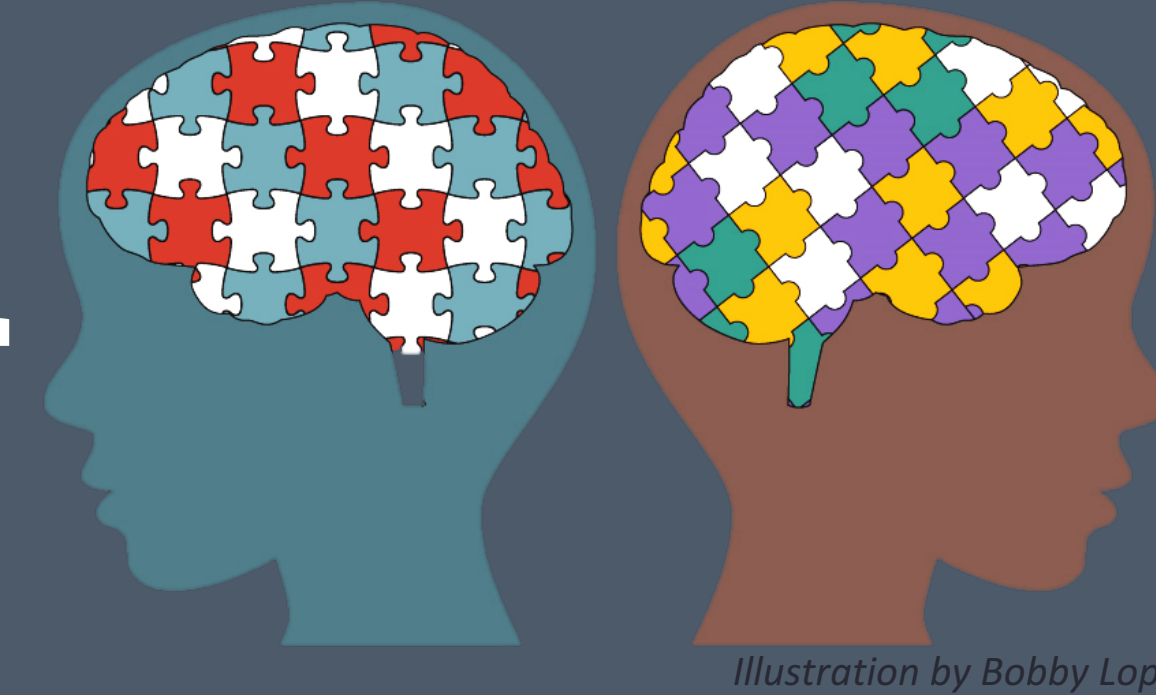


Eating Patterns of Children on the Autism Spectrum Disorder

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ABSTRACT

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder, identified by a lack of social interactions and communication, limited interests and the excessive repetition of certain behaviours (National Institute of Mental Health, 2016). Individuals diagnosed with Autism Spectrum Disorder fall on a spectrum, which is categorized by the severity of ASD symptoms. The purpose of the research is to identify how autism affects eating behaviour in children and what are the implications of such behaviour, if any. The literature indicated nutritional inadequacies in ASD children, especially deficiencies in Vitamin A, Vitamin D and iron. Food selectivity and picky eating behaviours were present in children with ASD, and such behaviour has been linked to nutritional inadequacy. Food selectivity also resulted in greater parental and spousal stress

OBJECTIVES

What does current research says about eating patterns of autistic children? Does autism affect eating behaviour in children and what are the implications of such behaviour, if any

METHODS

A review of the literature was conducted on PubMed, Web of Science, and ProQuest databases,

- keywords: "Autism Spectrum Disorder," "Diet," "Food Patterns," "Eating Behaviour", "Nutrition" and "ASD."
- Inclusion criteria: articles published between 2000 and 2016, peer reviewed, studies based on ages 0 to 16, and articles focusing on the diet and eating patterns of children with ASD.
- Studies conducted on adults and reviews are excluded from the literature review.
- A total of 12 articles is examined and categorized into three main themes- Nutritional Concern, Food Selectivity, Parental Stress- based on their findings.

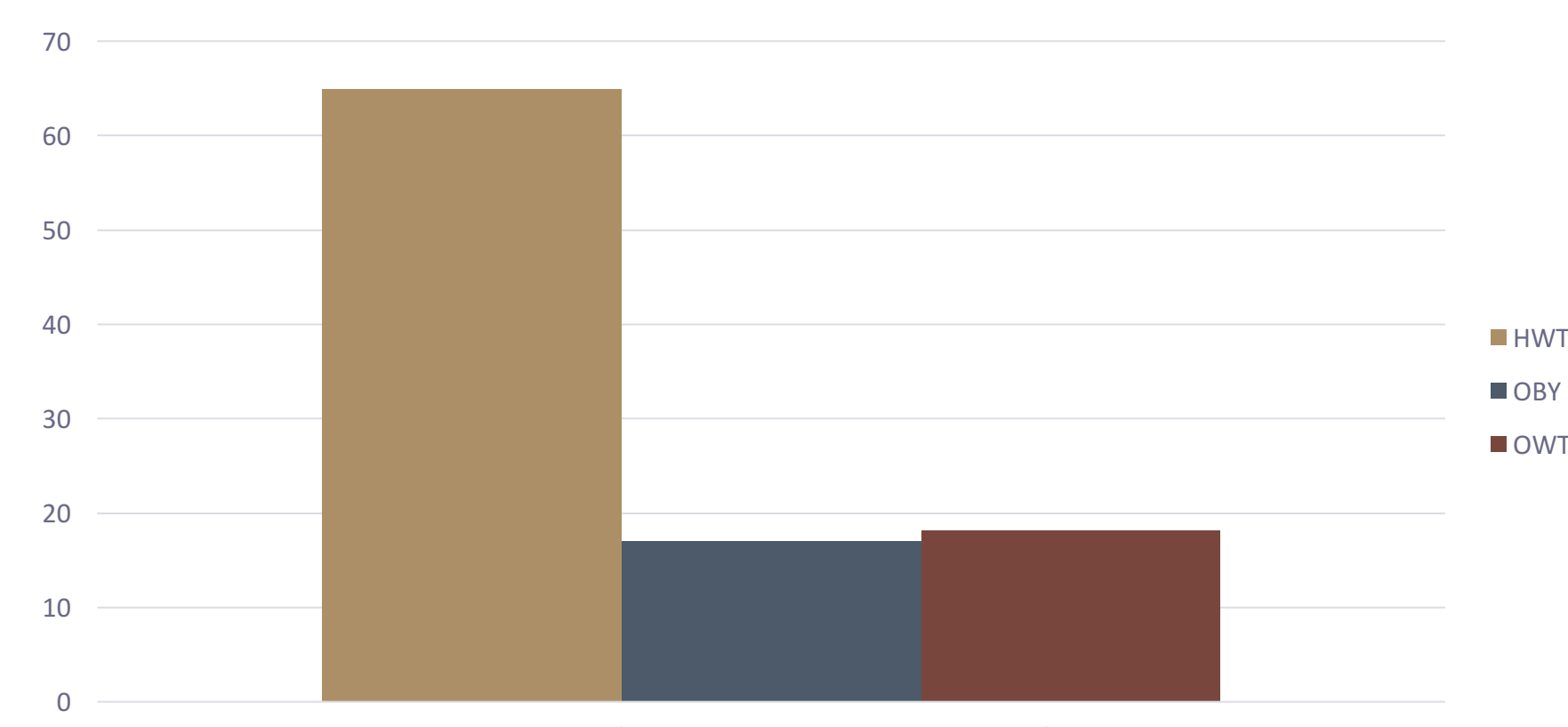
RESULTS

Food Selectivity

A common characteristic of ASD is a lack of social interaction and understanding of socially acceptable conduct. These characteristics were evident in mealtime behaviour and took the form of extreme food selectivity, food refusal, and overall disruptive eating behaviour.

- The most common reason for food selectivity was "texture," "taste" and "color." ASD children like to have repetitiveness and sameness in activities, hence certain foods were preferred over others or refused. (Curtin C et al. 2015)
- Autistic Children are at risk of being obese/overweight. (Zukerman et al. 2015)

Prevalence of OWT and OBY



371 ASD children between ages 2-18. (HWT 5 ≤BMI/age <85 percentile),(OWT 85 ≤BMI/age <95 percentile), (OBY BMI/age ≥95 percentile)

Parental Stress

Parental stress over an ASD child's eating behaviour and nutritional intake are an evident side product of ASD children's problematic eating behaviours.

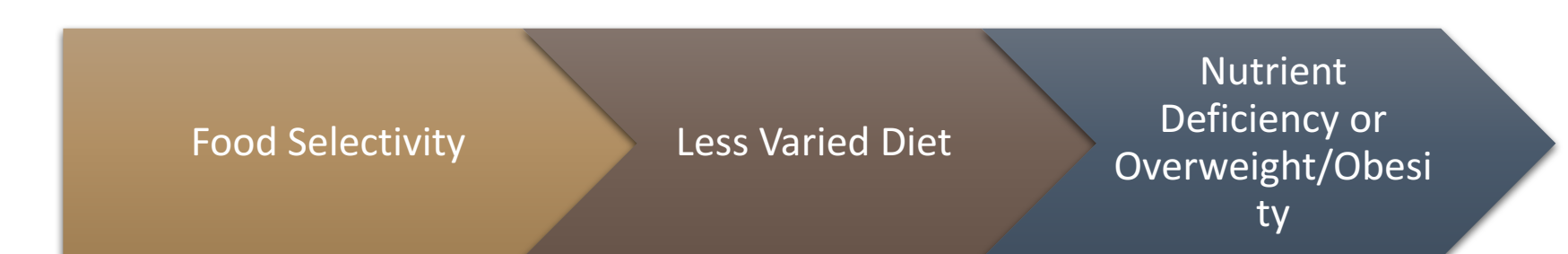
- In a demographic questionnaire 92% of parents displayed concern over ASD child's eating behaviours. (Apontea, and. Romanczykb 2015)
- Meal times behaviour management and family dinner is dissatisfying and stressful for parents and families of ASD children. (Curtin C. et al. 2015)
- Parents who reported greater stress levels also reported higher levels of behavioural problems in ASD children (Liu et al. 2015)

RESULTS

Nutritional Inadequacies

There is a growing concern that children on the Autism Spectrum Disorder are not meeting nutrient levels essential for healthy growth and development.

- ASD children, on average, have lower intakes of protein, energy, and fat in comparison to typically developing children.
- ASD children's Vitamin A levels were considerably lower in comparison with VA levels of typically developing children from low socio-economic backgrounds. ((Liu et al. 2016)
- Vitamin deficiency in ASD children due to lack of outdoor play, lack of prenatal. (Esparham et al. 2015)
- Strong negative correlation between Vitamin D levels and ASD severity because of the critical role VD plays in neurodevelopment. (Fernell et al. 2015)



CONCLUSIONS

Children on the Autism Spectrum Disorder and their families encounter significant challenges in regards to adequate nutritional intake and mealtime behaviours. ASD children on average have nutritional deficiencies, especially macronutrients such as Vitamin A, D, and iron. Food selectivity is a risk factor for nutrient deficiency in ASD children. Food selectivity is the result of the underlying characteristics of autism, such as the need for repetitiveness and sameness and lack of social understanding. Food selectivity, lack of nutritional intake, and disruptive mealtime behaviours put a strain on parents and families of ASD children. This opens avenues for further research, especially in the nutritional intake of essential macronutrients in ASD children. Likewise, intervention and support programs are needed for parents of ASD children to help them better cope and facilitate meal times.

