You are currently an OT working at a sensory integration clinic and have a child on your caseload that is diagnosed with autism spectrum disorder (ASD). In treatment, you have noticed that the child shows increased ability to attend to a task when he is provided with additional proprioceptive input like deep pressure (i.e., heavy work activities, massage, etc.). Because of the success you have had with this child, you are interested in what research exists regarding those treatments.

**Ask: Research Question**
What is the effect of providing proprioceptive input and deep pressure on improving the attention and organizational abilities of children with ASD compared to providing standard OT treatment?

**Acquire: Search Terms**
- Patient/client group: Autistic disorder AND child
- Intervention: Proprioception OR Massage OR Touch
- Comparison:
- Outcome(s): Attention

**Acquire: Selected Articles**
- Silva et al. (2007): Randomized control trial (RCT) focused on the effects of Qigong massage on sensory impairments and socialization on 15 children ages 3-6 with ASD.
- Escalona et al. (2001): RCT examining the effects of massage on behaviors of 20 children with ASD.
- Field et al. (1997): RCT comparing effects of touch therapy to sitting on a volunteer’s lap on attentiveness and responsivity of 22 children diagnosed with ASD.
- Piravej et al. (2009): RCT that compared traditional Thai massage and sensory integration (SI) to SI on behaviors of 60 children with ASD.
- Silva et al. (2009): RCT that focused on the effects of Qigong massage on sensory and self-regulation on 46 children with ASD.

**Appraise: Study Quality**
- Silva et al. (2007): Blinded measures, objective measurement tools. Parents not blinded, small sample size, subjective interpretation.
- Escalona et al. (2001): Parents not blinded, small sample size.
- Field et al. (1997): Blinded observers, massages performed in systematic ways. Short study, small sample size.
- Piravej et al. (2009): Parents and teachers not blinded, short time frame, small sample size.
- Silva et al. (2009): Teachers were blinded, but small sample size.

**Appraise: Study Results**
These studies showed that increasing proprioception and deep pressure improves behaviors of children with ASD in regards to self-regulation, attention, stereotypical behaviors, decreased sensory impairments and improved socialization. Some studies did not show significant differences between control and exposure groups. Finally, although the studies suggest that increasing proprioceptive input/deep pressure may help a child with ASD attend to tasks, but they are not generalizable due to the small sample sizes. More research is needed to strengthen the results and ensure that they are more generalizable.

**Apply: Conclusions for Practice**
In the clinic, evidence suggests the child could benefit from proprioceptive input/deep pressure to improve his or her attention and organization. Furthermore, OTs can use these techniques to potentially help with sensory impairments, social interactions, attention and self-regulation of children with ASD.

**References**

**Reviewers:**
K. Brill, L. Crozier, T. Friedman, K. Micheletti, M. Mitchell, S. Natan and K. Rotella
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*Unclear: Further research is needed to determine if proprioceptive input is effective for attention and organizational abilities in children with ASD.*