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

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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 probiotics 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.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.

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.

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.

References:


We have not had any relevant financial relationships with any commercial interests over the past 24 months