

A.T. Still University

Still ScholarWorks

---

OT Student Capstones

Occupational Therapy Department

---

2022

## Identifying an Association Between Sensory Processing and Food Sensitivities

Taylor Tonks  
A. T. Still University

Follow this and additional works at: <https://scholarworks.atsu.edu/ot-capstones>



Part of the [Occupational Therapy Commons](#)

---

### Recommended Citation

Tonks, Taylor, "Identifying an Association Between Sensory Processing and Food Sensitivities" (2022). *OT Student Capstones*. 9.

<https://scholarworks.atsu.edu/ot-capstones/9>

This Capstone is brought to you for free and open access by the Occupational Therapy Department at Still ScholarWorks. It has been accepted for inclusion in OT Student Capstones by an authorized administrator of Still ScholarWorks. For more information, please contact [mohammadaslam@atsu.edu](mailto:mohammadaslam@atsu.edu).

## Introduction

- Feeding difficulties can affect 13-80% of children diagnosed with ASD & roughly 50% of children in general
- Feeding challenges can include food selectivity and food refusal
- There are a multitude of poor health outcomes associated with feeding difficulties including: nutritional status, obesity, and GI symptoms
- Previous studies have identified some links between sensory processing and feeding in children with majority of research focused on children diagnosed with ASD
- Oral motor skills and oral praxis plays an important role in feeding

## Purpose

- The purpose of this study is to identify the association between sensory processing and food sensitivities using retrospective data from an outpatient pediatric clinic.

## Methods

- Retrospective de-identified data
- Outcome measures: Sensory Processing Measure (SPM) or Sensory Processing Measure-Preschool (SPM-P), Brief Assessment of Mealtime Behaviors in Children (BAMBiC), & Food Preference Checklist
- Used 2 tailed Spearman bivariate correlational statistics via SPSS (2018)
- IRB approval was received prior to data analysis

## Participants

- 47 participants who received a feeding evaluation at an outpatient pediatric clinic
- 35 male, 12 female
- Ages 2 years and older
- Any diagnosis
- Completed all 3 outcome measures

## Results

BAMBiC and SPM/SPM-P			Food Preference Checklist and SPM/SPM-P		
SPM/SPM-P Subtest	Correlation Coefficient	Relationship Strength	SPM/SPM-P Subtest	Correlation Coefficient	Relationship Strength
Social Participation	0.213	Weak	Social Participation	-0.147	Weak
Vision	0.060	Very Weak	Vision	0.103	Weak
Hearing	0.125	Weak	Hearing	0.014	Very Weak
Touch	0.127	Weak	Touch	-0.003	Very Weak
Body Awareness	-0.064	Very Weak	Body Awareness	0.161	Weak
Balance and Motion	0.054	Very Weak	Balance and Motion	0.137	Weak
Planning and Ideas	0.088	Very Weak	Planning and Ideas	-0.062	Very Weak
Total Sensory Score	0.077	Very Weak	Total Sensory Score	0.155	Weak

BAMBiC Test Items and SPM/SPM-P			
BAMBiC Item	SPM/SPM-P Subtest	Correlation Coefficient	Relationship Strength
"My child is willing to try new foods"	Social participation	-0.142	Weak
	Vision	-0.212	Weak
	Hearing	-0.186	Weak
	Touch	-0.222	Weak
	<b>Body Awareness</b>	<b>-0.377**</b>	<b>Moderate</b>
	Balance and Motion	-0.289	Weak
	Planning and Ideas	-0.239	Weak
	<b>Total Sensory Score</b>	<b>-0.301*</b>	<b>Moderate</b>
"My child dislikes certain foods and won't eat them"	Social participation	-0.159	Weak
	Vision	-0.169	Weak
	Hearing	0.007	Very Weak
	Touch	-0.287	Weak
	<b>Body Awareness</b>	<b>-0.464**</b>	<b>Moderate</b>
	Balance and Motion	-0.142	Weak
	Planning and Ideas	-0.069	Very Weak
	Total Sensory Score	-0.258	Weak
"My child prefers the same foods at each meal"	Social participation	-0.012	Very Weak
	Vision	-0.112	Weak
	Hearing	-0.090	Very Weak
	Touch	-0.150	Weak
	Body Awareness	-0.164	Weak
	Balance and Motion	-0.152	Weak
	Planning and Ideas	-0.060	Very Weak
	Total Sensory Score	-0.169	Weak
"My child accepts or prefers a variety of foods"	Social participation	-0.139	Weak
	Vision	-0.078	Very Weak
	Hearing	-0.060	Very Weak
	Touch	-0.284	Weak
	<b>Body Awareness</b>	<b>-0.370*</b>	<b>Moderate</b>
	Balance and Motion	-0.230	Weak
	Planning and Ideas	-0.156	Weak
	Total Sensory Score	-0.230	Weak

\*Correlation is significant at the 0.05 level (2-tailed)

\*\*Correlation is significant at the 0.01 level (2-tailed)

## Discussion

- The study found correlations between sensory processing and feeding
- Specifically, correlations found between body awareness based on the SPM/SPM-P and food selectivity questions of the BAMBiC
- Results indicate the importance of identifying and addressing body awareness difficulties in children of varying diagnoses who present with feeding challenges
- Proprioception impacts motor planning (oral praxis) affecting oral motor skills and a child's abilities to safely and effectively engage in oral feeding
- Interventions can include sensorimotor techniques

## Implications

### Occupational Therapy Practice

- Feeding falls within the scope of OT practice
- Results imply that OTs should address oral awareness and oral motor skills in children presenting with feeding difficulties

### Future Research

- Look further into the link between body awareness (proprioception) and feeding
- Focus research on children of varying diagnoses
- Consider using the SPM-2 (2021)

## Conclusion

- Sensory processing has correlations with feeding, particularly body awareness
- Results have implications for occupational therapy practice and tailoring feeding interventions for children of varying diagnoses

## References

See provided references