Nutrition and Autism Spectrum Disorder: A needs assessment and environmental scan to inform nutrition curriculum and training for non-medical diagnostic and therapeutic service providers in Northern Ontario

Sara Friedrich¹, Kerington Howell¹, Gill Nearing, RD², Lee Rysdale MEd, RD³

¹Northern Ontario Dietetic Internship Program, Sault Ste. Marie, ON, ²Group Health Centre, Sault Ste. Marie, ON, ³Northern Ontario School of Medicine, Sudbury, ON, lrysdale@nosm.ca

Introduction

- Autism Spectrum Disorder (ASD) is rapidly increasing in prevalence in Canada, currently 1 in 66 children and youth is being diagnosed.¹
- ASD includes a wide range of developmental challenges that influence a child’s nutritional intake.
- Children with ASD reported to be five times more likely to have feeding problems compared to children without ASD.²
- Current nutrition management of ASD by non-medical practitioners suggests need for additional education and training.

Objectives

To determine the nutrition-related knowledge, attitudes, and perceptions of non-medical practitioners working with children diagnosed with ASD; and, to identify relevant parent and professional resources to inform an evidence-based curriculum.

Methods

- Spring 2017: Comprehensive literature review (MEDLINE and PsychInfo) to develop and content validate (n=3 registered dietitians (RDs) with topic expertise) a 20-item online survey.
- Fall 2017: Grey literature search including PEN® (Practice-Based Evidence in Nutrition) and pediatric hospital websites conducted; inclusion criteria included evidence-based presentations or toolkits with a nutrition component and/or discussed the RD role in ASD.
- December 2017: Survey administered to a convenience sample (149 Child and Community Resources (CCR) therapists, managers, and psychologists). Results analyzed using Qualtrics® software and pivot tables.

Results

- A total of 232 existing nutrition resources were screened, 25 met the inclusion criteria.
- Resources with Canadian guidelines and related to youth with ASD were limited.
- Sixty-one staff (41% RR), all female completed the survey.

Results of Online Survey

Assessing and Providing Education

- 30% (17/57) not confident assessing food/nutrient intake, 26% (15/57) not confident assessing feeding behaviours in children with ASD.

Nutrition Interventions

- 42% (25/60) unsure gluten-free casein-free, 52% (31/60) unsure multivitamin supplements, and 80% (48/60) unsure prebiotics and probiotics were recommended.

GI Complaints

- 51% (29/57) unsure if children with ASD have more gastrointestinal (GI) complaints.

RD Involvement

- 78% (47/60) agreed an RD should be involved in the nutritional assessment of children with ASD.

Discussion

- Overall CCR staff reported a lack of knowledge related to common GI complaints, feeding behaviours, assessing food/nutrient intakes, and appropriate nutrition therapies for children with ASD.
- Comparable to the literature; a large proportion had generally low levels of confidence in their knowledge on ASD and feeding and perceived therapy success³, highlighting the need for additional education and training.^{2,4}

Conclusions

- Survey results revealed gaps in nutrition knowledge and management by non-medical practitioners who work with children with ASD.
- Numerous resources exist and can be adapted with Canadian guidelines and adolescent specific content.
- With appropriate revision and evaluation, this evidence-informed nutrition curriculum/training resource can be shared provincially and nationally to support non-medical practitioners in the nutrition management of children diagnosed with ASD.

Significance to the field of dietetics

- Providing nutrition education including screening and appropriate RD referrals can address pre-existing feeding concerns, abnormal growth patterns, and nutritional deficits and excesses associated with food selectivity which can prevent malnutrition and promote optimal growth and overall health status.

Key Topics in Nutrition Curriculum

General Nutrition

Nutrition in healthy child development and the role of an RD.

Food Selectivity

Strategies for food selection based on type, texture, and colour.

Food Problems

Strategies for food neophobia, rigid mealtime routines, food refusal, food allergies/intolerances, and pica.

Nutrition Therapies

Current research on nutrition interventions used for children with ASD and indications for use.

Gastrointestinal Issues (GI)

Common GI complaints seen in children with ASD and suggested foods for GI discomfort.

Introducing New Foods

Common food preferences and tips for introducing new foods.

Positive Meal Times

Common disruptive behaviours with strategies to achieve more positive meal times.

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