



Stigma and Autism Spectrum Disorder in Higher Education

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Autism in Higher Education

- Individuals with Autism Spectrum Disorder (ASD) can and do attend college
 - A national survey found that 34.7% of young adults with ASD had attended college within six years of graduating high school
- A time of change for all students, not just those with ASD
 - Transitioning to a different, often reduced, level of support
 - Social, emotional, academic

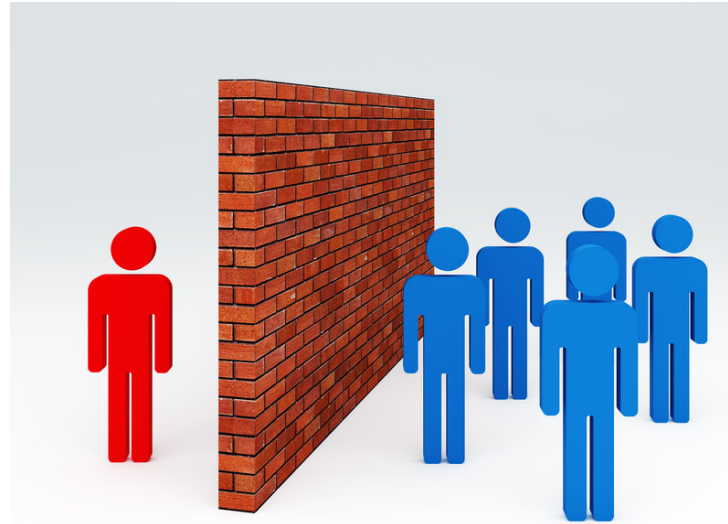
Attrition

- As with all college students, some students with ASD are very successful and others have more difficulty
 - 41% of college students with a disability (including ASD) graduate compared to 59% of college students without a disability
- Crucial to establish social support networks
 - Empathy
 - Peers may serve as models for how to respond to transition related challenges

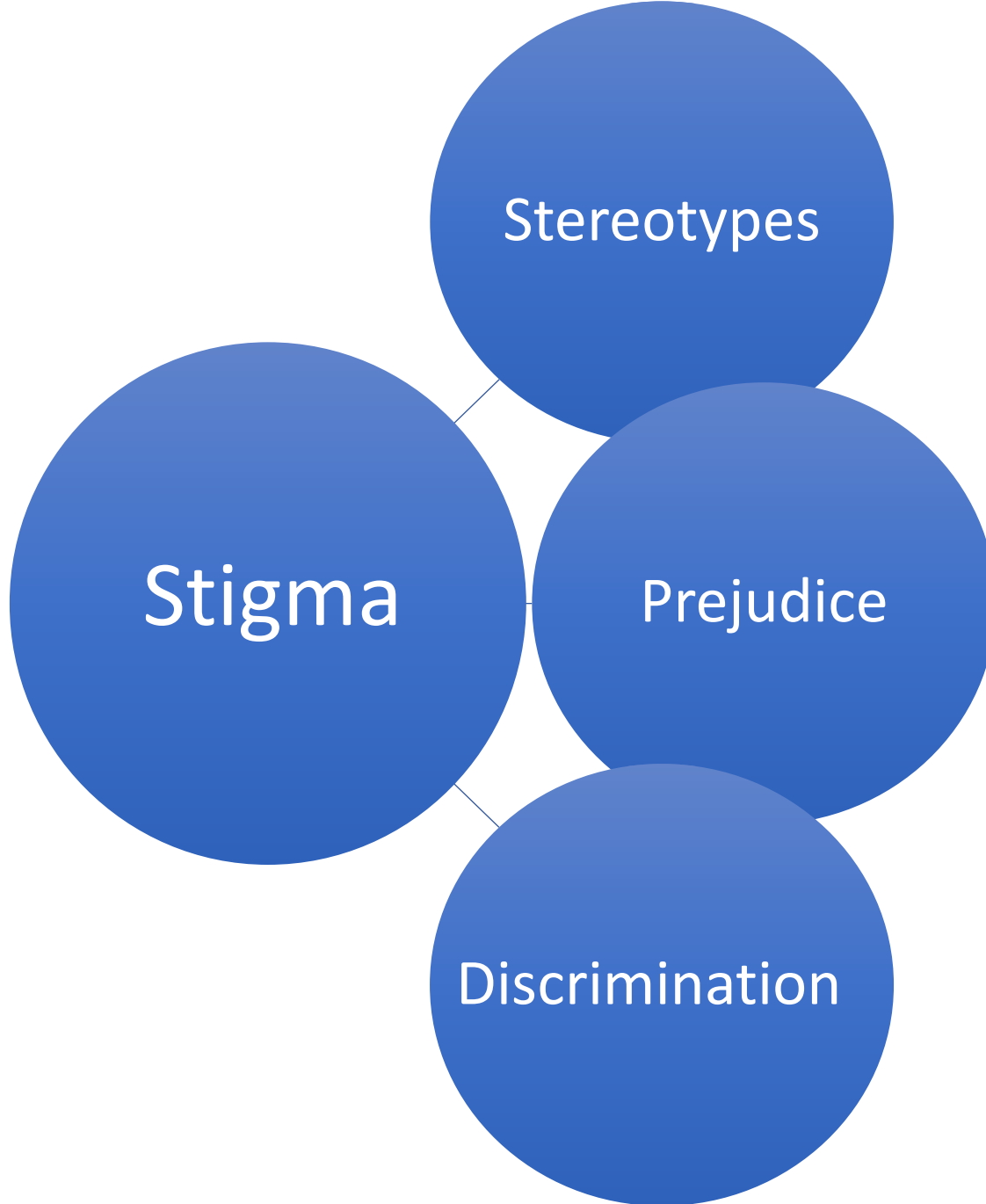


Barriers to Social Support

- Being perceived as a member of a stigmatized group may make people not want to interact with you



- Student resource programs and acquaintances not enough



- Cognitive
 - Beliefs about individuals that are generalized to a group
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- Affective
 - Negative evaluations about individuals who are perceived to belong to a particular group
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- Action
 - Different and negative treatment of individuals who are perceived belong to a particular group

Impacts of Stigma

- Stigma can lead to negative outcomes such as decreased employment opportunities, fewer social relationships, and negative self-concept
- “Us” vs “Them” categorization: labeling can lead to loss of social status and discrimination

Stigma and Mental Illness Research

- Mental illness stigma research clearly indicates that individuals with a variety of mental illnesses are stigmatized
- Specific **behaviors** become associated with the mental illness label, which leads to stereotypes

Stigma and Autism

- Findings of mental illness stigma research extend to the developmentally disabled population, including those with ASD
 - Is ASD more or differently stigmatized than other disorders with similar symptoms?
- We know that behavior is very involved in stigmatization, but what else contributes to the stigmatization of college students with ASD?

Special Interests in ASD

- A characteristic of ASD is restricted, repetitive behaviors and interests
 - One manifestation is a special interest (SI), or an intense, focused interest and/or in-depth knowledge in a narrow subject area
 - Some examples include: American Revolution, anime, astronomy, chemistry, clocks, computer hardware, deep-fat fryers, elevators, famous people, food labels, game shows, geography, Legos, light bulbs, locations of pay phones, military equipment, Shakespearian plays, smoke detectors, sports, Star Trek, train schedules, telephone pole insulators, video games, virology, weather patterns, zip codes...

Special Interests in ASD

- Many individuals with ASD are reported to have at least one SI
 - Results of several studies report a range of percentages, from a low of 49% to a high of 100%
- Neurotypical (NT) SIs fall into different categories than ASD SIs and are reported less frequently
 - Individuals with ASD: machines and technology, vehicles, factual information, and sciences
 - NTs: sports and games, food, belief systems, and creative arts

Bodfish, J. W., Symons, F. J., Parker, D. E., & Lewis, M. H. (2000). Varieties of repetitive behavior in autism: Comparisons to mental retardation. *Journal of Autism and Developmental Disorders*, 30(3), 237-243.

Szatmari, P., Georgiades, S., Bryson, S., Zwaigenbaum, L., Roberts, W., Mahoney, W., Goldberg, J., & Tuff, L. (2006). Investigating the structure of the restricted, repetitive behaviours and interests domain of autism. *Journal of Child Psychology and Psychiatry*, 47(6), 582-590.

Jordan, C. J., & Caldwell-Harris, C. L. (2012). Understanding differences in neurotypical and autism spectrum special interests through internet forums. *Intellectual & Developmental Disabilities*, 50(5), 391-402.

Special Interests and ASD

- A common fear of family members of children with ASD is that the time spent investigating the interest and talking about the interest would limit social relationships and job opportunities
 - Could SIs limit social opportunities in college?

Present Study

- We examined the relationship of behaviors associated with ASD and SI topic with degree of stigmatization in college students
- Results may help to better understand factors involved in stigmatization and influence how we prepare high school students to transition to college

Behaviors & Special Interests Vignettes

Special Interest			
Behavior	Neurotypical No Interest	Neurotypical Common Interest	Neurotypical Uncommon Interest
	Social Anxiety No Interest	Social Anxiety Common Interest	Social Anxiety Uncommon Interest
	Autism No Interest	Autism Common Interest	Autism Uncommon Interest

Hypotheses

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Hypothesis 1 Effect of Behavior	Behavior conditions (ASD or SA) will elicit higher rates of stigmatization than the neurotypical behavior condition
Hypothesis 2 Effect of Special Interest	Special interest conditions (common or uncommon) will elicit higher rates of stigmatization than the no interest condition
Hypothesis 3 The Least and Most Stigmatized	The combined NT behavior and no special interest condition will have the lowest rate of stigmatization and the combined ASD behavior and uncommon special interest condition will have the highest rate of stigmatization

Behaviors & Special Interests Vignettes

- Behavior conditions (ASD or SA) will elicit higher rates of stigmatization than the neurotypical behavior condition

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Behaviors & Special Interests Vignettes

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Behaviors & Special Interests Vignettes

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Vignettes: Neurotypical No Interest

- You walk into the first club meeting of the year and take a seat next to another member. You take your coat off and put it on the back of your chair, just like the other member has done. After taking a seat, you introduce yourself and hold out your hand. The other student turns their chair towards you, shakes your hand, and says “I’m C”. You ask what year C is in, and they answer with the same year as you. C asks what you’re interested in and you talk about that for a while. C starts telling you about a TV show they watch and ask if you’ve seen it. You talk for a while about shows you both like. Eventually C notices the sports logo on your shirt and asks you about the team.

Vignettes: Social Anxiety Common Interest

- You walk into the first club meeting of the year and take a seat next to another member. You take your coat off and put it on the back of your chair, just like the other member has done. After taking a seat, you introduce yourself and hold out your hand. The other student grins nervously at you, shakes your hand, and says “I’m E” in a quiet voice. They look away quickly. You ask what year E is in, and they answer with the same year as you before looking away. After a few minutes of silence you ask what they’re interested in. E starts telling you about a level of a popular video game. You look bored and E quietly says “I should probably talk about more interesting things” before asking what you like to do.

Vignettes: Social Anxiety Common Interest

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Vignettes: ASD Uncommon Interest

- You walk into the first club meeting of the year and take a seat next to another member. As you take your coat off, you notice the member is wearing shorts and a t-shirt, even though it is winter. After taking a seat, you introduce yourself and hold out your hand. The other student does not look up from the book they are reading and says “I’m G” without shaking your hand. You ask what year G is in, and they answer with the same year as you, and quickly begins telling you about the deficits in the design of a newly released computer motherboard. You try to tell G about some of your interests, but they always return the conversation to computer hardware. You look bored, but G doesn’t seem to notice.

Vignettes: ASD Uncommon Interest

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Stigmatization across Behavior Conditions Using the Social Distance Scale

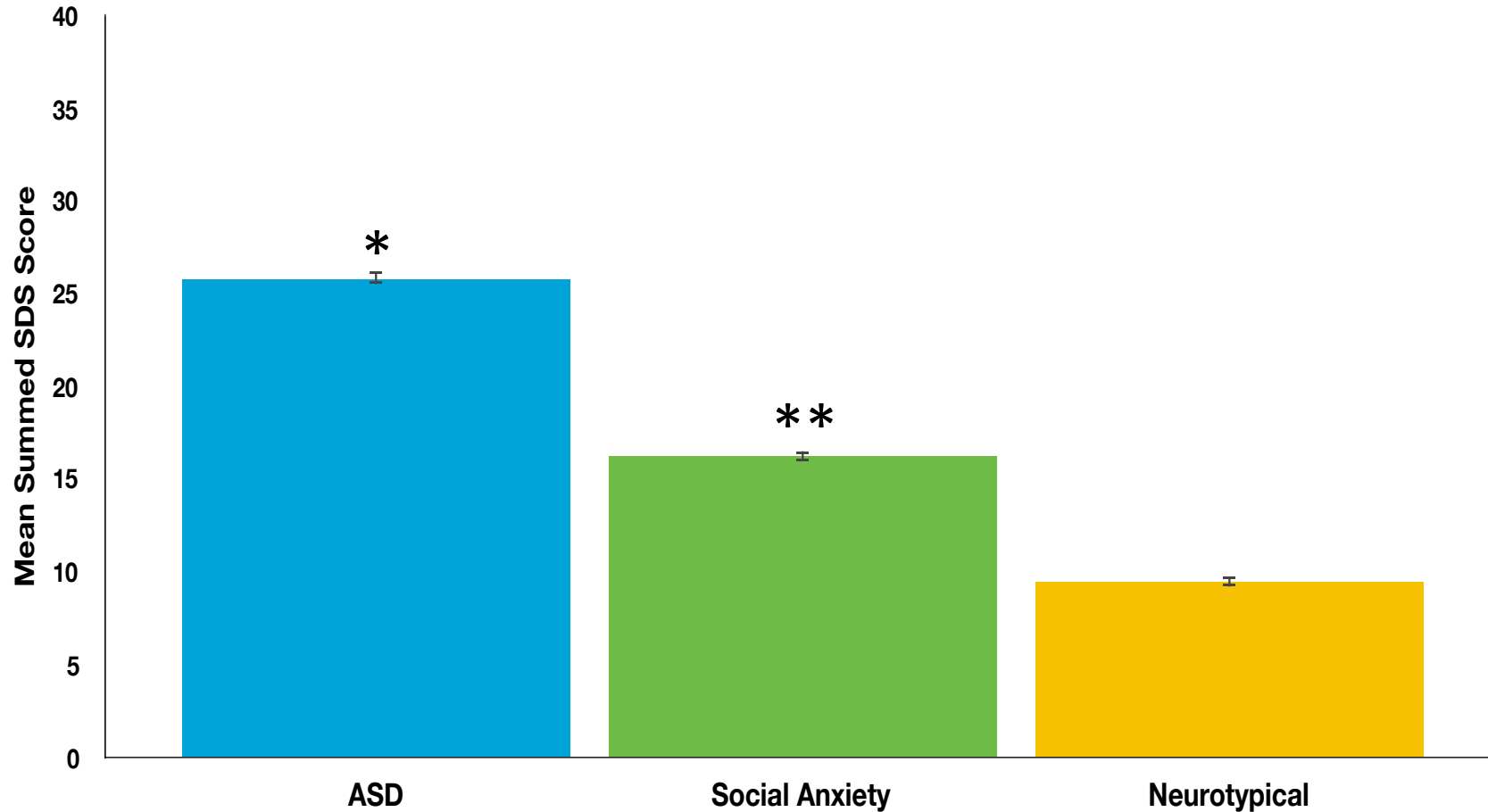


Figure 1. Stigmatization Varies by Behavior Condition. Mean summed SDS scores across all behaviors conditions (i.e. summed ASD NI, ASD CI, and ASD UI SDS scores). Error bars represent +/- calculated standard error. * = significant difference from all ($p < 0.01$); ** = significant difference from NT ($p < 0.01$).

Stigma Differs Depending on Behavior

- Behavior is a highly salient factor in stigmatization and behavior associated with ASD is more stigmatized than behavior associated with SA
- Both behavior associated with ASD and behavior associated with SA are more stigmatized than NT behavior

Stigmatization across Interest Conditions Using the Social Distance Scale

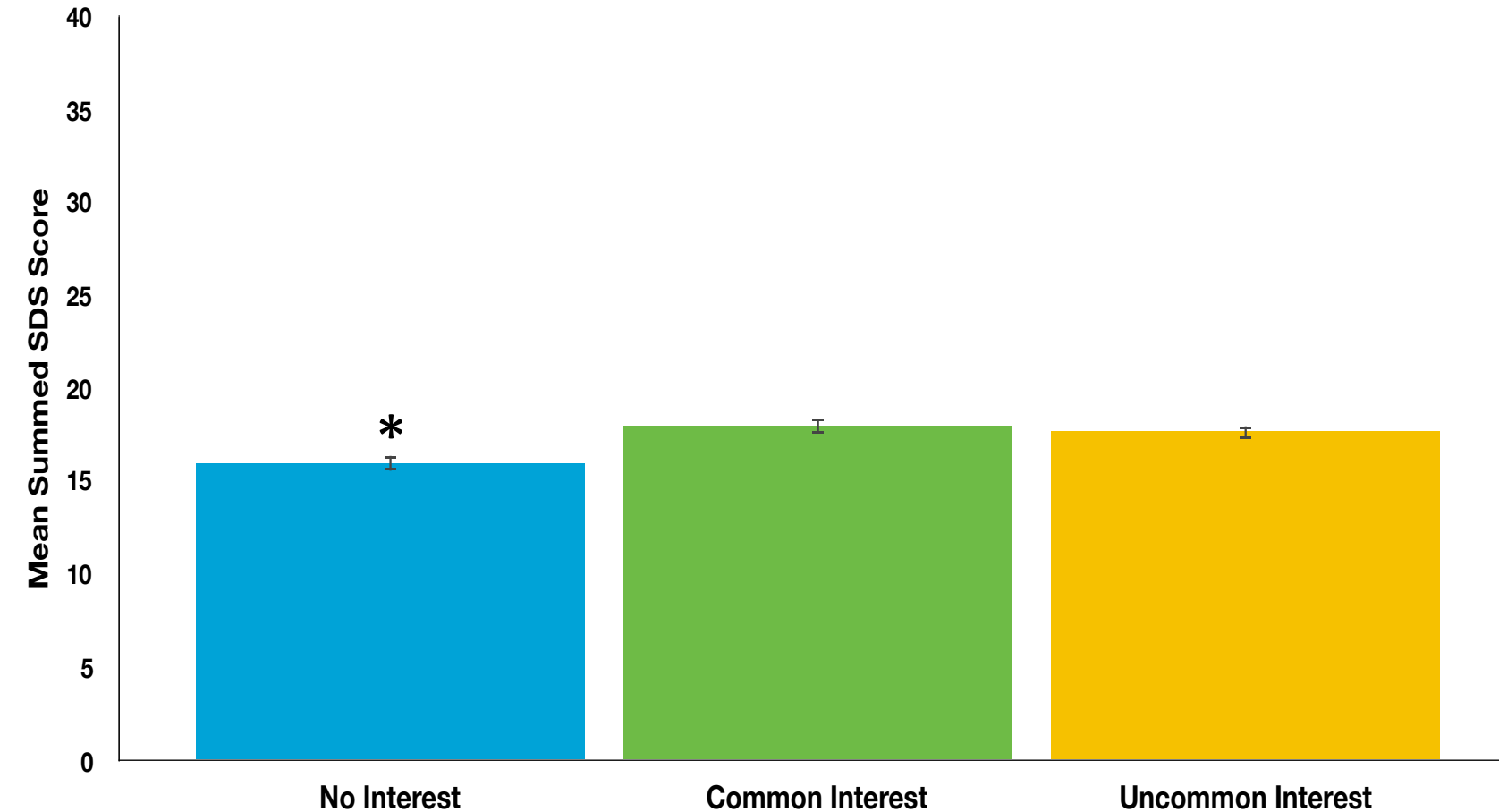


Figure 2. Stigmatization Varies by Presence of Special Interest. Mean summed SDS scores across all interest conditions (i.e. summed ASD NI, SA NI, and NT NI SDS scores). Error bars represent +/- calculated standard error. * = significant difference from all ($p < 0.01$).

Stigma Differs Depending on Presence of Interest

- Having a SI, either common or uncommon, is more stigmatizing than not having a SI
- Commonness of SI topic did not alter amount of stigma

Interest is Only Relevant if Behavior is Typical

- Behavior is the more salient factor in stigmatization
- Commonness of SI topic was not a differentiating factor in level of stigmatization

Stigmatization across Behavior x Interest Conditions Using the Social Distance Scale

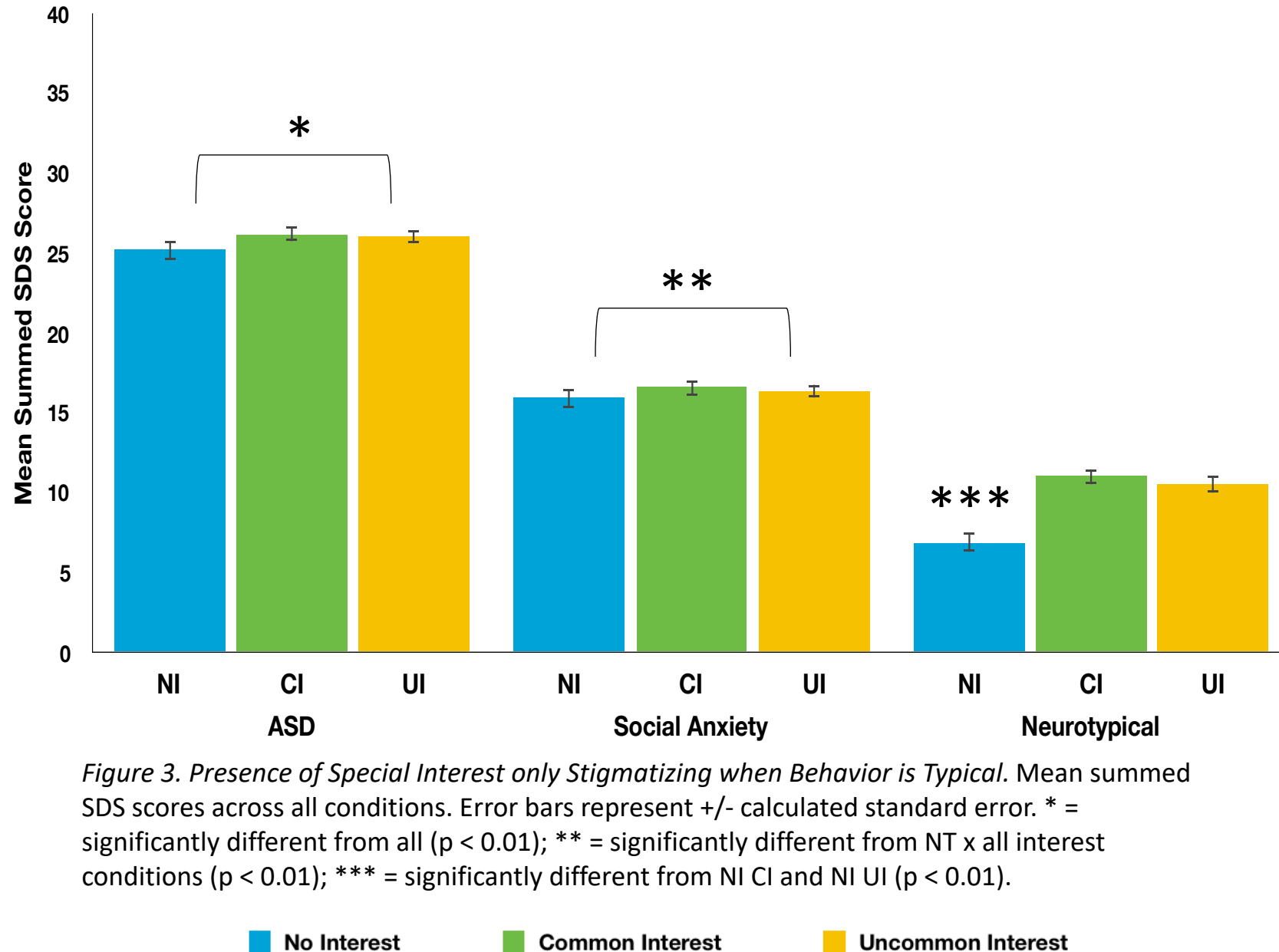


Figure 3. Presence of Special Interest only Stigmatizing when Behavior is Typical. Mean summed SDS scores across all conditions. Error bars represent +/- calculated standard error. * = significantly different from all ($p < 0.01$); ** = significantly different from NT x all interest conditions ($p < 0.01$); *** = significantly different from NI CI and NI UI ($p < 0.01$).

Limitations and Future Research

- Results may be impacted by social desirability bias
 - Future studies should evaluate how results extend to real life scenarios
- Next steps may involve investigating stigmatization using video scenarios, role playing, and real life interactions

Implications

- SI topic may not a salient intervention target if it is not a significant factor in the stigmatization of individuals with ASD
 - Caregiver fears of SIs limiting social opportunities may not be accurate in the context of stigma
- In individuals with ASD who are behaviorally indistinguishable from NT peers, presence of a SI may contribute to stigmatization

Implications

- Teach skills to cope with negative effects associated with stigmatization
 - Mental health support
 - Self advocacy skills
- Support for individuals with ASD to form and maintain social networks

What Can We Do?

- Reducing stigmatizing beliefs in NT peers
 - Education programs
 - Opportunities for inter-group contact
 - More integrated Office of Student Resources
- **Findings highlight the importance of creating programs to foster inclusive attitudes towards neurodiversity**
 - **Not only bringing individuals with ASD into NT activities, but a meeting in the middle that both parties can learn from and enjoy**

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