control of background characteristics that may interfere with results or findings (Example, controlling for female students being more likely to endorse an item than male students)**

# Types of Data Analysis Used

Background characteristic controlled for include:

1. Autism status
2. Gender
3. Minority status
4. Age

# Results

1. What are the major perceived obstacles to academic success for autistic and nonautistic high school students?

# Results

1. What are the major perceived obstacles to academic success for autistic and nonautistic high school students?

Autistic	Nonautistic
1. Feeling constantly anxious or nervous (55%)	1. Zoning out in class (80%)
2. Procrastinating on assignments (54%)	2. Having an irregular sleep schedule (76%)
3. Having poor organizational skills (53%)	3. Feeling constantly tired (67%)



# Results

1. What are the major perceived obstacles to academic success for autistic and nonautistic high school students?

A) When compared to autistic students, nonautistic students were significantly more likely to select the following perceived obstacles to academic success:

- 1) Zoning out in class
- 2) Feeling constantly tired

A) When compared to nonautistic students, autistic students were significantly more likely to select the following perceived obstacles to academic success:

- 1) Working with others

# Results

2. What are the most common compensatory methods and strategies used to enhance success in school by autistic and nonautistic high school students?

# Results

## 2. What are the most common compensatory methods and strategies used to enhance success in school by autistic and nonautistic high school students?

Autistic	Nonautistic
1. Maintaining an everyday routine (65%)	1. Asking friends, family members, or others for help when feeling overwhelmed (73%)
2. Taking prescribed Medications (58%)	2. Listening to music to help focus while completing an assignment (69%)
3. Working longer & harder than peers to get good grades (47%)	3. Asking for help from instructors and peers (62%)

# Research Questions Across Studies

2. What are the most common compensatory methods and strategies used to enhance success in school by autistic and nonautistic high school students?

Autistic Students		Nonautistic Students	
Males	Females	Males	Females
1. Maintain an everyday routine	1. Maintain an everyday routine	1. Listen to music to help me focus when completing an assignment	1. Ask friends, family, or others for help when feeling overwhelmed
2. Take my prescribed medications daily	2. Feel like I have to work longer and harder than my peers to get good grades	2. Ask friends, family, or others for help when feeling overwhelmed	2. Listen to music to help me focus when completing an assignment
3. Ask friends, family, or others for help when feeling overwhelmed	3. Listen to music to help me focus when completing an assignment	3. Maintain an everyday routine	3. I believe it's my responsibility to ask for help from instructors or peers.



# Results

## 2. What are the most common compensatory methods and strategies used to enhance success in school by autistic and nonautistic high school students?

- A) Autistic students were significantly more likely than nonautistic students to use a daily planning to record upcoming due dates
- B) Nonautistic students were significantly more likely than autistic students to listen to music to help them focus while completing an assignment
- C) The following strategies compensatory strategies were more likely to be used by autistic students due to their status of having a disability:
  - 1) Seeking permission to receive extended time on tests
  - 2) Taking prescribed medications daily
  - 3) Having regular one-to-one check in sessions with my academic advisor or counselor

# Results

3. What are the most self-identified sources of strength for autistic and nonautistic high school students?

# Results

## 3. What are the most self-identified sources of strength for autistic and nonautistic high school students?

Autistic	Nonautistic
1. I am very observant in my area of interest/pay great attention to detail (62%)	1. I believe that I am more creative and talented in certain areas than others (44%)
2. I have developed an extreme interest and passion in an area greater than my peers (53%)  I have a great strength in thinking in pictures & visualizing concepts/ideas (53%)	2. I see myself as possessing normal intelligence (42%)
3. I have a memory that is stronger compared to my peers (50%)	3. I have a great strength in thinking in pictures and visualizing concepts/ideas (29%)

# Results

## 3. What are the most self-identified sources of strength for autistic and nonautistic high school students?

–Out of all the self-identified sources of strength listed, autism was a significant predictor in selecting “*I am very observant in my area of interest/pay great attention to detail.*”





# Results

4. What internal and external motivational factors do autistic and nonautistic high school students perceive as contributing the most to their academic success?

# Results

4. What internal and external motivational factors do autistic and nonautistic high school students perceive as contributing the most to their academic success?

Autistic	Nonautistic
1. To make my parents proud	1. To make my parents proud
2. To prove to myself that I can succeed	2. Because I want to get into college/find a good job
3. To please my instructors	3. Because of my career goals

\*Notice how two of the three autistic students top responses are focused on pleasing others regarding academic success.

\*Note how two of the three nonautistic student responses are future-oriented.

# Results

4. What internal and external motivational factors do autistic and nonautistic high school students perceive as decreasing their academic success?

Autistic	Nonautistic
1. Having to complete coursework that does not pertain to my specific area of interest (71%)	1. Boredom with coursework (67%)
2. Feeling anxious (68%)	2. Feeling tired or exhausted (65%)
3. Boredom with coursework (63%)	3. Feeling overwhelmed by coursework (63%)

\*Note how earlier in the presentation that the nonautistic group indicated that “having an irregular sleep schedule” and “feeling constantly tired” are barriers to their academic success.

\*Here the nonautistic students are also saying that feeling tired or exhausted actually decreases their motivation, which may in turn hurt their academic success!

# Results

4. What internal and external motivational factors do autistic and nonautistic high school students perceive as decreasing their academic success?

Autistic high school students were significantly more likely to select “feeling anxious” as a factor that decreased their motivation to be academically successful than their nonautistic peers.

The largest disability-specific factor that decreased autistic students motivation to be academically successful was “lack of understanding for my disability among my teachers (44%).”





# Results

5. Are there significant differences between autistic and nonautistic high school students in relation to the internal and external motivational factors they attribute to their academic success?

# Results

4. Are there significant differences between autistic and nonautistic high school students in relation to the internal and external motivational factors they attribute to their academic success?

>Out of the **15** internal and external motivational factors listed, nonautistic students significantly rated **11** of the motivators of greater importance than autistic students.

Table 3

*Differences Among Autistic and Nonautistic High School Students Regarding the Importance of Sources of Motivation*

Sources of Motivation	Autistic	N	Mean	SD	Mean Difference	F(1,160)	$\eta^2$
To prove to others (who said I would fail) that I can succeed	Yes	77	3.26	1.72	.93	7.32	.05
	No	84	4.19	1.64			
To prove to myself that I can succeed	Yes	77	4.09	1.42	1.09	19.22*	.11
	No	84	5.18	1.29			
To make my parents proud	Yes	77	4.22	1.36	1.07	11.96*	.07
	No	84	5.29	1.14			
To make my grandparents proud	Yes	77	2.87	1.72	2.11	40.68*	.21
	No	84	4.98	1.42			
To please my instructors	Yes	77	3.78	1.45	.28	1.23	.01
	No	84	4.06	1.43			
To obtain scholarship money for college	Yes	77	2.65	1.73	2.40	60.94*	.28
	No	84	5.05	1.30			

# Results

5. Are there significant differences between autistic and nonautistic high school students in relation to the internal and external motivational factors they attribute to their academic success?

The top three motivators with the largest mean differences between autistic students and nonautistic students were:

- 1) To obtain scholarship money for college
- 2) To make my grandparents proud
- 3) Because having a high GPA is a goal of mine

**\*The nonautistic students rated these motivators as having greater importance to their academic achievement than the autistic students.**

# Results

6. Are there significant differences between autistic and nonautistic high school students in relation to the internal and external motivational factors they attribute to their academic success?



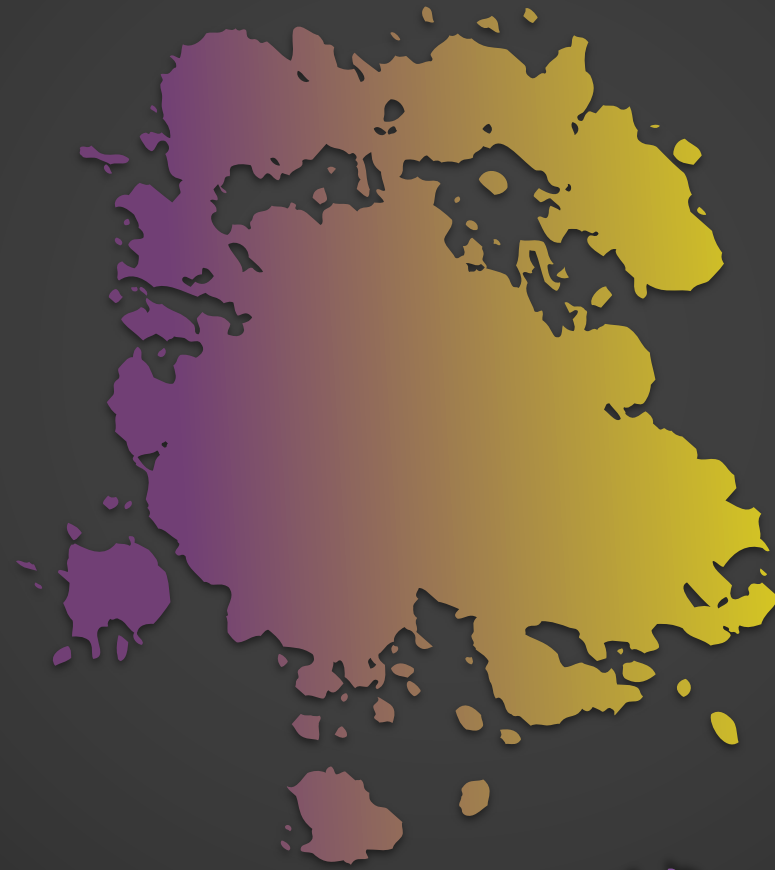
# Results

6. Are there significant gender difference in participants' responses for autistic students?

**NO.** Although previous studies have cited gender differences in the presentation of autism, our studies have found little to no gender differences in the following areas that have been examined:

- > Perceived obstacles to success
- > Compensatory strategies
- > Self-identified sources of strength
- > Motivational factors

# Implications for Educators



# Implications for Educators

> For nonautistic students, lack of sleep being tied to a decrease in motivation and interfering with academic success is critical. Educators can help students by:

- 1. Educating students about Sleep Importance:** Start by discussing the importance of sleep in class. Explain how adequate sleep improves memory, concentration, mood, and overall health. When students understand the benefits of good sleep, they may be more motivated to prioritize it.
- 2. Promoting Time Management:** Teach time management skills to help students balance their academic and extracurricular activities. When they learn to manage their time effectively, they can allocate sufficient time for studying, hobbies, and rest without compromising their sleep.



# Implications for Educators

- 3. Explaining limiting screen time:** Explain the negative impact of blue light from screens on sleep quality. Encourage students to avoid screens (phones, tablets, computers, TVs) at least an hour before bedtime. Suggest reading a physical book, practicing relaxation techniques, or listening to calming music instead.
- 4. Creating a Calming Classroom Environment:** If possible, create a calming and supportive classroom environment. This can include soothing colors, comfortable seating, and possibly even a designated space for relaxation exercises or meditation.
- 5. Incorporating Mindfulness Practices:** Teach mindfulness techniques that can help students reduce stress and improve sleep quality. Breathing exercises and meditation can help calm their minds before bedtime.





# Implications for Educators

> Nonautistic students' motivators for wanting to be academically successful appeared to be more future-oriented than autistic students. Educators can help students with college and career readiness by:

1. **Early Introduction:** Start discussing college and career options early, even in freshman or sophomore years. Introduce the concept of higher education and different career paths so students have ample time to explore their interests and options.
2. **Individualized Counseling:** School counselors should offer one-on-one sessions where they can discuss students' aspirations, strengths, weaknesses, and interests. Provide personalized guidance based on their goals.

# Implications for Educators

**3. College Workshops:** Organize workshops focused on college application processes, financial aid, scholarships, and other relevant topics. These workshops can help demystify the college application journey for both students and their parents.

**4. Guest Speakers:** Invite professionals from various fields to speak to students about their careers. This exposure can provide real-world insights and inspire students to consider different career options.





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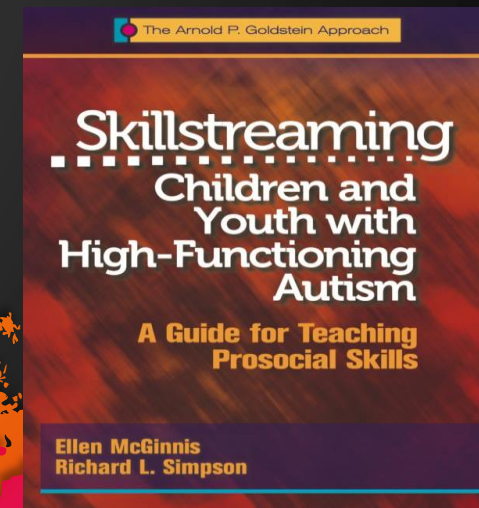
Too few autistic students are being involved in transition planning and leading their transition plan meetings. High school autistic students should lead their transition plan meetings and these plans should incorporate:

1. Their future college and career goals
2. Motivating factors
3. Detail compensatory strategies used to be academically successful that could help beyond high school
4. Detail strategies and interventions to improve social interactions, communication, and collaboration in various settings.

# Implications for Educators

In our study, students with autism acknowledged that working with others is a barrier to their academic success. This is also a key feature of autism. School can help autistic high school students by:

1. Providing social skills training groups through a school psychologist or school counselor
2. Using counseling M.Ed. curriculums like Skillstreaming for Children and Youth with Autism
3. Providing classroom opportunities to practice skills learned in social skills training groups
4. Modeling prosocial behavior
5. Using role playing





# Implications for Educators

Both autistic and nonautistic students indicated a number of compensatory strategies that they use to be academically successful. However, educators can further help these students by:

1. Helping students determine which compensatory strategies are helping them to be most academically successful
2. Assisting students in using their compensatory strategies on a routine basis for consistency
3. Ensuring that students are using only a few compensatory strategies really well as opposed to a lot of compensatory strategies that they are not using correctly or consistently
4. Modeling compensatory strategies that may assist after high school

# Implications for Educators

Out of the **15** internal and external motivational factors listed, nonautistic students significantly rated **11** of the motivators of greater importance than autistic students.

- >Although this finding appears to suggest that students with autism have significantly lower internal and external motivating factors compared to their peers (amotivation), these students restricted interests may be so unique and nuanced that the current study and past research has not been able to fully detect their true interests or motivators.
- >Educators should specifically inquire about what motivates and interests their students with autism. These motivators and interests can be worked into everyday lessons and anticipatory sets.
- >Educators should specifically inquire about autistic high school students future plans after they graduate and help them to think constructively about what they would like to pursue after high school.



**Thank You!!!!**

# About me



Growing up as a struggling student with **Attention-Deficit Hyperactivity Disorder** and a **learning disability**, Gary E. Schaffer has dedicated his professional practices and life to helping all learners succeed. Gary received a bachelor's degree in special education and English and subsequently went on to become a school psychologist and clinical mental health counselor. As a school psychologist, Gary practiced across **school, hospital, and state agency settings** where he primarily worked with **diverse learners** and individuals with **developmental disabilities** for over ten years. Additionally, Gary was employed full-time at Niagara University where he taught graduate students in school psychology and counseling.

Currently, Gary is completing his terminal degree in School Psychology at the **University of South Florida (USF)** with plans to rejoin **Niagara University** in 2024 as a full-time Assistant Professor. Gary has authored numerous scholarly articles, books, book chapters, and programs in the areas of COVID-19, MTSS, autism, and school psychology leadership. He has presented on and offers consultation in Multi-Tiered Systems of Support and best preventative practices under three-tiered frameworks, such as RTI and SWPBS. Under MTSS, he has a particular interest in leveraging the model to assist individuals with developmental disabilities to overcome barriers to success and create equitable outcomes both in school and in life. He can be reached through his email at [geschaffer@gmail.com](mailto:geschaffer@gmail.com) or followed on Twitter (now known as X) at [@GE\\_Schaffer](https://twitter.com/GE_Schaffer).