

The Challenge of Students with Autism Spectrum Disorder (ASD) in Honors Programs

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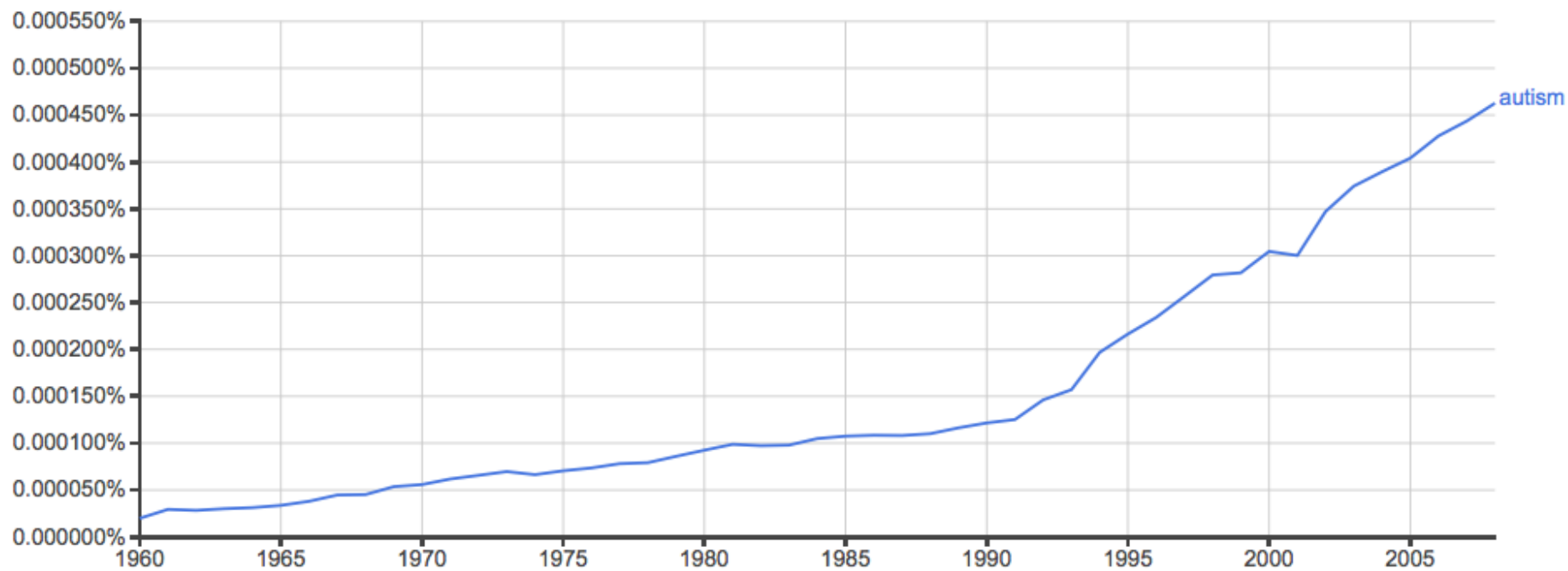
Identified Prevalence of Autism Spectrum Disorder

ADDM Network 2000-2010
Combining Data from All Sites

Surveillance Year	Birth Year	Number of ADDM Sites Reporting	Prevalence per 1,000 Children (Range)	This is about 1 in X children...
2000	1992	6	6.7 (4.5 – 9.9)	1 in 150
2002	1994	14	6.6 (3.3 – 10.6)	1 in 150
2004	1996	8	8.0 (4.6 – 9.8)	1 in 125
2006	1998	11	9.0 (4.2 – 12.1)	1 in 110
2008	2000	14	11.3 (4.8 – 21.2)	1 in 88
2010	2002	11	14.7 (5.7 – 21.9)	1 in 68

Google books Ngram Viewer

Graph these comma-separated phrases: case-insensitive
between and from the corpus with smoothing of [Search lots of books](#)

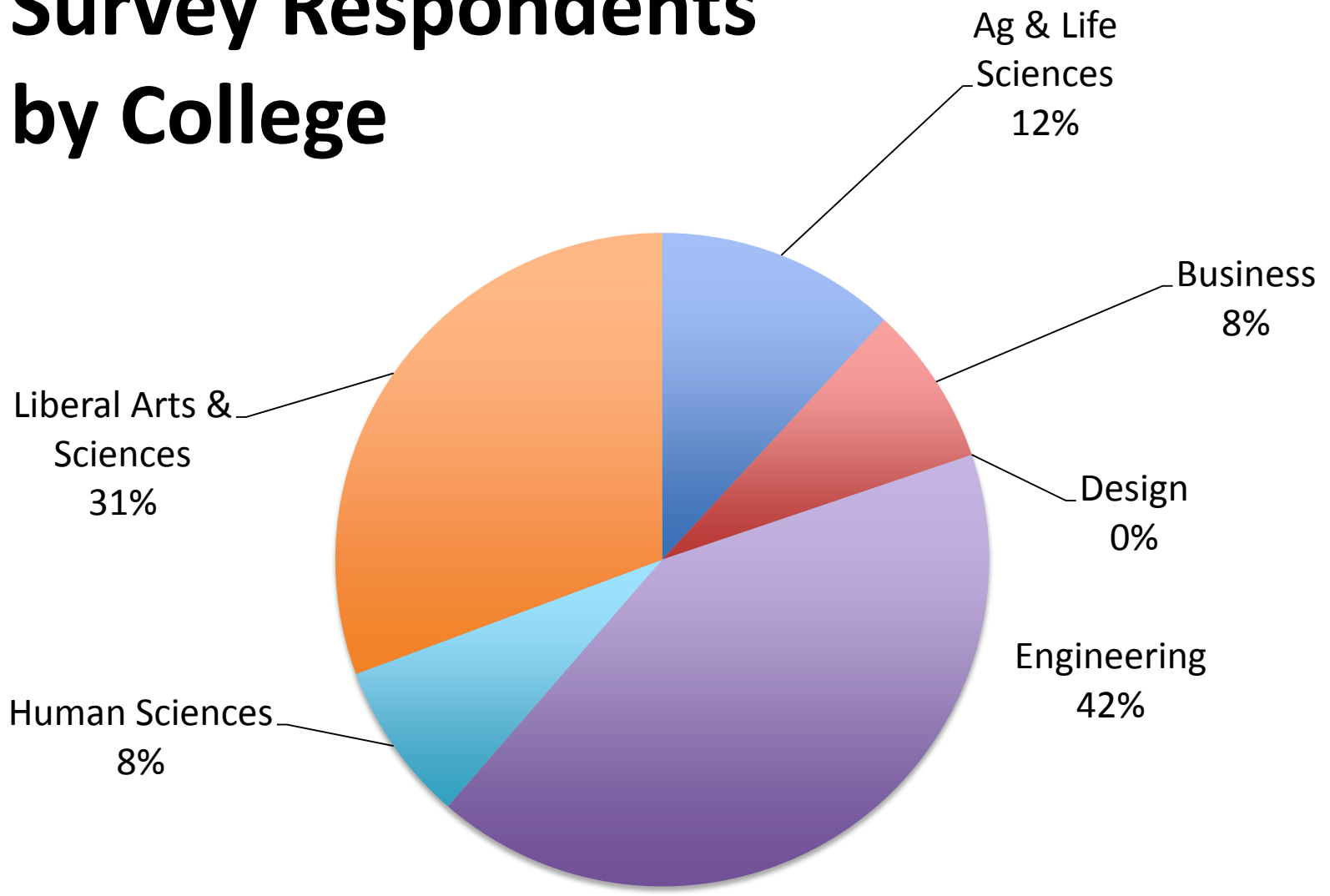


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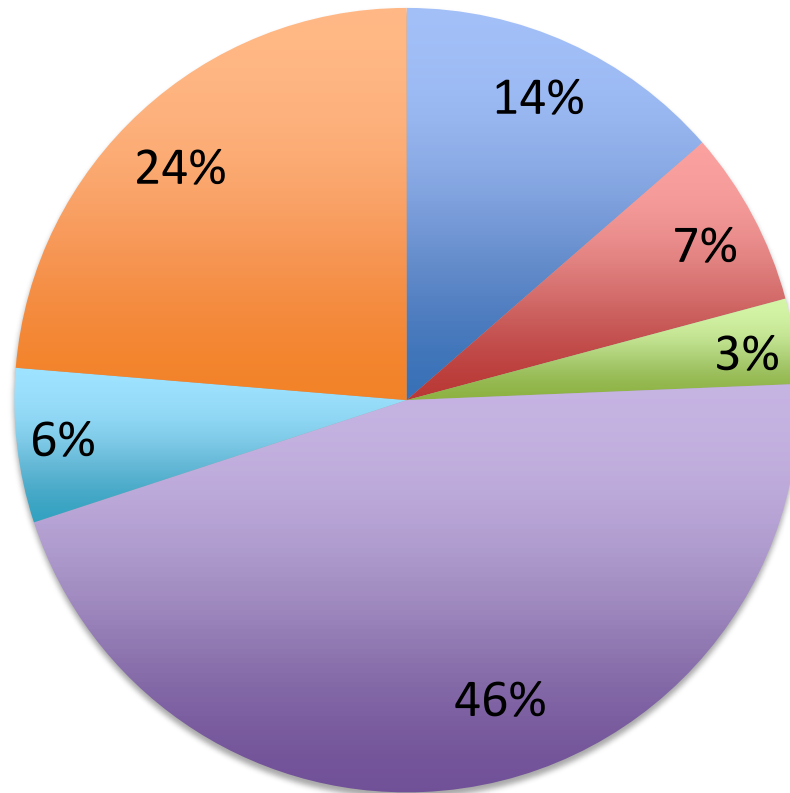
Survey of Students Identifying as Being on Autistic Spectrum

- 26 respondents from a total population of 1130, just over 2 percent (higher than .6-.8 percent prevalence for 1995 cohort)
- Median age of 20 and median expected graduation date of 2017
- Median GPA higher than 3.8
- Largest proportions enrolled in Colleges of Engineering and Liberal Arts and Sciences

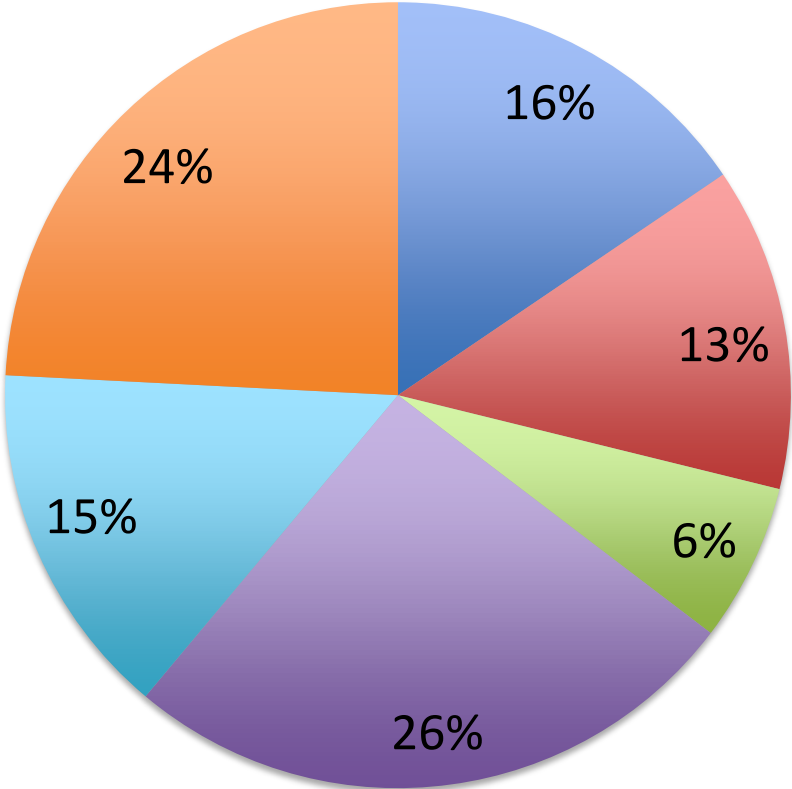
Survey Respondents by College



Distribution of Honors Students by College, Fall 2013



Distribution of All ISU Undergraduates by College, Fall 2013



Gender Breakdown

- 26 survey respondents: 54% M, 46% F
- 456 Honors students entering Fall '13:
42.5% M, 57.5% F
- 27,659 ISU undergraduates (as of Fall '13):
56.6% M, 43.4% F

Respondents' Career Goals

- Medical school
- Veterinary school
- Graduate school
- MBA
- Teaching
- Bachelor's degree: Dietetics, Aerospace Engineering, Math

Student Strengths (11 Responses)

- Skill in math (5)
- Analyzing, seeing connections
- Memory, curiosity
- Focus, attention to detail; patience
- Energy and persistence
- Organization, motivation
- Quick, efficient learner
- Reading, writing

Student Challenges (10 Responses)

- Problems with communication
- Easily distracted (2)
- Disorganized (2)
- Procrastinating (2)
- Dislike working in groups
- Time management

What Can We Do?

- Employ and encourage Universal Design in teaching Honors courses and Honors students
- Among respondents' suggestions:
 - Small classes or recitations
 - Professor availability
 - Clear expectations
 - Professor facing the students
 - Have material available in different formats

More Applications of Universal Design

- Visual organizers on board or PowerPoint slide
- Use Think-Pair-Share and similar protocols to allow participation by both quicker and more deliberate thinkers
- Create and define specific roles in group work; cycle group members through roles
- Request mid-term (formative) feedback

ASD-Specific Applications of Universal Design

- Work to ensure that faculty are aware of the likelihood of ASD students in Honors
- Offer tutoring options (teaching or being taught)
- Consider online or hybrid learning options
- Insist on open-endedness; delay reaching closure on an issue or idea (i.e., teach paradox)

Focus on ABET Student Outcomes

- (b) Design/conduct experiments; analyze/interpret data
- (c) Design system, component, process
- (d) Function on multidisciplinary teams
- (f) Understand professional/ethical responsibility
- (g) Communicate effectively
- (i) Recognize need for, and engage in, life-long learning
- (j) Have knowledge of contemporary issues

Reaching Students with ASD Outside the Lab or Classroom

- Small, informal social events
- Events specific to majors
- Events specific to hobbies (including video gaming, card or board games)
- Residence hall-based events
- Live music or theater; lecture
- Demonstration (e.g., machine or process)

A Few More Suggestions

- Remember that students with ASD (like students everywhere) are *not all the same*
- Be aware of a correlation between ASD and depression/anxiety
- Recognize difficulty. It's a challenge when a student with ASD is told "it should be easy because you have a high GPA and can do anything"
- Recognize effort and applaud success

Sources

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