

IT'S NEVER TOO LATE: FRIENDSHIPS, MENTAL HEALTH, AND WELL-BEING IN ASD ACROSS THE LIFESPAN



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Statement of Potential Conflicts of Interest

Relating to this presentation, there are no relationships that could be perceived as potential financial conflict of interests:
 Amy Vaughan Van Hecke, Ph.D.

Dr. Van Hecke administers therapeutic programs for individuals on the autism spectrum and their families solely in a research context, and does not derive any personal income, beyond Marquette salary, from families participating.
 Dr. Van Hecke's work in the Next Step Clinic does not provide any additional personal income, beyond Marquette salary.

Note. The terminology "on the spectrum" and "autistic" will be used in this presentation, as a reflection of what research has most recently indicated are the preferred terms of the majority of the population. See Dwyer, P., Ryan, J. G., Williams, Z. J., & Gassner, D. L. (2022). First do no harm: Suggestions regarding respectful autism language. *Pediatrics*, 149(Supplement 4).

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Outline

- The impact of friendships
- Evidence-based treatments focusing on the social difficulties of people on the autism spectrum
- Evidence-based treatments focusing on comorbidities
- Making it work in the real world:
 - ▣ Access
 - ▣ Input
 - ▣ Individualizing
- What holds promise for the future?

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Strengths of people on the autism spectrum

- People on the spectrum have similar and different strengths compared to people not on the spectrum
- Loyal friends
- Honest and unbiased in judgment toward others
- Pay close attention to detail
- Passionate commitment to ideas
- Originality in approaching problems
- Diligent working/ task-focused
- Strong pursuit of knowledge in areas of interest
- Strong sense of justice, fairness, and empathy

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Importance of Friendships

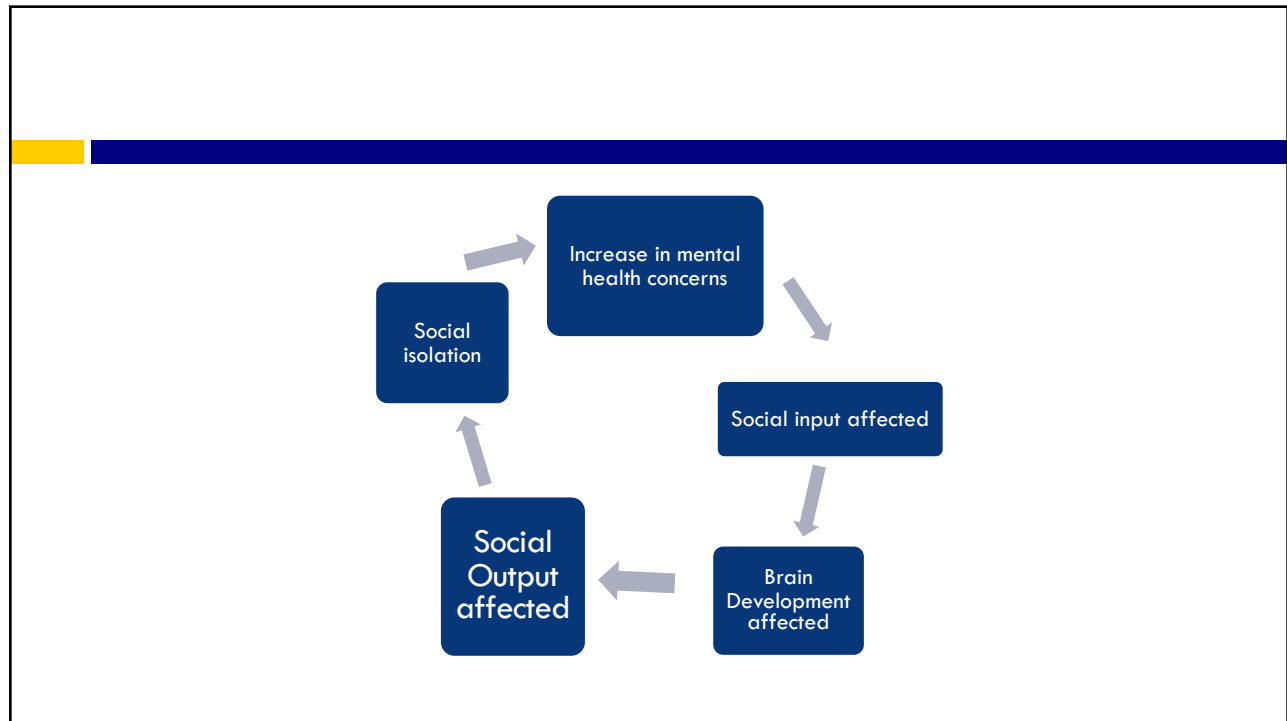
- Having high-quality, reciprocal close friends is predictive of later adjustment:
 - ▣ Buffers impact of stressful life events
 - ▣ Improves self-esteem
 - ▣ Increases independence
 - ▣ Relates to less depression and anxiety
 - ▣ Predicts lifespan and physical health
 - ▣ Improves quality of life
 - ▣ Improves cardiovascular function and inflammatory responses
 - ▣ Increase “happy hormones”- oxytocin, dopamine, serotonin
 - ▣ Improves functioning of the brain’s reward and mentalizing systems and buffers brain health against adverse experiences

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Outcomes for people on the spectrum

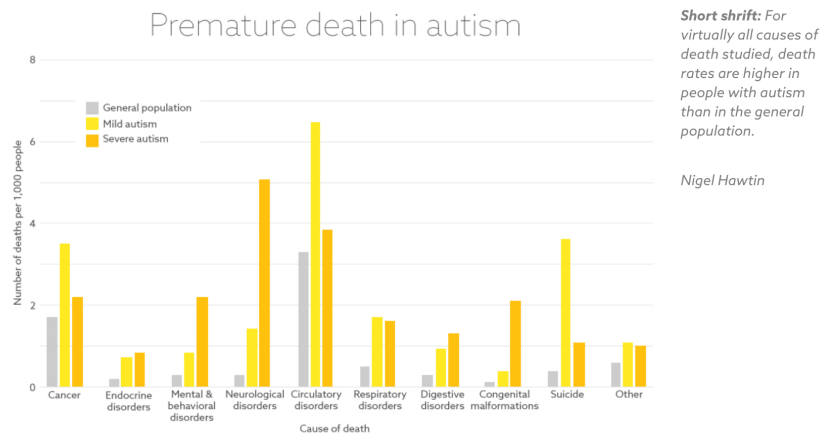
- Poor friendship quality
 - ▣ Majority report having no friends, even though they are desired
 - ▣ Especially challenging if aware of differences and difficulty
- Social Isolation
- Bullying and trauma
- Limited functional independence- 80% adults still live at home, are unemployed or underemployed
- Mental health challenges: depression, anxiety, suicidality
- These factors are especially salient and impactful at developmental stage shifts- elementary to middle school, high school to beyond, higher ed to beyond

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This pattern results in a loss of fulfilling lives. Loneliness, hopelessness, and social isolation are serious concerns.



Source: Hirvikoski, T., Mittendorfer-Rutz, E., Boman, M., Larsson, H., Lichtenstein, P., & Bölte, S. (2016). Premature mortality in autism spectrum disorder. *The British Journal of Psychiatry*, 208(3), 232-238. And 2019 INSAR Meeting.

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Evidence-based treatments focusing on the social difficulties of people on the spectrum



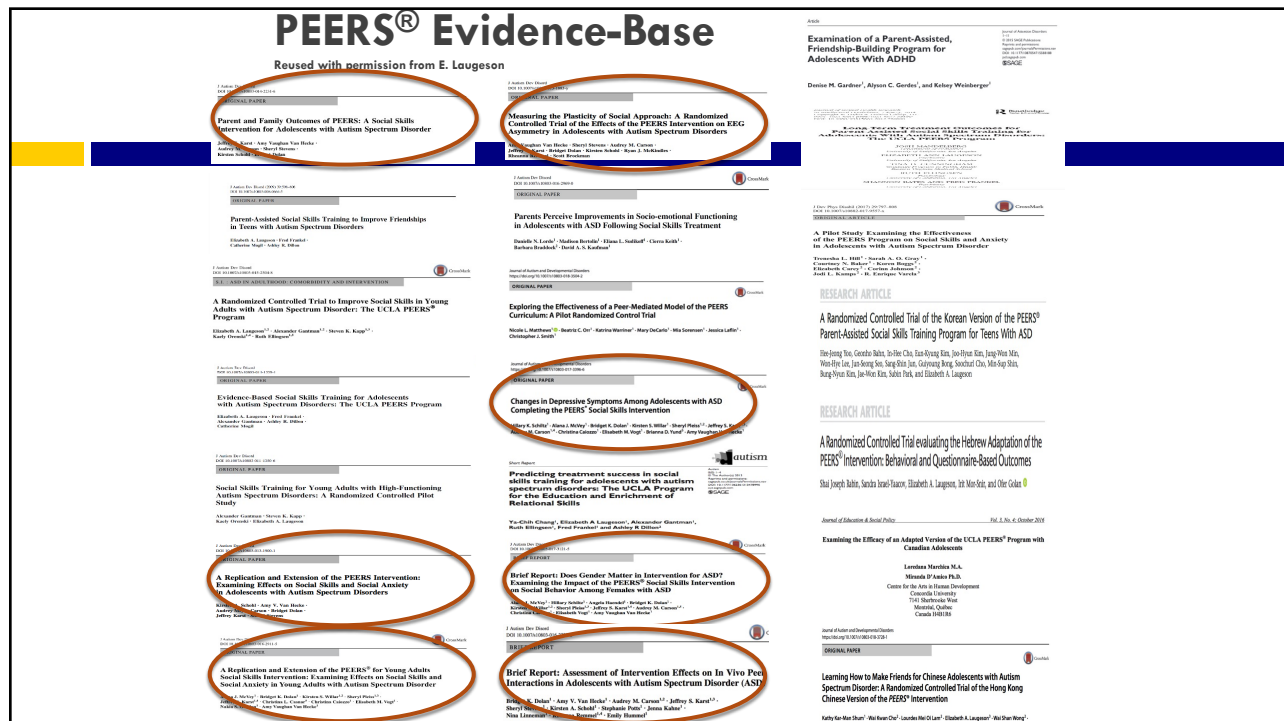
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Evidence-based models for social difficulties

- JASPER (Kasari, UCLA) (Manual)
 - Joint attention in toddlers
- Preschool Peer Social Intervention (PPSI: Bauminger, Israel) (Manual)
- SENSE Theatre (Corbett, Vanderbilt) (manual)
 - School age
- Social Tools and Rules for Teens (START: Vernon, UC Santa Barbara)
- Program for the Education and Enrichment of Relational Skills (PEERS® Laugeson, UCLA) (Manuals): Preschoolers, teens, adults

Helpful resources: National Professional Development Center on Autism:
<https://autismpdc.fpg.unc.edu/evidence-based-practices>
 and National Standards Project on Autism:
<https://www.autismdiagnostics.com/assets/Resources/NSP2.pdf>

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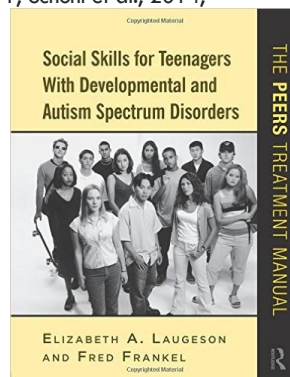
PEERS® Intervention

- ❑ 14-week (adolescents)/16-week (young adults and preschoolers) intervention with publicly available manuals (Routledge: Laugeson & Frankel, 2010; Laugeson, 2016)
- ❑ Caregivers included and meet concurrently
- ❑ Teaches strategies to make and keep friends
- ❑ Can be offered over Telehealth

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PEERS[®] Evidence Base

- **Adolescents** (Laugeson et al., 2009; Laugeson et al., 2011; Schohl et al., 2014; Mandelberg et al., 2013)
 - ▣ Social skills knowledge
 - ▣ Contact with other teens
 - ▣ Friendship quality
 - ▣ Effects last at least 3-5 years
- **Adolescent Adaptations**
 - ▣ Korean
 - ▣ Hebrew
 - ▣ Dutch
 - ▣ Chinese
 - ▣ Japanese
 - ▣ Canada
- **Young adults** Gantman et al., 2013; Laugeson et al., 2015
- **Preschoolers** Antezana et al., 2022, Tripathi et al., 2022
- **School-based version** Laugeson et al., 2014



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Marquette PEERS[®] overview

- [http://www.marquette.edu/psyc/about PEERS video.shtml](http://www.marquette.edu/psyc/about_PEERS_video.shtml)
- Randomized Controlled Trials
- Non-randomized controlled trial
 - ▣ Telehealth PEERS[®] (TBH)
- All participants seen at Pre and Post (with either PEERS[®] or a 14-week wait in between assessments)
- Outcomes:
 - ▣ Self-, teacher-, and parent-report of social skills, anxiety, depression, family function
 - ▣ Observations of social behavior with another teen
 - ▣ EEG power, asymmetry, and coherence
 - ▣ Cardiovascular function- Heart rate, respiratory sinus arrhythmia
 - ▣ Electrodermal activity
 - ▣ MRI, fMRI, DTI

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Results: Behavioral

Schohl et al., 2014, JADD; Dolan et al., 2016, JADD; Schiltz et al., 2018, JADD; McVey et al., 2017, JADD

- Teen Significant effects:
 - ▣ Social skills and knowledge: EXP ↑
 - ▣ Hosted and invited get-togethers: EXP ↑
 - ▣ Anxiety: EXP ↓
 - ▣ Problem Behaviors (parent- & teacher-report): EXP ↓
 - ▣ Depression and suicidality: EXP ↓
- Teen video interaction observation (CASS):
 - ▣ Expressivity: EXP ↑
 - ▣ Rapport: EXP ↑
- Adult significant effects:
 - ▣ Depression: EXP ↓
 - ▣ Anxiety: EXP ↓
 - ▣ Social cognition: EXP ↑
 - ▣ Total social responsiveness: EXP ↑
 - ▣ Social awareness: EXP ↑
 - ▣ Social motivation: EXP ↑
 - ▣ Social skills knowledge: EXP ↑

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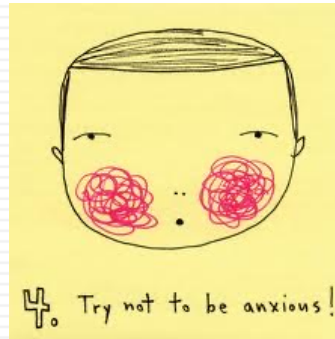
Results: Psychophysiology and Neurology

Vaughan Van Hecke et al., 2015; Haendel et al., 2021, Arias et al., in preparation

- Teen Significant effects:
 - ▣ EEG Left hemispheric asymmetry: EXP ↑
 - ▣ Related to increases in social contacts
 - ▣ EEG Coherence amongst left temporal/occipital social brain areas: EXP ↑
 - ▣ MRI decrease in the volume of the amygdala: EXP ↓
 - ▣ Regulation of heart rate: EXP ↑

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Evidence-based treatments focusing on co-occurring concerns



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Co-occurring concerns for people on the spectrum

- ADHD: 40-70%
- Anxiety- 3 to 4 times more likely than non-autistic populations: ~85%
- Depression: 30-50% adolescents and adults on the spectrum
- Suicidality: rates are 10x higher in adults on the spectrum; 16x higher in those who "mask;" 30x higher in those who self-harm, particularly females.

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ADHD: Evidence-based treatments for people on the spectrum with ADHD

- Relatively new area, as DSM-IV did not allow concurrent diagnosis (since DSM-V, 2013)
- Physical Exercise Interventions
 - Small to medium effect on cognition (Tan, Pooley, and Speelman, 2016)
- Sleeping Sound intervention (Papadopoulos et al., 2019; Australia)
 - Improvements in sleep and behavior rated by teachers, quality of life, and ADHD symptoms

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Anxiety: Evidence-based treatments for people on the spectrum with Anxiety

- Facing Your Fears (Judy Reaven and colleagues, Denver) (manual)
- Behavioral Interventions for Anxiety in Children with Autism (BIACA: Jeff Wood and colleagues, UCLA)
- Coping Cat modified for ASD (McNally Keehn and colleagues, Alliant U San Diego)
- Multimodal Anxiety and Social Skills Intervention (MASSI: Susan White and colleagues, Alabama).
- Mindfulness-Based Therapy-AS (Spek, Tilburg Univ, Netherlands)
- Coping with Uncertainty in Everyday Situations (CUES: Rodgers, Newcastle Univ)

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Depression: Evidence-based treatments for people on the spectrum with Depression

- Emerging evidence: CBT and Mindfulness based therapies
- We're not there yet.

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Making it work in the real world

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Access

- The silver lining of the pandemic: Telehealth
 - ▣ PEERS and many others are being offered via Zoom; track down the developer and investigate their website for trials; also check the NIH Clinical Trials database clinicaltrials.gov
 - ▣ Increases access to those in rural or underserved communities
- In general, the internet increases access of individuals on the spectrum to those with like-minded interests (for older teens and young adults)
 - ▣ Do we know if internet-based friendships are inferior to in-person ones for people on the spectrum? No, we don't. (We do need to teach internet safety at the same time, however)
- Spread the word: seek out community organizations and share knowledge. Family Navigators/Patient Care Coordinators can be an excellent resource. Advocacy groups.

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Honoring Autistic Voices

- No evidence-based therapies currently available were developed with autistic people's input.
 - ▣ There are some developments in this area, but we have a long way to go
 - ▣ Europe and the UK are ahead of us, e.g., see the excellent programs on suicide safety plans from Newcastle University
- Ask children, teens, and young adults for input on their care:
 - ▣ Similar to the IEP self-determination process but applied to therapeutic contexts
 - ▣ How do they feel about x? What do they wish they could do with their life? What do they want to achieve? Life mapping.
 - ▣ And provide therapeutic and educational choices to support those intentions.

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Individualizing

- Consider what the primary need might be:
 - ▣ Friendships, depression, or depression about friendships?
 - ▣ Anxiety, or uncertainty about a new setting?
 - ▣ Education, predictability, or therapy?
- Manualized therapies should be considered a starting place:
 - ▣ Out of date content should be skipped or updated.
 - ▣ Content that may do harm, insult, or stigmatize someone should be skipped.
- Consider the trauma the client might be carrying and adapt content as needed. Remember that trauma may be communicated differently on the spectrum.
 - ▣ Masking
 - ▣ Bullying
 - ▣ Discrimination
 - ▣ Abuse
 - ▣ Rejection
- Consider the family system. Sometimes the person on the spectrum is not the only one who needs a little help.

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Conclusions

- Effective therapies focusing on social relationships and social well-being are important across the lifespan of autistic people.
- Relationship development programs may address both social and mental health concerns, and may be more widely available than focused mental health treatments that are adapted for autistic populations.
- Consider social supports and vocations as a key area for intervention for mental health concerns in ASD
- Focus less on “treating ASD” in adolescence and adulthood, and more on helping the individual navigate social contexts to decrease anxiety and depression, increase social success

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What Does the Future Hold?

- Hopefully- more evidence-based social, executive, and co-occurring concerns models will be brought to the US; for now, we have long waitlists, too many one-note providers, too much focus on only the preschoolers, and lots of snake-oil sellers
- The bright side! Innovative new ideas and foci:
 - ▣ Oxytocin (RRB)/vasopressin (social/adaptive)
 - ▣ Robot-guided intervention (jury is still out)
 - ▣ Quality of life studies
 - ▣ Inclusion of autistic voices in research and clinical care
 - ▣ Occupational/vocational/postsecondary therapies and programs
 - ▣ Biofeedback and physiological monitoring
 - ▣ Technology as therapy: i.e., Google glasses to assist with facial affect detection
 - ▣ Peer mediated/community models
 - ▣ Expedited models of diagnosis in primary care, especially in underserved populations
 - ▣ Trauma and Autism

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