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Research Evaluating Attention Training

It is important to be discerning when using decontextualized drill-based training. While there is a general proof of principle that direct attention training can improve processing, the literature is equivocal in the amount of generalization or transfer that occurs to untrained tasks. Indiscriminate use of attention drills does not transfer to improved function. The APT-3 is designed to promote transfer by integrating drill training with strategy instruction and active promotion of client engagement and self-monitoring. “Top down” self monitoring processes when paired with “bottom up” focused drills can promote neuroplasticity for clients who are appropriate candidates (NIH Blueprint for Recovery, 2011; https://neuroscienceblueprint.nih.gov/blueprint_basics/harnessing_neuroplasticity_workshop_report.htm). The NIH blueprint reminds clinicians of the importance of considering candidacy for using impairment-based approaches. For example, clients must have sufficient neural resources to benefit from training and must be sufficiently motivated. Further research is needed to identify client characteristics that are amenable to direct training. Knowing a client’s attention profile and matching training to that profile is likely to be a key factor in more generalized results (e.g., Serino et al., 2007)

The journal, Neuropsychological Rehabilitation, dedicated an entire issue to reviewing research evaluating “brain training” (Van Heugten, Ponds & Kessels, 2017) that includes studies using APT-3. When attention tasks are not individually selected to match client profile or the training is not paired with strategy instruction and self-monitoring, transfer may be limited. For an evaluation of the use of APT-3 approach with pediatric clients see Sohlberg et al., (2014).

References

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Sohlberg, M.M., Harn, B., MacPherson, H., & Wade, S.L. (2014). A pilot study evaluating attention and strategy training following pediatric traumatic brain injury. *Clinical Practice in Pediatric Psychology*. 2(3), 263.

Van Heugten, C; Ponds, R., & Kessels, R. (2016). Brain training: Hype or hope? *Neuropsychological Rehabilitation*, 26, 5-6.