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STUDY: SENSORY INTEGRATION INTERVENTION MAY RESULT IN POSITIVE OUTCOMES

Guidance Provided Regarding Frequency, Length, and Duration of Occupational Therapy Intervention

Bethesda, MD — With the increased awareness of sensory integration, parents and professionals are looking for “proof” that interventions work. To fulfill this need, researchers at The Spiral Foundation and OTA-Watertown, a private practice, conducted a systematic review of 27 studies to identify, evaluate, and synthesize the research literature on the effectiveness of sensory integration intervention on the ability of children with difficulty processing and integrating sensory information to engage in desired occupations and to apply these findings to occupational therapy practice.

Results of the systematic review suggest the sensory integration approach may result in positive outcomes in sensorimotor skills and motor planning; socialization, attention, and behavioral regulation; reading-related skills; participation in active play; and achievement of individualized goals. Additionally, gross motor skills, self-esteem, and reading gains may be sustained from three months to two years.

Motor Performance

Fourteen articles examined motor outcomes of the sensory integration approach, including component skills such as fine and gross motor skills, as well as general motor planning skills and participation in gross and fine motor play. Some positive gains were found in 10 of the 14 studies, suggesting the sensory integration approach is better than no treatment and at least as effective as, and sometimes more effective than, perceptual-motor treatment in improving aspects of motor performance. The studies also suggested that these gains are maintained after the cessation of intervention.

Sensory Processing

Thirteen studies of intervention using the sensory integration approach examined outcomes thought to be indicators of improved sensory processing. Seven studies showed positive outcomes, including changes in duration of involuntary eye movement, improvements in tactile function (e.g., distinguishing textures by feel), reports of overall changes in sensory processing (e.g., a change in sensory response to stress or anxiety), and decreases in sensory defensiveness.

Academic and Psychoeducational Outcomes

Twelve studies examined academic and psychoeducational outcomes (e.g., math, reading, visual targeting, cognitive functions, language). Six of these studies suggested some positive gains, particularly that reading skills improve with the sensory integration approach and skills are maintained at follow-up; however, it is unclear whether these effects are greater than gains achieved by other interventions.

Occupational Performance Outcomes

Three recent studies examined changes in individualized goals measuring functional occupational performance changes (e.g., goal attainment scaling), such as improved sleep patterns, increased repertoire of foods eaten, improved ability to participate in mealtime and homework activities, improved ability to manipulate fasteners, or improved ability to pump a swing. All studies demonstrated significant

gains in chosen tasks and activities, and positive changes were reported in both the performance of tasks and the satisfaction of performance of tasks.

“This systematic evaluation provides a comprehensive review of the research evidence on the sensory integration approach,” said lead study author Teresa A. May-Benson, ScD, OTR/L, research director at The Spiral Foundation and clinical director at OTA-Watertown. “It is unique in that it independently examines all research articles and does not depend on interpretations by previous reviewers. Findings suggest that there is a trend for positive results from the sensory integration approach, especially in contrast to no treatment.”

However, the studies show variations in frequency, length, and duration of intervention.

“The studies that have shown effective results indicate that therapy two to three times per week for six months is commonly an effective frequency, but the total number of hours of therapy may vary depending on the type of outcome being measured,” said co-author Jane A. Koomar, PhD, OTR/L, FAOTA, president of The Spiral Foundation and executive director of OTA-Watertown. “If the outcome is client-focused and aimed at affecting core body functions, fewer sessions may be required before observing gains. If the outcome is focused on a complex level of participation, which may be reliant on first addressing several underlying skills, a longer period of intervention may be needed.”

Reference: *American Journal of Occupational Therapy*, Vol. 64, No. 3.

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