

Evidence Based Assignment: Comparison

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The articles in the evidence-based assignment enable readers to dive deeper into the research, offering meaningful insights and a thorough understanding into the subject matters. The articles explored include Dunn's Model, (Cho, M., 2018). Sensory Integration (Schaaf, R., & Nighlinger, K., 2007), PAIR Model, (Barefoot, J., et.al. 2024) and The Pyramid Model (Hemmeter., et.al 2020). The first article highlighting Dunn's Model of Sensory Processing explored sensory processing differences and behavioral patterns in school-aged children. I find this relevant as sensory interventions have been a basis for my clinical practice and anticipate incorporating sensory strategies into my capstone project. The second article applies a Sensory Integrative approach in a case study that examines using the approach with a four-year-old patient. This article was relevant for exploring clinical outcomes using a sensory integrative approach.

The PAIR Model (Phased Approach to Incorporating A Relationship Focus) examines parent/child relationships for child developmental outcomes in three phases. This article was pertinent to examine, as I want to explore the relevance of parent/child relationships and emotional regulation. The last article explores The Pyramid Model as a framework for organizing evidence-based practices that include universal social and emotional practices for all children who need targeted social-emotional support, as well as behavior support practices for children with significant social skill deficits or persistent challenging behavior (Hemmeter., et.al 2020). I hope that my capstone project of redefining calming areas in preschool classrooms can complement classes that implement The Pyramid Model.

The article "*The relationship between sensory processing patterns and behavioral patterns in children*" in the Journal of Occupational Therapy, Schools, & Early Intervention in 2018 was a study that examined the relationship between sensory processing patterns and behavioral patterns in 229 school and 155 preschool children. Data collected used The Sensory Profile School Companion and Conners Teacher Rating Scale. The study examined the relationship between sensory processing and behavioral patterns such as conduct problems, inattentive/passive behavior, and hyperactivity in children. The findings revealed that there was a significant relationship between sensory processing patterns and behavioral patterns in children at school (Nesayan, et.al, 2018). Study limitations consisted of the inability to measure the intermediate variables such as academic performance, socioeconomic status, and number of siblings of the participants.

The Dunn's Model of Sensory Processing was used in the study by the authors as the framework/model to guide the intervention process. Dunn's model of sensory processing proposes four basic patterns of sensory processing which derive from the intersection of the neurological threshold and self-regulation. The neurological threshold is one's own personal range of threshold for observing and responding to various sensory events every day. Low sensory thresholds notice stimuli more than others because their neurological systems activate quicker to sensory events. High sensory thresholds often miss stimuli that others notice because their system requires stronger stimuli to activate. Self-regulation is defined as a continuum of behavioral constructs (Cho. M., 2018).

“Four patterns can be resulted from the intersection of the neurological threshold and self-regulation; they are (1) sensation seeking (high threshold and active self-regulation strategy), (2) sensory avoiding (low thresholds and active self-regulation strategy), (3) sensory sensitivity (low threshold and passive self-regulation strategy), and (4) low registration (high threshold and passive self-regulation strategy). Individuals with extreme responses to sensory events are likely to have interfered with daily life (Cho. M., 2018)” The model assisted the researchers on determining that there is a correlation between sensory processing and behavior challenges in a school setting”(Cho.M., 2018)

The article *Occupational Therapy Using a Sensory Integrative Approach: A Case Study of Effectiveness* by Schaaf. R., & Nighlinger., K. (2007) was a case report of a child who participated in occupational therapy services for ten months using a sensory integrative approach. In a 10-month span the study indicated that the patient progressed because of intervention. The study was based around a four-year-old male who received early intervention services before the family decided that additional occupational therapy services with a sensory integration trained therapist was beneficial. The methods utilized in the study consisted of a detailed history, occupational profile, and the use of a sensory integrative model. The child and parent were given The Sensory Profile with the assessment revealing that the patient had notable differences in social, play and home activities as well as specific hyperresponsiveness in tactile, vestibular, oral-sensory, and auditory stimuli. The child has a limited diet, and exaggerated emotional, behavior, and fear responses. Of the goals created following the intervention, the patient was able to participate in play with peers. Parent interview revealed his progress during

tasks and perceptions of the intervention was positive. The limitations of the case study are the sample size, and the authors indicated that the reliability and validity of the assessment tool used was created by using parent interview, assessment data, and history not allowing objective data.

Both the articles “*The relationship between sensory processing patterns and behavioral patterns in children*” in the Journal of Occupational Therapy, Schools, & Early Intervention in 2018 and *Occupational Therapy Using a Sensory Integrative Approach: A Case Study of Effectiveness* by Schaaf, R., & Nighlinger, K. (2007), aim to explore the impact of sensory processing on children's behavior but Dunn's Model focuses on school-aged children, while the Sensory Integrative approach is applied in a case study with one child and Dunn's Model investigates sensory processing and behavior assessments in a broader population. While the Sensory Integrative approach targets an individual case, allowing for more detailed insight into specific outcomes for one child which may offer more specific clinical strategies that may prove beneficial for my capstone question.

The article “*a relationship-focus in paediatric occupational therapy interventions: Introducing the PAIR*” authored by Barefoot, J., et.al. (2024) is a relationship-focused approach highlighting the importance of parent-child relationships in a multidisciplinary approach in settings such as early intervention. This article prefaced the importance of positive parent/child relationships regarding positive outcomes in child development and parent behaviors have a significant impact on development. The article also discussed the importance of attachment, security and emotional regulation for developmental outcomes. The model is composed of three phases, observation, building trust, and relationship enhancement. It begins by observing parent/child natural interactions, then moves toward intentionally strengthening the relationship through planned interactions. Limitations of the study include that this model is in a preliminary model and further research and discussion will be required to determine the validity of the model.

Program-wide implementation of the Pyramid Model: *Supporting fidelity at the program and classroom levels* by (Hemmeter, M., and et.al., 2020). This study published in the Early Childhood Research Quarterly utilized a cluster randomized controlled trial to sixteen classrooms 2-5 years of age, across two states that included head start centers, for-profit private, church-affiliated, and nonprofit community programs. The authors wanted to determine if The Pyramid Model to determine the intervention and examine its feasibility of implementation in

community-based early childhood programs serving children from low socioeconomic environments. The study found programs increased their implementation of the pyramid model practices improved classroom practices after only one year of support. The findings indicate the pyramid model approach is an effective way to implement social emotional framework within classrooms. Some limitations of the study are the small sample size and two of the authors Hemmeter and Fox receive royalties from the testing measure used which is the TPOT.

The Pyramid Model and The PAIR Models both appreciate the importance of building relationships between the patient (i.e. student) and family and/or educator and other multidisciplinary team members to ensure the success of the patient across all settings and environments. While the PAIR model needs to have more research completed to determine its effectiveness and validity. The Pyramid Model values the importance of relationships as its part of the Tier one universal supports and offers the evidence-based research on relationships within the model.

Occupational therapists through their clinical and research lens utilize differentiated interventions, offer individualized support, can be part of a multidisciplinary team, and can implement environmental modifications to promote success with patients. For my capstone, I would like to incorporate The Pyramid Model framework, more specifically Tier One and Tier Two, the use of calming areas in a classroom before the need for Tier 3 interventions that may result in challenging behaviors and decreased self-regulation. Dunn's and the Sensory Integrative approach could offer some valuable insight into the calming area as most offer self-regulation and sensory strategies. The PAIR model approach could be considered as a resource as the importance of parent/child relationships may shape how children tolerate stress and the ability to regulate during school.

References:

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