


Abstract

Hands-On Interaction with Food as a Means of Increasing Vegetable Intake in Preschool Children [†]

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Abstract: Preschool years are a highly formative period in a child's life and present a critical opportunity for the cultivation of enduring healthy eating habits. Trying new vegetables can be a challenge for young children as they can often be wary or even averse to the unfamiliar tastes, textures, smells, sights, and sounds posed by new foods. This study aimed to assess how engaging preschool children in growing food and playing with food influences their vegetable consumption and willingness to try new foods. Intervention studies were conducted with children aged 3–5 years in four Irish preschool classes across three different preschools, with two classes partaking in a vegetable-focused sensory learning intervention ($n = 33$), and two classes being involved in a gardening-based food education intervention ($n = 57$). The sensory learning intervention involved playing with three different foods, tomatoes, peas, and bell peppers, with the children's consumption of these foods measured at baseline and after partaking in two interactive sensory learning classes. The gardening-based intervention centered around watercress and compared the effects of a hands-on planting activity versus a storytelling control activity on preschool children's perceptions and reactions to tasting watercress. The sensory learning intervention was successful in encouraging preschool children to eat more vegetables, with children consuming on average 85% more peppers ($p < 0.001$), 24% more peas ($p = 0.002$), and 17% more tomatoes after the intervention. Children showed a greater willingness to try new foods after experiencing sensory learning, with over 50% of those who refused to try peas and peppers at baseline opting to try the vegetables after the intervention ($p < 0.001$). Involvement in the hands-on planting activity resulted in a slightly higher willingness to try what was a new vegetable for 79% of children, with 48% of the children in the planting group opting to taste the watercress compared to 32% in the storytelling group. This research indicates that providing preschool children with the opportunity for hands-on interaction with food aids in increasing their vegetable consumption and can make them more receptive to trying new foods. Use of these techniques can help to cultivate positive early food experiences that can have a lasting impact on lifelong food habits.

Keywords: preschool children; sensory learning; vegetable intake; food preferences; food education; experiential learning; taste exposure; health promotion



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