Psychological Approaches to Understanding and Managing ADHD

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Disclosures

- No financial ties to industry, including pharmaceutical companies.
- Multiple employer-funded research projects (University of Windsor).
- No Tri-Council funding in the past 2 years.

Learning outcomes

Following this presentation, attendees will:

- Recognize the need for intervention beyond pharmaceutical-only approaches to ADHD treatment;
- Describe psychological interventions that may be used as complementary therapies for ADHD in a treatment package with or without pharmaceuticals;
- Identify which interventions may be more appropriate for a given patient in light of the overall risk profile, including familial, environmental, and individual risk factors.

Why not pharmaceutical-ONLY treatment for ADHD?

- MTA results (MTA Cooperative Group, 1999; MTA Cooperative Group, 2004; Swanson et al., 2007)
- The missing 30% (Antshel et al., 2011)
- Compliance problems (Charach & Fernandez, 2013)
- Parent preferences
- Impact on secondary symptoms (MTA Cooperative Group, 1999)



Examples of Psychological Approaches to Treatment of ADHD

- Social skills training
- Tutoring/schoolbased services
- Coaching
- Cognitive training
- Psychotherapy
- Parent training
- Parent-child therapy

- Meditation/contemplative practices
- Physical activity
- Holistic lifestyle changes
 - Sleep
 - Diet
 - Screen time
 - Micronutrients



Social skills training

- Among the most commonly recommended interventions (Danielson et al, 2018), yet low efficacy data in general (Evans et al., 2018; Willis et al., 2019)
- Increased efficacy when children with ADHD have comorbidities, such as anxiety disorders and autism spectrum disorder (Antshel et al., 2011)
- Increased efficacy when social skills training is part of a larger treatment package that involves multiple contexts adults (Storebø et al., 2012)

Tutoring/ School-based services

- About 50% of children/adolescents with ADHD get school-based services (Murray et al., 2014)
- Tutoring alone is unlikely to improve academic problems, particularly with less skilled tutors (DuPaul & Weyandt, 2006; Rabiner et al., 2004)
- Peer tutoring modestly impacts academic achievement (DuPaul et al., 1998, Plummer & Stoner, 2004)
- Teachers and their students with ADHD benefit significantly with intensive behaviour management training (Evans et al., 2018)

Executive functioning coaching for older adolescents and adults (solanto et al., 2008) Academic coaching for post-secondary students (Prevatt & Yelland, 2015) Coaching in school-aged children (Garcia et al., 2016)

Across multiple studies, commercially available computer-based games programs show limited efficacy (strahler et al., 2015) Parents and children report improvements in self-regulation and focus (Minder et al., 2019), but teachers do not typically report similar improvements (Amonn et al., 2013) and objectively measured behaviours do not typically improve (Chacko et al., 2014) Computerized programs may be used to teach organizational skills (Evans et al., 2018) Multiple studies show that cognitive training within parent-child intervention impacts functioning overall (e.g., Healey & Halperin, 2015)

Impact of psychotherapy on primary and secondary symptoms (Lopez et al., 2018) Psychotherapy Impact of psychotherapy on comorbid conditions (Scholle et al., 2018)

Significant burdens come with having a child with ADHD (Zhao et al., 2019) and may interfere with parents effectively engaging in parent training (Joseph et al., 2019) Less specific parent training is often not effective for families with ADHD **Parent** (Hagen & Ogden, 2017), but programming training designed for parents of children with ADHD improves parenting skills and confidence (Evans et al., 2018; Loren et al, 2015) Effective parent training can be delivered remotely, but may not result in long-term improvements (Olthuis et al., 2018)

Parent-child therapy

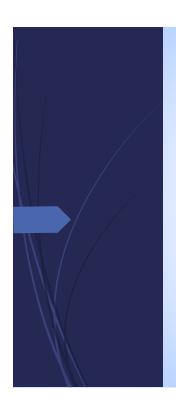
- Parent-child therapy is associated with significant improvements in disruptive behaviour, but smaller effects than medication alone (van der Veen-Mulders et al., 2018)
- Outcomes related to child ADHD may be the result of indirect influences of improvements in monitoring, negative parenting practices, and parenting stress (Leung et al., 2017)

Meditation/ contemplative practices

- Mindfulness training improves attention problems and impulsivity (Cairncross & Miller, 2016)
- Mindfulness training as part of a larger treatment package may be more effective (Cassone, 2015)
- Mindfulness training for children may be more effective when parents and children do it together (van der Oord et al., 2012)

Acute effects on attention and executive functioning (Mehren et al., 2019) Physical activity Effects on primary symptoms (Verret et al., 2012) Effects on secondary symptoms (Kemp et al., 2014)

Direction of effects with regard to sleep and ADHD is equivocal (Bijlenga et al., 2019) and sleep-focused intervention may be needed (Corkum et al., 2016), and ADHD treatment may interfere with sleep (Morash-Conway et al., 2017) Holistic ADHD predicts lower quality diet, but not vice versa (Mian et al, 2019) lifestyle changes Relations between ADHD and screen time are also equivocal (Miller et al., 2007; Tamana et al., 2019) Nutritional supplements are a growing area of treatment (Danielson et al, 2018) with wide ranging results (Rucklidge, 2018; Scholle et al., 2019



Role of Adherence

- Primary treatment goal should be treatment adherence/compliance with effective treatment over time (Brinkman et al., 2018)
 - Alliance with clinician
 - Symptom improvement
 - Parent and client beliefs
- Better adherence often means better outcomes (MTA Cooperative Group, 1999; Vilodas et al., 2014)
- Limited knowledge about barriers to psychosocial treatments (Corkum et al., 2015)



Constructing a treatment package

- Most people with ADHD receive two of more forms of treatment (Danielson et al., 2018)
- When parents'/patients' preferences match with treatment goals, treatment is usually more effective (Fiks et al., 2013)
- Treatment outcomes are also influenced by beliefs about ADHD; thus, psychoeducation is a critical component of any treatment package (Charach & Fernandez, 2013)
- Treatment itself may increase parental stress (Brinkman et al., 2009)

