

**Mini Review***Copyright © All rights are reserved by Vidya Pingale*

# Sensory Diets

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Sensory diets, a sensory-based intervention, are used by occupational therapists to manage sensory processing disorder (SPD). SPD is prevalent in children with diagnoses, such as autism, attention deficit hyperactive disorder, learning disabilities, fragile X syndrome, and developmental delays [1,2]. Children with SPD show a decreased ability to respond and organize sensory stimuli. As a result, SPD affects their participation in daily activities of self-maintenance, learning, play, sleep, and social interaction [3]. Sensory diets consist of a group of multisensory activities, such as pushing a ball, jumping on a trampoline, pushups, stationary postures. These activities are customized for a child based on his/her sensory processing patterns to provide sensorimotor experiences to help stay alert and organized [4].

A review of the literature on sensory diets in the last 15 years found five studies that investigated the effectiveness of sensory diets or interventions with similar conceptualization. Fazlioglu, et al. [5] investigated the effect of sensory activities similar to sensory diets on children (n = 30) between the ages of 7-11 years with a diagnosis of autism using a randomized control design. A two-group analysis of variance after 12 weeks of intervention showed a significant main effect for groups on total scores of the sensory evaluation form ( $F_{1,28} = 5.84, p < .05$ ), pretest-posttest test time ( $F_{1,28} = 98.38, p < .01$ ), interaction of group and time ( $F_{1,28} = 119.38, p < .01$ ), and posttest scores ( $F_{2,27} = 167.16, p < .01$ ), suggesting sensory activities can be beneficial in reducing sensory processing related issues in children with autism.

A study by Lin, et al. [6] used a matched group pretest-posttest design to observe the effect of sensory strategies on children (n = 36) between the ages of 3-6 years with SPD. Improvements in activity level ( $t [17] = 2.09, p = 0.03$ ) and feet-swinging ( $t [17] = 2.26, p = 0.02$ ) were noted after 8 weeks of intervention, suggesting sensory strategies can be effective in managing activity level and sensory seeking behavior.

Another study investigated the effect of sensory diets on sensory processing, psychosocial skills, and classroom engagement of children (n = 3) between the ages of 5-8 years with SPD using customized sensory diets. The binomial test results indicate that with sensory diets, all participants showed a significant decline in sensory seeking behaviors during individual ( $p < .05$ ) and group activities ( $p < .10$ ). Changes in interruptive or disruptive behaviors were significant for one participant for group activities, and all participants for individual activities ( $p < .05$ ). Similarly, changes in classroom engagement were significant for all participants for group activities and one participant for individual activities ( $p < .05$ ). These results favor the use of sensory diets for managing SPD [7].

A study that investigated the effect of a group proprioceptive program on nine-year-old children with SPD (n = 3) using a single-subject ABA design and found a decline in the duration of aggressive behaviors of two participants and frequency of aggressive behaviors in one participant with nine days of intervention. Binomial test results suggest that the decline was ( $p < .05$ ) statistically significant [8]. On the contrary, a single-subject alternating treatments design study that researched the effectiveness of sensory diets on children (n = 4) of ages 6-11 years with a diagnosis of autism did not find any improvements in self-injurious behaviors with 10 days of intervention [9]. Results of these studies cast doubt on the effect of sensory diets or similar interventions.

This review suggests that continued research is needed to investigate the effectiveness of sensory diets. Three studies in this review show promising results. However, intervention strategies, protocols, dosages, and dependent variables used in these studies show significant variations. These variations may have led to differences seen in the results of the studies. As it appears now, sensory diets can have a role in managing SPD; however, they should be used judiciously and in alignment with therapeutic goals.

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## Conflict of Interest

No conflict of interest.

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