

CANADIAN FOUNDATION FOR DIETETIC RESEARCH

CFDR Research Showcase: June 6th and 7th, 2019

Through the support of Dietitians of Canada (DC) and the Canadian Foundation for Dietetic Research (CFDR), the 2019 Research Showcase at the DC Conference represented a wide variety of practice-based nutrition research projects in Canada.

The 2019 Research Showcase consisted of several new elements this year. Early Bird abstracts were considered for either oral or oral ePoster sessions. New this year was the presentation of 11 Early Bird abstracts as 'Lightning Rounds' within the regular conference sessions. The remaining 27 Early Bird abstracts were presented as 3 concurrent oral ePoster sessions on June 6th, 2019; authors presented their research in 2-3 minutes plus 2 minutes for questions, using their ePosters. The Late Breaking abstracts were all considered for ePosters that were attended by authors on June 7th, 2019. All ePosters were on display throughout the conference.

This research event would not have been possible without the commitment and dedication of many people. On behalf of DC and CFDR, we extend a special thank you to members of our abstract review committees.

Early Bird Committee: Susan Campisi (University of Toronto); Elaine Cawadias (Retired); Andrea Glenn (St. Francis Xavier University); Brenda Hartman (Brescia College, Western University) Mahsa Jessri (University of Ottawa); Jessica Loeffers (University of Alberta).

Late Breaking Committee: Laurie Drozdowski (University of Alberta), Laura Forbes (University of Guelph), Joann Herridge (Hospital for Sick Children), Grace Lee (Toronto General Hospital), Lee Rysdale (Northern Ontario School of Medicine), Shelley Vanderhout (University of Toronto), Sarah Woodruff Atkinson (University of Windsor).

We are also grateful to the moderators of the Oral ePoster sessions: Barb Anderson (Acadian University); Jane Bellman (Dietitians of Canada); Brenda Hartman (Brescia College, Western University); Jessica Loeffers (University of Alberta); Dawna Royall (Dietitians of Canada); and Lee Rysdale (Northern Ontario School of Medicine). Thanks are also extended to Susan Caswell (University of Waterloo) for her assistance with the ePoster sessions.

Finally, a special thank you to Gareth Willows Tribe and Michelle Naraine at CFDR for their assistance and support throughout the review process.

We enjoyed interacting with authors throughout the Research Showcase process.

Christina Lengyel, PhD, RD
Chair, 2019 Early Bird Committee
Associate Professor
Director of the Dietetics Program
Human Nutritional Sciences
University of Manitoba

Janis Randall Simpson, PhD, RD, FDC
Chair, 2019 Late Breaking Committee
Professor Emerita
University of Guelph
Executive Director, CFDR

Topic Area: Determinants of Food Choice, Dietary Intake

Abstract Title

Using focus groups to identify the barriers of arthritis-related disability on food behaviours and guide future nutrition interventions

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Abstract

Introduction: Arthritis is associated with greater functional disability, lower diet quality, and a higher risk of experiencing food insecurity. However, how arthropathies impact food choices, grocery shopping, and food preparation remains largely understudied.

Objectives: This study sought to describe the impact of arthritis-related disability on aspects of food insecurity and meal preparation and to gain insight on the incentives and deterrents to participating in a nutrition intervention program.

Methods: Twenty-seven individuals diagnosed with arthritis participated in one of four focus groups between April and May 2018 at Concordia's PERFORM Centre. Participants completed questionnaires relating to socioeconomic status, diet, and health. Audio recordings of the focus groups were transcribed verbatim and were coded using the constant comparative method. Basic descriptive statistics were used to analyze the questionnaire data.

Results: The themes of pain, fatigue, knowledge, and social support emerged in discussions on food choices, procurement, preparation, consumption, and other lifestyle behaviours. Approximately half of the participants increased diet quality by making specific dietary changes to improve their condition, while others made no modifications, often due to a lack of information. Several reported changing their grocery shopping and food preparation due to fatigue and pain. The questionnaire results revealed low disability levels. Timing, cost, and information quality were deemed to be the most important incentives to participate in a nutrition intervention program.

Conclusions: Participants reported common barriers, although the extent to which they were impacted differed. This variability highlights the need for customized, comprehensive interventions that consider disability levels and other factors, such as socioeconomic status and social support.

Significance to the Field of Dietetics: The information obtained on the challenges of arthritis in nutrition and the incentives to participate in an educational intervention provides valuable insight when adapting dietary recommendations or creating a program.

Funding: The Drummond Foundation

Abstract Title

Quels facteurs influencent l'apport alimentaire des soldats et de leurs instructeurs dans l'Arctique canadien?

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Abstract

Introduction: Il a été rapporté que les militaires des Forces armées canadiennes (FAC) ne réussissent pas à combler leurs besoins énergétiques avec les rations de combat dans le climat arctique. Plusieurs facteurs semblent affecter leur apport et ceux-ci pourraient différer entre les soldats et leurs instructeurs.

Objectifs: Documenter des facteurs affectant l'apport alimentaire de soldats et d'instructeurs des FAC en entraînement dans l'Arctique.

Méthodes: Des soldats et instructeurs ayant été dans l'Arctique entre 2015 et 2018 ont répondu à un sondage sur *SurveyMonkey* qui évaluait les facteurs influençant leur apport alimentaire. Les résultats des groupes (moyennes±écarts types) ont été comparés dans Excel avec des tests de T.

Résultats : Les participants étaient des soldats (n=37) et leurs instructeurs (n=11). Les instructeurs avaient en moyenne 17,8±7,9 années d'expérience dans les FAC, alors que les soldats en avaient 10,4±5,4 années (p<0,05). Les instructeurs avaient en moyenne 3,4±2,6 années d'expérience à préparer des rations dans l'Arctique, alors que leurs soldats en avaient 0,65±1,1 (p<0,05). Le manque d'expérience préalable dans les FAC, dans l'Arctique et avec la préparation des rations aurait pu influencer négativement l'apport alimentaire des soldats comparativement aux instructeurs (p<0,05).

Conclusion: Les résultats préliminaires de ce projet ont permis de documenter que plusieurs facteurs influençaient l'apport alimentaire de soldats et d'instructeurs en entraînement nordique, dont l'expérience à préparer les rations, surtout pour les soldats. Le nombre d'années d'expérience préalable dans l'Arctique et avec les rations était plus grand pour les instructeurs que pour les soldats.

Importance pour la Pratique en Diététique: Une meilleure compréhension des facteurs affectant négativement l'apport alimentaire des soldats et des instructeurs des FAC dans l'Arctique permettra de développer des rations mieux adaptées à la réalité nordique et aux besoins spécifiques de cette population, en plus d'enrichir la formation des soldats et de leurs instructeurs en matière de nutrition.

Projet financé par : Programme d'initiation à la recherche au premier cycle (PIRPC) de l'Université d'Ottawa et par les Forces armées canadiennes (FAC).

Abstract Title

Quelle est la perception des employés des Forces armées canadiennes (FAC) qui travaillent en nutrition des facteurs qui influencent l'apport alimentaire des soldats?

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Abstract

Introduction: Les Forces armées canadiennes (FAC) ont documenté que l'apport alimentaire quotidien en rations de combat des soldats est souvent insuffisant. Plusieurs facteurs pourraient contribuer à un apport déficient.

Objectifs: Déterminer la perception des employés des FAC qui travaillent en nutrition des facteurs qui influencent l'apport alimentaire des soldats.

Méthodes: Un questionnaire *SurveyMonkey* avec 25 questions ouvertes et fermées a été envoyé nationalement par courriel pour documenter la perception des employés des FAC qui travaillent en nutrition concernant les facteurs qui affectent l'apport alimentaire des soldats. Les données ont été analysées avec Excel pour obtenir des statistiques descriptives.

Résultats: Selon les participants (n=10), l'éducation à propos des rations offertes par la chaîne de commandement et l'éducation nutritionnelle disponible aux soldats pourraient être améliorées. Les participants ont rapporté plusieurs facteurs qui affectent l'apport alimentaire des membres des FAC tels que les conditions environnementales, la monotonie des repas, le stress des soldats, la perception négative des rations, le fait de manger en groupe, le temps de préparation des rations et le temps disponible pour manger. L'effet combiné de ces facteurs pourrait particulièrement contribuer à réduire l'apport alimentaire des soldats. Finalement, les participants ne croyaient pas que les membres des FAC possédaient suffisamment de connaissances pour répondre à leurs besoins nutritionnels.

Conclusion: Ce projet a permis de documenter que selon la perception des employés des FAC qui travaillent en nutrition plusieurs facteurs contribuent à un apport alimentaire non optimal en rations de combat des soldats.

Importance pour le domaine de la diététique: Les diététistes ont un rôle important pour promouvoir un apport nutritionnel optimal par les soldats et adresser les multiples facteurs influençant négativement leur apport. Ce projet met en évidence qu'une stratégie suggérée par des employés des FAC qui travaillent en nutrition serait d'augmenter l'éducation nutritionnelle des soldats.

Projet financé par : Programme initiation à la recherche au premier cycle (PIRCP) de l'université d'Ottawa et les Forces armées canadiennes (FAC).

Abstract Title

Association entre les pratiques alimentaires de mères noires de descendance africaine et caribéenne résidant à Ottawa et l'apport alimentaire de leurs enfants

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Abstract

Introduction: Certaines pratiques alimentaires utilisées par les parents influencent l'apport alimentaire de leurs enfants. La restriction a été associée avec une consommation accrue d'aliments restreints, notamment les sucreries et les collations malsaines, chez l'enfant. Inversement, la pression à manger engendrerait chez l'enfant une diminution de l'apport en aliments encouragés, comme des légumes ou des sources de protéines animales.

Objectif: Étudier l'association entre les pratiques alimentaires parentales de mères noires de descendance africaine et caribéenne et l'apport en nutriments de leurs enfants.

Méthodes: Nous avons recruté 205 mères noires d'origine africaine et caribéenne habitant Ottawa et leurs enfants de 6-12 ans. L'apport en nutriments des enfants a été estimé à l'aide d'un rappel alimentaire de 24h analysé avec ESHA Food Processor. Le Child Feeding Questionnaire a permis d'évaluer la restriction et la pression à manger. À l'aide du logiciel SPSS, nous avons effectué des corrélations de Spearman afin d'évaluer l'association entre ces deux pratiques et l'apport en nutriments des enfants.

Résultats: La restriction parentale était négativement associée à l'apport en lipides (% apport énergétique (AE)), gras polyinsaturés (g et %AE), vitamine D (UI), vitamine E (mg) et folate (mcg) des enfants ($p < 0.05$). La restriction parentale était aussi positivement associée à l'apport en glucides (%AE) ($p = 0.011$). La pression à manger était également positivement associée à l'apport en glucides (g), sucres (g), fer et potassium (mg) ($p < 0.05$).

Conclusion: Ces résultats suggèrent que les pratiques alimentaires de restriction et de pression de ces mères noires influenceraient négativement l'apport en certains nutriments de leurs enfants. Plus d'études sont nécessaires pour confirmer leur effet sur l'apport alimentaire des enfants.

Importance pour la pratique de la diététique : Les interventions nutritionnelles envers ces mères devraient les sensibiliser quant à l'usage des pratiques de restriction et de pression et leurs conséquences sur l'apport alimentaire des enfants tout en encourageant le respect des signaux de faim et satiété.

Projet financé par : CNFS - Volet Université d'Ottawa

Abstract Title

Factors influencing the dietary intake of military members in the Canadian Armed Forces working in the Arctic

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Abstract

Introduction: Military members in the Canadian Armed Forces (CAF) do not consistently meet their daily energy needs with combat rations when working in harsh environments, like the Arctic. Low dietary intakes over a prolonged period can contribute to involuntary weight losses and diminished performance and increase the risk of injury. Many factors are thought to influence soldiers' dietary intake.

Objectives: This study aimed to determine CAF members perception of individual, dietary, and environmental factors influencing food intake while working in the Arctic.

Methods: A survey was sent nationally with SurveyMonkey July-September 2018 to military members who worked in the Arctic 2015-2018. The survey included questions on demographics, physical markers, acceptability of rations, eating habits, and diet history during Arctic work. The 20-minute survey had 39 open and closed-ended questions, including some on food variety, amount of food eaten, time for meals, ability to heat rations, hunger, and weight changes. Excel was used to compile descriptive statistics.

Results: The survey response rate was 27.5%. Soldiers (n=37) and instructors (n=11) participated (ages 31.7±7.2years; 45 men, 3 women). They reported that 61%, 68%, and 71% of breakfast, lunch, and supper rations were eaten. Two participants reported not having enough time to eat. Eating on the move, weather/environmental conditions, and equipment required for food preparation and consumption were factors that negatively affected the most dietary intake of military members during Arctic exercises. Sixty-five percent (n=31) self-reported losing weight during their exercise (1.8–11.3kg).

Conclusion: Preliminary results showed that many factors influenced the dietary intake of CAF members working in the Arctic. Lack of time did not seem to limit intake. More research is needed to accurately measure weight change during these exercises and explore options to make rations better adapted for the Arctic.

Significance to the Field of Dietetics: These results may help dietitians develop rations better suited for this population.

Funding: Canadian Armed Forces

Abstract Title

Using the Social Ecological Model to Explore Nutritional Risk in Community-Dwelling Older Adults

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Abstract

Introduction: More than one-third of community-dwelling Canadians aged 65 and older are at nutritional risk (NR). NR is related to increased morbidity and mortality. It is critical to understand the factors associated with NR.

Objectives: To determine if the Social Ecological Model (SEM) can be used to analyze NR in community-dwelling older adults in Canada.

Methods: Three theories of aging examined NR in older adults: the social capital theory, the life-span theory of social support (social support theory), and the social ecological model (SEM). The databases CINAHL, Embase, Medline, and Google Scholar were searched for articles published since 1990 related to NR and these theories of aging. Search terms used the subject headings associated with each database (i.e. MESH for Medline). First titles, then abstracts were screened for relevance. After retrieving relevant articles, the factors relating to NR were mapped onto the theories.

Results: SEM was the most appropriate theory as it best explained NR. The social support and social capital theories can be incorporated into SEM, at the interpersonal and community levels. All of the factors associated with NR in older adults identified in the literature can be mapped onto SEM. NR is also affected by factors at all levels within SEM and by interactions between levels. Other theories only address some of the factors associated with NR.

Conclusions: SEM can be used to examine the factors associated with NR in community-dwelling older adults and can guide research, and program development and evaluation. Understanding these factors is critical for improving NR in older adults.

Significance to the Field of Dietetics: Dietitians are the health care professionals best positioned to assess community-dwelling older adults for nutritional risk and to implement nutrition interventions designed to address or mitigate these contributing factors. SEM can be used to guide the development and evaluation of these interventions. If nutritional risk can be reduced, this could improve the health and quality of life for many community-dwelling older adults.

Funding: Queen Elizabeth II Graduate Scholarship in Science and Technology

Topic Area: Clinical Research (Including Outcomes of Intervention)

Abstract Title

Malnutrition, hepatic encephalopathy and quality of life: associations in chronic liver disease

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Abstract

Introduction: Malnutrition is a frequent complication in patients with chronic liver disease (CLD) and increases the risk of developing hepatic encephalopathy (HE) and affects quality of life (QOL). Strategies focusing on nutritional status and complications of CLD are an unmet clinical need.

Objectives: 1) Assess nutritional status and its relationship to QOL; 2) Ascertain the presence, severity and history of HE; 3) Inquire the relationship of HE and QOL.

Methods: Cross-sectional study involving 50 patients from the CHUM's Liver Unit, Montreal, Canada and 18 non-cirrhotics. All subjects were assessed for: 1) Nutritional Status (SGA); 2) QOL (SF-36; 8 scales); 3) HE (EncephalApp Stroop test or CHESS).

Results: 50 CLD patients (72% men) of various etiologies (18% NASH, 12% alcoholic, 8% autoimmune, 6% viral, 12% others and 44% mixed etiologies), aged 56±12 years and 18 non-cirrhotic patients (33% male, aged 42±15). SGA revealed that 34% of CLD subjects were malnourished. Among malnourished CLD patients, 18% were diagnosed with HE. CLD malnourished patients had a lower perception of QOL than well-nourished CLD patients for all SF-36 scales ($p<0,01$). History of HE was associated with poor QOL ($p<0,01$). Compared to controls, CLD patients displayed a lower score in QOL ($p<0,05$).

Conclusion: Our data suggest that a suboptimal nutritional status based on SGA negatively affects 6 scales out of 8 of QOL but is not associated with presence of HE. However, history of HE does impact 2 scales of QOL. Identifying malnourished CLD patients is of great importance to improve QOL.

Significance to the Field of Dietetics: Results of this study will pave the way to future strategies urgently needed for patients with chronic liver disease and guide dietitians to optimize their interventions.

Abstract Title

An Evaluation of Dietitian Consult Practices Using the Malnutrition Screening Tool (MST) in Surgical and Medical Units at Nanaimo Regional General Hospital (NRGH)

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Abstract

Background: Before December 2018 the MST was a component of the Adult Admission History Powerform (AAHP) used at NRGH to identify patients at risk for malnutrition. Automatic consults were generated for patients at nutrition risk scoring 4-5 on the MST. It is unknown how frequently the MST was used or how it impacted the number of Registered Dietitian (RD) consults.

Objectives: To determine the frequency at which adult patients on acute care wards at NRGH were assigned an MST score at admission. To investigate how the MST was used at NRGH to involve RDs in patient care.

Methods: A retrospective chart review was conducted of 270 patients from NRGH medical and surgical wards discharged between February 1 and April 30, 2018 who were admitted for 48 hours or more. Data collected included demographics, presence of MST score and numerical value if taken, presence of a RD consult and if an RD was involved in patient care. Descriptive statistics were used to analyze data.

Results: 18.5% of all participants had an MST score. 54% of all participants were found to have a formal RD consult. A total of 20.4% of all participants had an RD involved in their care, 34.5% of these had an MST score. 8.1% of all participants had an MST score between 2-3, 27.3% of which had an RD involved in their care.

Conclusions: There is a low rate of RD consults based on the original build of the AAHP, which does not generate automatic consults for participants at nutrition risk scoring 2-3.

Significance to the Field of Dietetics: With the new build of the AAHP and improved nursing workflow any patient identified at nutrition risk will generate an automatic RD consult. Our findings will help to measure anticipated improvements based on the new build of the AAHP.

Abstract Title

Updating the Client Perceptions of Nutrition Counselling (CPNC) Instrument

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Abstract

Introduction: This project was to assess whether the Client Perceptions of Nutrition Counselling instrument (1994) remained relevant for nutrition counselling practice with the view to republishing the instrument. The CPNC instrument was developed as an evaluation method to gather client feedback about consultation with a dietitian, their perceptions of the effect(s) resulting from nutrition counselling including any diet changes, and to reveal unanticipated outcomes. The intent was that use of the CPNP would generate information to be used in decision-making about development or refinement of nutrition education programs from practitioner and management perspectives.

Objectives: Objectives were, through consultation with a panel of dietitians with expertise in clinical nutrition and service delivery decisions, to determine whether the instrument continued to be a relevant for dietetic research and practice, to assess content validity, and to articulate any modifications (considering that the instrument was developed before the digital era).

Methods: A facilitated discussion with the panel was to review the usefulness of the instrument in practice, and if relevant, to articulate revisions while retaining validity and reliability.

Results: The panel agreed that the instrument remained relevant to decision-making about practice. Revision suggestions were for using the instrument on digital platforms, and to add items to gather client suggestions for enhancing nutrition counselling.

Conclusion: Revisions to the CPNC instrument retain validity and reliability and ensure its ongoing relevance.

Significance to Dietetics: Documenting and using client perceptions of nutrition counselling outcomes yield research findings that support decision-making in practice and advocacy for nutrition counselling services.

Topic Area: Dietetic Practice and Education

Abstract Title

Barriers and Facilitators to the Implementation of Nutrition Care Process Terminology in Dietetic Practice

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Abstract

Introduction: The Nutrition Care Process is a well-known framework used in dietetic practice, focusing on systematic problem-solving to assist with the development of evidenced-based nutrition interventions (Atkins et al, 2011). Despite many benefits associated with this framework, there are numerous barriers to the successful implementation of nutrition care process terminology (NCPT) (Vivanti et al, 2015).

Objectives: The main research question was to assess the barriers and facilitators for implementing NCPT in dietetic practice. The secondary objective was to review current recommendations to improve support for NCPT implementation and evaluation.

Methods: A literature search was conducted from November to December 2018 using the following databases: PubMed, Scopus, and OVID Medline. The inclusion criterion was research focused on the implementation and/or evaluation of NCPT. Exclusion criteria included non-English articles and papers published before 2005 as this was the year that the Academy of Nutrition and Dietetics invited Canada to adopt the NCPT framework (Atkins et al, 2011). Studies were organized based on inclusion of NCPT implementation, evaluation, or both. Key barriers and facilitators to NCPT implementation and future recommendations were summarized.

Results: Twelve studies met the eligibility criteria. Main facilitators to NCPT implementation were project champions with change management experience and group-based learning. Low levels of support, time, and knowledge were identified as major barriers to NCPT implementation. Recommendations for improvements were ongoing training and education for registered dietitians (RDs) to improve the quality of their documentation, and additional research to evaluate the impact of NCPT on nutrition care outcomes.

Conclusions: Continual education is required to support RDs with effectively incorporating NCPT into their practice. Moreover, further research is warranted to justify the validity and reliability of NCPT application.

Significance to the Field of Dietetics: The present study may help enhance current NCPT implementation strategies and serve as a guide for subsequent research to evaluate the impact of NCPT on patient care.

Abstract Title

The Prevalence of Dyslipidemia in Patients Attending the Post Kidney Transplant Clinic at St Paul's Hospital

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Abstract

Background: Renal Transplant Recipients (RTRs) are at high risk of dyslipidemia. Elevated low-density lipoprotein (LDL) has been shown to be the most closely tied to Cardiovascular Disease (CVD) and therefore, dyslipidemia is defined by the Canadian Cardiovascular Society as an LDL value >2.0 mmol/L in high risk groups such as RTR's. The prevalence of dyslipidemia at St Paul's Hospital (SPH) RTR population has not been previously investigated.

Objectives: To describe demographic data and biochemical markers at 1 Year Post Transplant (YPT), percentage of RTRs with dyslipidemia over 1, 2, and 5 YPT, and the relationship between demographic or biochemical factors and dyslipidemia over 1 YPT.

Methods: A retrospective chart review was completed for SPH renal transplant recipients over 18 years old who were transplanted between January 1st, 1997 and July 31, 2018. Descriptive and comparative statistics were generated for the sample at 1, 2, and 5 YPT.

Results: The inclusion criteria were met by 796 patients. At 1 YPT, the proportion of RTRs with dyslipidemia was 79% (n=611) and remained constant 2 and 5 YPT. Groups with particularly higher risk of dyslipidemia prevalence include those with lower creatinine level of 40-110 mmol/L, white ethnicity, and females. Individuals with BMI <18 kg/m² showed the lowest prevalence of dyslipidemia at 1 YPT (50%, n=11) and 5 YPT (43%, n=14). Dyslipidemia within the remaining BMI groups appeared stable across each time point.

Implications & Conclusions: The prevalence of dyslipidemia in this population is consistent with the literature. Within the context of the population at SPH, this study was able to identify subgroups who demonstrate higher rates of dyslipidemia, who are at a higher risk of dyslipidemia, and who may need modified intervention. These conclusions may help renal transplant dietitians to screen for higher priority patients in clinic.

Abstract Title

Interdisciplinary approach to pressure injury care: A retrospective chart review of the involvement of Registered Dietitians (RD), Occupational Therapists (OT) and Physiotherapists (PT) in the care of residents diagnosed with pressure injuries

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Abstract

Introduction: Pressure injuries (PI) are a type of wound that commonly affect residents in long term care (LTC). Without proper care, a PI can greatly impact a resident's quality of life. Currently, there is no data on the state of interdisciplinary care (RD, OT and PT) being provided to residents living with a PI within Northern Health (NH) LTC facilities.

Objectives: To determine the current prevalence of PIs among residents living in Stuart Nechako Manor (SNM) and whether interdisciplinary care is being provided to residents diagnosed with a PI.

Methods: A retrospective chart review was conducted for residents living in SNM in 2017. Data collected from all residents included age, gender, presence of a PIs and whether they had any of the high-risk comorbidities associated with PIs, which are diabetes, peripheral vascular disease, cerebrovascular disease, hypotension and sepsis. The timeline of interdisciplinary care, such as days between diagnosis and referral, referral and consult and diagnosis and consult, was collected for affected residents. Data were analyzed using descriptive statistics.

Results: Of the 45 residents who met inclusion criteria, 6% (n=3) had a PI. Of all residents included, 67% (n=30) had no high-risk comorbidities, 29% (n=13) had one, and 4% (n=2) had two or more high-risk comorbidities. The most common high-risk comorbidity was diabetes mellitus (24%). 1 affected resident was consulted by an OT with regards to their PI with 264 days passing between diagnosis and consult.

Conclusions: The findings of this study show that interdisciplinary care in PI management at SNM is suboptimal. The lack of referrals and coordinated documentation of PI care highlights either a lack of knowledge among the team or the need for enhanced collaboration between disciplines.

Significance to the Field of Dietetics: RDs collaborate with OTs and PTs to minimize the risk for PI development and enhance wound healing through proper nutrition, equipment and mobilization plans.

Abstract Title

An impact evaluation: Bringing Active Living and Nutrition into your Childhood Everyday (BALANCE) program and nutrition education on parental efficacy and child health behaviour change

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Abstract

Introduction: BALANCE is a family-based pediatric obesity program that focuses on changes in health behaviours and outcomes rather than changes in weight and Body Mass Index (BMI). Family-based behavioural interventions are regarded as the first line of treatment for childhood obesity.

Objectives: To establish if the nutrition education components were effective in eliciting parental efficacy for healthy behaviours in their children; and, if changes in parental efficacy were associated with patient age, attendance rate, BMI and serum biomarkers of improved health.

Methods: Parental efficacy was measured using the online Parent Efficacy for Children Healthy Weight Behaviour (PECHWB) scale completed by the child's legal guardian pre and post program (summer 2017/18 - winter 2018/19). Changes in parental confidence levels were assessed by comparing the mean difference of pre and post scores; statistical significance was determined using the Wilcoxon signed-rank test. Patient's age at intake, attendance rate, and changes in pre/post BMI, lipid profile and fasting blood glucose were assessed using regression analysis to determine an association with changes in parental confidence.

Results: Forty participants were recruited; 20 completed the PECHWB questionnaire both pre- and post-intervention. Changes in confidence were statistically significant for two of six scale components: fruit intake ($p < 0.0438$) and limitations to screen time ($p < 0.0090$). There was no association between pre/post changes in PECHWB with the number of classes attended nor with changes in BMI or serum biomarkers.

Conclusions: The BALANCE program appears effective in eliciting parental efficacy for certain healthy behaviours in their children, yet no related associations were evident. The low PECHWB scale response rates warrant further review as an appropriate evaluation tool. A larger sample size is required for more conclusive results.

Significance to the Field of Dietetics: Similar interventions that address parental efficacy and positive behaviour change may be beneficial in the treatment of childhood obesity.

Topic Area: Nutritional Assessment and Therapy

Abstract Title

Beyond DASH: Examining the efficacy of the Mediterranean diet as a nutritional strategy for overweight or obese hypertensive children A systematic review.

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Abstract

Introduction: The Mediterranean diet (MedDiet) is believed to be one of the healthiest dietary patterns and is associated with reduced cardiovascular risk and better weight management. For these reasons, consideration for its use as a therapeutic option for primary pediatric hypertension (PPH) is warranted.

Objectives: a) to update research in PPH and b) to provide Registered Dietitians (RD) with evidence-based therapeutic guidelines for treatment.

Methods: A literature search, using Summons and PubMed databases, was conducted from November 2018 to February 2019 using the keywords: *hypertension, high blood pressure, overweight, obese**, *Mediterranean diet, child**, *adolescent**, *youth**. Additionally, a manual review of reference lists of each article was conducted. One hundred and thirty-six original research articles were considered. Including: English publications (2009-2019); specific reference to MedDiet; children, adolescents, and youth between 9-21 years of age; comorbidities including obesity, diabetes, and metabolic syndrome. Exclusion criteria: animal studies; use of MedDiet for medical conditions other than those stated above and adult studies. Twelve full-text articles were obtained and included in the review.

Results: In those with greater adherence to the MedDiet there is lower indices of arterial stiffness; prevalence of metabolic syndrome; lower BMI; visceral adiposity and obesity; lower BP; better lipid and blood glucose profiles and healthier metabolic profile overall.

Conclusions: Research supporting the use of the MedDiet as a therapeutic strategy for PPH remains limited. There is convincing evidence for cardiometabolic risk reduction and weight management with the inclusion of fruit and vegetables, whole grains, legumes, nuts and seeds, fish as well as olive oil, key components of the MedDiet.

Significance to Dietetics Practice: An RD-supervised nutrition care plan that focuses on the Mediterranean diet may prove to be an effective tool for overweight or obese PPH patients.

Abstract Title

Implementation and Evaluation of a Nutrition Risk Screening Tool in a Rehab Setting

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Abstract

Purpose: To implement a nutrition risk screening tool for all inpatient rehab units at Toronto Rehab Institute (TRI) and to complete a process evaluation on its use.

Process: A review of best practice indicates that systematic nutrition risk screening should be completed for all new admissions to ensure that no high-nutrition risk patients are missed (Mueller et al, 2011). An 'Identification of Nutrition Risk Level' screening tool was developed over 10 years ago at TRI in order to flag high risk patients to the dietitian. Due to inconsistent completion and accuracy, the need for a revised screening tool became evident.

Systematic Approach Used: An updated nutrition risk screening tool was informed and guided by the TRI Clinical Best Practice Process, which included needs assessment, review of present practice, literature review of best practice, and a gap analysis (McGlynn et al, 2010). The updated tool was adapted from the Canadian Nutrition Screening Tool and includes additional information regarding common reasons for dietitian intervention in rehab.

Conclusions: Nursing education was provided for 93 inpatient rehab nurses. Completion rates for new admissions improved from an average of 48% of the time to 87%. The accuracy of information on the completed tools also improved, from 50-80% to 90%.

Recommendations: Ongoing training and auditing is needed to sustain this change. Moreover, an outcome evaluation will be helpful to further understand the long-term impact of the tool on dietetic practice and patient care (Eglseer et al, 2019).

Significance to the Field of Dietetics: There are currently no validated screening tools developed for the rehab patient population (Marshall et al, 2016). The positive results observed from the present screening tool may help bridge the gap regarding systematic nutrition risk screening among rehab patients.

Abstract Title

Practice-based evidence in nutrition (PEN) knowledge pathway Should a plant-based dietary approach be recommended for overweight, hypertensive children?: A review and update of the literature

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Abstract

Introduction: The prevalence of obesity and hypertension in children and adolescents has increased significantly within the past few decades. Multiple studies have reported a healthier body mass index (BMI) and blood pressure in children/adolescents who adhere to plant-based diets compared to those that consume animal-rich diets. Further research needs to be conducted to explore the association between these variables in children

Objectives: (a) to provide Registered Dietitians (RD) with evidence-based therapeutic guidelines for treatment; And, (b) to update the literature on effective dietary treatments for overweight and hypertensive children/adolescents.

Methods: PEN for Healthy Weight/Obesity Pediatric was first consulted. Then, a full search of the literature was completed using PEN, Summons, PubMed and Scopus databases with keywords: *plant-based diet, vegan, obes**, *overweight, hypertension, blood pressure, children, and adolescents*. One hundred and ninety original research articles were considered. Inclusion criteria: English publications within the last 10 years (2009-2019); children and adolescents between 9-21 years of age; specific reference to plant-based diets; and the presence of overweight and/or hypertension. Exclusion criteria: presence of secondary overweight/obesity and hypertension. Seven full-text articles were obtained and included in the review.

Results: The literature supports an inverse relationship between the effects of a plant-based diet on overweight/obesity and hypertension in the pediatric population. Findings demonstrate lower indices of overweight/obesity and hypertension in children/adolescents who have a greater adherence to plant-based diets.

Conclusion: Research supporting the use of a plant-based diet as a therapeutic strategy for overweight/obesity and hypertension in children/adolescents remains limited. There is convincing evidence for weight management and hypertension reductions with the inclusion of whole grains, legumes, vegetables, fruits, nuts and seeds as found in a plant-based dietary pattern.

Significance to Dietetics: An RD-supervised plant-based diet nutrition care plan may prove to be an effective therapeutic approach for overweight, hypertensive children and adolescents.

Abstract Title

A description of patients with prostate cancer seen at BC Cancer at first oncologist visit

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Abstract

Background: Increased Body Mass Index (BMI) is associated with a higher risk of developing advanced prostate cancer and prostate cancer recurrence. There is evidence that diet and lifestyle counselling could be beneficial for prostate cancer patients. Currently, at BC Cancer (BCC), there are limited resources for preventative lifestyle and dietary counselling.

Objective: This study aims to describe prostate cancer patients seen at BCC for their first oncologist visit by BMI, comorbidities, medical history and demographic data, and also aims to identify how many received nutrition counselling from a BCC dietitian.

Methods: A convenience sample of all genitourinary cancer patients attending their first oncologist visit from January 1 to June 30, 2017 was generated using the Outcomes and Surveillance Integration System (OaSIS) database. Electronic charts and Nutrition Screening Tool forms (NST) were reviewed for all prostate cancer patients (n = 125) in this sample, and the data was analyzed using descriptive statistics.

Results: The distribution of BMIs was 23% (n =29) normal weight (18.5-24.9), 39% (n=49) overweight (25.0-29.9), 24% (n=30) obese (> 30) and 12% (n=15) unknown. The majority of patients had cancer localized to the prostate gland (87%, n = 109) and were recommended curative treatment (69%, n = 86). 80% (n = 100) of patients had at least one comorbidity. BCC dietitians saw 2 of 125 patients in this study for nutrition counselling.

Implications and Conclusions: The BMI distribution in this study was similar to the general population in BC. There remains a role for dietitian involvement given the high prevalence of comorbidities in combination with curative treatments with nutritionally relevant side effects.

Significance to the Field of Dietetics: The findings of this study will provide insight into the prostate cancer population in BC and contribute to the evidence needed to identify gaps in dietetic practice.

Topic Area: Research Methodologies

Abstract Title

The message writing process behind SmartAPPetite, a smartphone application for improving food knowledge and dietary behaviours among high school adolescents.

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Abstract

Purpose: Poor dietary behaviours in adolescence can carry into adulthood and contribute to the development of chronic disease; consequently, adolescence is a critical time to establish healthy dietary habits. Since the majority of adolescents own smartphones, smartphone-based interventions to improve food knowledge and dietary behaviours are a logical approach. The objective of this abstract is to describe the message-writing process that was developed to ensure consistent, evidence-based nutrition messages for a smartphone application.

Process: SmartAPPetite is a multidimensional application that sends messages to help users make healthier choices. It was developed through an interdisciplinary collaboration with an overall goal of improving food knowledge, food purchasing, and diet quality of adolescents.

Systematic Approach Used: A database of over 1000 messages was created with a range of nutrition and lifestyle topics, such as sports nutrition, eating away from home, information about specific nutrients, seasonality and origin of foods, and how to choose, prepare, and store various fresh food items. A Youth Advisory Council of high-school students assisted with the selection of topics and assessing the relatability of messages. A writing guide was created and used to standardize the messages which included dietitian-approved sources to gather nutrition information. Messages were written by undergraduate and masters level nutrition students, edited by senior writers, and approved by dietitians. Using program algorithms, SmartAPPetite selected messages from the database according to the user's age, sex, and reported dietary preferences. User feedback also allowed the app to continually adjust message selection algorithms.

Conclusions: SmartAPPetite messages have undergone a thorough planning, writing, editing, and approval process to ensure users are provided with evidence-based, expert recommended nutrition and lifestyle messages.

Recommendations: A systematic approach must be used to ensure nutrition and healthy lifestyle messages are of high-quality and evidence-based.

Significance to Field of Dietetics: Nutrition-related smartphone applications have the potential to reach a large proportion of Canadian adolescents and enhance dietary behaviours.

Funding: Canadian Institutes of Health Research (CHIR), Heart & Stroke Foundation

Topic Area: Nutrition and Health Education

Abstract Title

Recette pour réussir des ateliers culinaires: concertation et collaboration

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Abstract

Purpose: Le développement de compétences culinaires constitue une piste d'action prometteuse pour favoriser l'acquisition de saines habitudes alimentaires chez les enfants (Coalition Poids, Santé Canada). Plusieurs services de garde scolaires et certains enseignants réalisent des ateliers culinaires. Le guide pratique *Recette pour réussir des ateliers culinaires* a été conçu pour les soutenir, améliorer la planification et l'organisation des ateliers, et favoriser une animation interactive pour ultimement optimiser les apprentissages des enfants.

Process: *Recette pour réussir des ateliers culinaires* est issu du projet Écoles enracinées, lequel visait à augmenter la présence des fruits et légumes locaux dans les écoles. Cinq partenaires ont uni leurs expertises pour concevoir cet outil et l'adapter au contexte des camps d'été.

Systematic approach used, including supporting information, Étapes de la conception du guide:

- Recension des contenus et ressources existants
- Structuration et rédaction du contenu
- Mise en page et graphisme
- Révision par des pairs et des intervenants du milieu scolaire et ajustements
- Projet pilote dans trois milieux et ajustements
- Traduction
- Impression
- Lancement
- Évaluation de l'adaptabilité au contexte des camps d'été
- Adaptation au contexte des camps d'été

Conclusions: La concertation et la collaboration de partenaires ont permis d'assurer la richesse et la validité des contenus. La connaissance du milieu et de ses besoins a mené à la création d'un outil adapté qui connaît du succès.

Recommendations:

- La recension des ressources et outils existants était essentielle afin de ne pas réinventer la roue et d'identifier les partenaires à impliquer.
- Le projet pilote a permis des ajustements pertinents et un meilleur arrimage de l'outil à la réalité des écoles. Une évaluation plus approfondie est prévue en 2019-2020.

Significance to the field of dietetics:

- L'implication de diététistes a permis de démontrer leur pertinence dans un travail interdisciplinaire et de terrain, et d'assurer la crédibilité de l'outil.

Projet financé par : Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ), Système alimentaire montréalais, Les Producteurs laitiers du Canada

Topic Area: School Nutrition

Abstract Title

Nourishing Young Minds: An Evaluation of the Nutritional Quality of the Elementary School Nourishment Program at New Westminster Schools.

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Abstract

Introduction: Children who suffer from hunger are more likely to have poor academic performance and cognitive development. New Westminster Schools (NWS) has been offering a subsidized lunch program, the School Nourishment Program (SNP). This program was redesigned in January 2019. The nutritional quality of the menus previous to 2019 has not been evaluated.

Objectives: To evaluate the nutritional quality of the SNP lunch menus in NWS prior to the program redesign and to determine if the menus meet the recommendations from the BC School Meal and School Nutrition Program Handbook (SMSNPH).

Methods: Three SNP schools were approached to provide menus and recipes for a retrospective menu review. Each menu day was analyzed for the number of food groups served, whether there was a vegetarian option, and the frequency with which fish, juice, processed meats, and other foods were offered. Menus were assessed based on the SMSNPH.

Results: Of the participating schools, one was able to provide a 37-day menu for analysis. Thirty menu days (81.1%) provided all four food groups. While a vegetarian option was available every day, fish was only offered once (2.7%). Other foods and processed meats were served on 9 (24.3%) and 11 (29.7%) menu days, respectively. Juice was the only source of fruit and vegetables on 9 (24.3%) menu days. Standardized recipes were not available for in-depth nutritional analysis.

Conclusion: The majority of the days, the SNP met the SMSNPH recommendations for food groups and vegetarian options. However, processed foods should be reduced, and whole fruit, vegetables, and high-quality proteins could be provided more often to optimize the nutritional quality of meals.

Significance to the Field of Dietetics: Our research supports the redesign and future evaluation of the SNP with the goal of optimizing nutrition and promoting the health of future generations.

Topic Area: Vulnerable Groups and their Nutritional Needs

Abstract Title

A description of nutrition status, using Subjective Global Assessment on the patient population followed by the Urban Health Dietitian at St. Paul's Hospital.

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Abstract

Introduction: An average 45% of acute care patients in Canada are malnourished, increasing with length of stay (LOS). Patients of the Urban Health dietitian (UHD) at St. Paul's Hospital (SPH) in Vancouver have high incidence of Human Immunodeficiency Virus (HIV), infectious disease (including Hepatitis C (HCV)) and substance use disorders, which are well-known to decrease nutrition status (NS).

Objectives: To describe: (1) demographics of patients followed by the UHD at SPH; and, (2) patient NS upon admission and over their LOS, using Subjective Global Assessment (SGA) scores and parameters. **Methods:** A retrospective chart review of patients admitted between March 29 to October 12, 2018 was completed. Data compiled using descriptive analysis included demographics (age, sex, housing, HIV and HCV status), parameters from SGA (intake, weight changes, symptoms affecting intake, functional capacity, metabolic requirement, physical examination, and contributing factors (cachexia and sarcopenia)), initial SGA scores and subsequent weekly scores.

Results: Of n=193, 80% were 35-64 years, 72% male, 63% HIV+, 17% homeless and 66% HCV negative. Upon initial assessment, 77% had inadequate intake, 85% high metabolic needs, 60% were malnourished (SGA B or C) and 70% had muscle loss (25% severe). Of patients who were severely malnourished (SGA C), 97% were HIV+. Considering LOS (n=100), over 90% of malnourished patients (n=52) improved NS in 1.8 weeks. Following dietitian intervention, 71% of patients were well-nourished, a 31% increase from admission. HCV and homelessness had minimal significance on NS.

Conclusion: This study highlights the importance of using SGA to assess NS and impact of dietitian intervention in this population (specifically those with HIV), which had a 15% higher incidence of malnutrition than the Canadian average.

Significance to the Field of Dietetics: This multi-morbidity population shows increased incidences of malnutrition. Continuation of early screening and dietitian intervention for HIV+ patients should be emphasized to improve NS.

Abstract Title

The relationship between weight-related behaviours and sleep characteristics in a sample of Canadian university students: Implications for dietitians

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Abstract

Introduction: Sleep insufficiency, particularly among adult postsecondary students, is a major public health problem and is associated with a multitude of poor health outcomes including weight gain and obesity-related comorbidities.

Objectives: This study explored relationships between sleep characteristics (e.g., sleep quality and duration) and weight-related behaviours (e.g., diet, physical activity, weight challenges) in a sample of undergraduate students in Oshawa, ON.

Methods: Using a cross-sectional design, participants completed an on-line survey about their eating, sleep, and physical activity behaviours, along with sociodemographic characteristics and self-reported height and weight.

Results: Participants (n=257) were on average 23 years of age and female (83%), with the majority being full-time students (92%). Most participants had a healthy body weight (BMI: mean 24.58 SD 5.55) and low physical activity levels (65%). Mean Global sleep score was 7.4 (SD 3.3) indicating poor overall sleep quality (mean score ≥ 5); however, most participants self-reported having very or fairly good (65%) sleep quality in the past month. Poorer sleep quality was associated with a higher BMI ($r=.265$, $p<0.001$) and those that reported longer sleep duration (<7 hr or ≥ 7 hr) had higher odds of reporting higher internal eating regulation (OR 1.15 [95% CI: 1.01, 1.32], $p<0.05$).

Conclusion: Although most students (65%) report having very or fairly good sleep quality, the mean global sleep score of 7.4 was higher than the cut-off of 5 indicating poor sleep quality. Inadequate sleep was also associated with daytime sleepiness, less daily fruit and vegetable consumption and poor internal regulation in eating competence (i.e., attention and responsiveness to cycles of hunger, appetite, and satiety).

Significance to the Field of Dietetics: Findings highlight the need for dietitians to evaluate sleep behaviours as part of their nutritional assessments and care plans. Capacity-building strategies are called for to strengthen dietitians' capacities in this emerging area.

Funding: Canadian Foundation for Dietetic Research

Abstract Title

Bone Broth: A Sustainable and Cultural Friendly Food Item in Hospital Food Services

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Abstract

Introduction: The goal of the project was to educate the kitchen staff of Whitehorse General Hospital (WGH) on the nutritional and environmental benefits of making homemade bone broth from recycled ingredients in order to help reduce food waste. Furthermore, we drafted a policy and procedure document for future reference.

Objectives: As part of our management internship, we carried out a project to implement a new local item on the menu. The WGH Foodservice wished to serve its patients a homemade bone broth to replace the existing broth to offer a more nutritious choice and satisfy the needs of First Nations patients. In addition, the bone-based broth will be prepared with more eco-friendly practices with an eye on waste reduction.

Methods: Our systematic approach included the following steps: Investigating the nutritional and environmental benefits of bone broth and writing the procedure and the policy in order to guide future implementation and production. The project was set up within the WGH Foodservice.

Results: The broth has been entered into the Foodservice computer system. It is offered to patients on a "Clear Fluid" diet and also in the cafeteria for visitors. The patient reception to the product has ranged from overwhelmingly positive to rather lukewarm due to its lower salt quantity relative to the bouillon it is replacing. Changes in the recipe might occur over time for improvement.

Conclusions: It would be interesting to evaluate the projects impact over time on reducing the amount of organic waste produced. Hospitals across the country should add bone broth to their menus, especially in First Nations areas. This project is significant to the field of dietetic because it offers a more nutritious option to patients, it reduces food waste in foodservices, and it satisfies First Nations cultural needs.

Topic Area: Technology and Food Selection, and Food Safety

Abstract Title

Using web-based software solution to maintain resident nutrition profiles and offer table side ordering in long term care to enhance resident dining experience and create efficiency.

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Abstract

Purpose: Research identifies that the biggest challenge with providing nutrient-rich foods in long-term care is the limited budget for raw food in combination with rising food prices. We are using innovation in technology to address malnutrition and limited raw food cost budget in long term care.

Summary of Content: Marquise hospitality developed Bridge software for management of resident nutrition profiles and meal service which was piloted at a 150-bed long term care home. This software enhanced the resident meal experience in 3 ways:

1. The use of digital pictures instead of show plates minimized food waste, delivering savings of ~\$20,000 per year and enabling improved menu options with greater focus on local fresh products and special themes.
2. Bridge software interfaces with our menu management system ensuring meals offered are based on resident's diet, allergies, and dislikes, minimizing risk and enabling person centred approach to meal service.
3. The table side orders obtained by the nursing staff are visible on the dietary screen in real time with diet order, allergies and preferences. This enables staff to plate the food accurately and serve quickly and efficiently.

Conclusions and Recommendations: The successful implementation of the pilot is a good example of residents, families and staff embracing technology to enhance the meal service experience of the residents in long term care while reducing food waste and improving menu options. Further advances in technology can enable us to monitor food and fluid intake of residents more accurately and increase efficiency in service allowing more time for staff to offer residents needed assistance with eating.

Significance to the Field of Dietetics: Bridge allows the nursing and dietary staff to offer meals to residents ensuring resident preferences are met, which may improve food intake and minimize risks associated with inappropriate texture or allergen exposure.

Funding: Compass Group Canada

Abstract Title

Evaluation of mobile apps that promote health behaviour change. Can these be adapted for use in dietetic practice in Newfoundland and Labrador?

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Abstract

Purpose: To identify current mobile health (mHealth) promoting technologies and cultivate a summary of recommendations for the development of a mobile application intended to support individuals with healthy eating behaviour change within Newfoundland and Labrador (NL).

Process or Summary of Content: A selection of mHealth apps that emphasize weight and calorie counting are presently available. Research is limited on their accuracy, success, and long term usefulness. Furthermore, these apps have minimal focus on healthy eating and behaviour change. Individuals are more likely to be successful making positive dietary changes when they are able to identify their goals via a client-centered approach. mHealth apps can motivate and support clients, resulting in improved self-efficacy with achieving personalized goals.

Systematic Approach Used, including supporting information: An environmental scan and analysis of existing technologies (i.e. mobile apps, websites, etc.) that focus on health promoting behaviors was searched using CADTH, PubMed and Google Scholar. A literature review was conducted on motivation and other factors influencing behaviour change. Consultation with national, provincial, and local stakeholders provided qualitative data pertaining to the feasibility and level of interest in the development and implementation of this type of technology.

Conclusions: At present there are limited applications available that meet the needs of the individual while supporting the work of dietitians. Introducing a mHealth application into dietetic practice in NL is a cost-effective method to improve healthy eating and enhance dietetic services province wide.

Recommendation: It is recommended that the government of NL invest in the development of a mHealth application tailored to support dietetic practice and individuals who are working to improve their eating behaviour.

Significance to the Field of Dietetics: The findings have been translated into recommendations for the development and implementation of a mHealth application targeted at improving healthy eating within NL. This technology will foster a client-centered approach to behaviour change related to healthy eating.

Topic Area: Food Security

Abstract Title

Effects of a Combined Horticulture and Peer-Led Nutrition Education Intervention on Diet Diversity and Food Related Practices among Rural Kenyan Women One-Year Post Intervention

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Abstract

Introduction: Horticulture interventions in developing countries are most effective in improving micronutrient malnutrition when combined with nutrition education, although there have been few studies assessing their long-term impact. In 2017, a peer-led nutrition education and horticulture intervention was implemented in a women's group in Eastern Kenya which focused on introducing food related practices aimed at increasing micronutrient intakes; a comparison group received no intervention. While we found that the intervention group had higher diet diversity (variety) and was more likely to adopt recommended food related practices such as adding orange and green vegetables to staple foods immediately after the intervention (reported elsewhere), it is not known if these positive changes are retained in the longer term.

Objective: To assess the impact of a combined horticulture and peer-led nutrition education intervention on diet diversity and food related practices among rural Kenyan women from post-intervention (2017) to 2018.

Methods: Food related practices were assessed one year after the intervention (2018) using a questionnaire during home interviews; a 24-hour recall and a standardized food coding method was used to assess diet diversity. Diet diversity scores and practices were compared between 2017 and 2018 for the intervention (n=29) and comparison group (n=19) using Wilcoxon rank sum and chi square tests.

Results: Diet diversity scores were significantly higher in 2018 than in 2017 for the intervention group (p=0.025). All recommended food related practices were maintained from 2017 to 2018 except for adding an orange vegetable to mukimo, a starchy vegetable dish, which was significantly lower (p=0.01). There were no significant differences in practices among women in the comparison group from 2017 to 2018.

Conclusions: Results suggest that in women receiving a combined nutrition and horticulture intervention, improvements in healthy food related practices and diet diversity were sustained one-year post intervention suggesting that they may be effective in the long term.

Funding: Queen Elizabeth Scholarship

Topic Area: Dietary Assessment

Abstract Title

Breakfast quality and its association with cardiometabolic risk factors: a population-based study

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Abstract

Introduction: Breakfast consumption contributes to healthier diets and control of non-communicable diseases risk factors. Its structure can vary with different foods, and consequently, different nutritional qualities. In this context, breakfast quality indexes come as quantitative tools to evaluate breakfast nutritional quality. However, few studies have been conducted to evaluate their associations with health outcomes.

Objective: To evaluate the breakfast nutritional quality using the Brazilian Breakfast Quality Index (B-BQI) and its association with cardiometabolic risk factors in residents of São Paulo city, Brazil.

Methods: Data came from the 2015 São Paulo Health Survey, a cross-sectional population-based study whom evaluated a multiethnic sample of 606 adults and 537 older adults living in São Paulo city. The breakfast quality was evaluated considering 24-h recalls and were classified in scores ranging from 0 to 10 according to B-BQI. B-BQI associations with cardiometabolic risk, demographic, socioeconomic and lifestyle variables were determined using multiple logistic regression models adjusted for the complex sampling design.

Results: Individuals in higher categories of household income, educational level, age, with racial self-identification as white, who never smoke, and meet the recommendation of leisure-time physical activity had higher breakfast quality. Higher scores of B-BQI was negatively associated with 6 of the 9 cardiometabolic risks factors investigated (elevated blood pressure, total cholesterol, LDL-c, fasting glucose, excess body weight, and metabolic syndrome), with odds ratios ranging from 0.78-0.87 (p-value<0.05). Results remained significant after adjustments for Brazilian Healthy Eating Index (B-HEI).

Conclusion: Breakfast quality was associated with lower odds of cardiometabolic risk factors, suggesting a beneficial effect in this population.

Significance to the Field of Dietetics: To our knowledge, this was the first study to identify the cardiometabolic protective effects of a quality breakfast among a multiethnic sample of Brazilian adults. These findings could support future interventions and policies for optimal meals consumption in Brazil.

Funding: São Paulo Research Foundation (FAPESP) and Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES)

Topic Area: Professional Development

Abstract Title

Perceived knowledge, skills, attitudes and barriers of Northern Ontario Dietetic Internship Program (NODIP) preceptors and preferred modes of training

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Abstract

Introduction: Dietetic preceptors guide students' education and assess their performance during supervised practicums, a compulsory step to becoming a registered dietitian (RD) in Canada. The NODIP is a uniquely distributed model with three principal teaching hubs and over 20 communities who annually support interns. In 2018, NODIP celebrated its 11th graduating class; 74% work in the north and support the internship.

Objectives: 1) Determine the perceived knowledge, skills, and attitudes of NODIP preceptors; 2) Identify barriers to precepting NODIP interns; and, 3) Identify training needs and preferred training modes of NODIP preceptors.

Methods: A 17-item online survey (Qualtrics[®]) with Likert scale and open-ended questions adapted from a previous evaluation was distributed by email to 200 eligible NODIP preceptors in January 2019. Quantitative data analysis was completed with Microsoft Excel[®] using pivot tables. Open-ended questions were thematically organized. Ethical approval was received from Lakehead University.

Results: The response rate was 51.5% (n=103), with over half (56.2%) from clinical or public health settings, and one third (33.0%) having practiced for 6-10 years. The majority rated themselves good or excellent in professionalism (99.0%) and time management (91.3%). Excess workload, unsupportive work environments, and lack of compensation were common barriers through open-ended comments. Learner evaluation strategies, including giving and receiving constructive feedback; and, fostering critical thinking were identified as the top training needs (67.0% and 65.0% respectively). The majority (81.5%) would like to see training models explored; preferred modes of training were face-to-face (38.1%), online (34.5%), and videoconferences (27.4%).

Conclusions: These findings are consistent with current literature, and successfully identified areas for further research to improve the internship experience for learners and preceptors.

Significance to the Field of Dietetics: Results will guide future NODIP preceptor training initiatives as well as recruitment and retention efforts and can inform Canadian dietetic practicums on preceptor improvement.

Topic Area: Nutrition and Health Education

Abstract Title

An evaluation of a nutrition training program for mental health workers in Atikokan and the District of Thunder Bay, Ontario.

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Abstract

Introduction: There is growing evidence that nutrition plays important roles in the prevention, development, and management of diagnosed mental health conditions. Mental health promotion is a mandated public health service in Ontario. In response to community requests, a nutrition training program for mental health workers (MHWs) was developed in fall 2018 and piloted January 2019.

Objectives: To determine if the training program increased MHWs' nutrition knowledge related to mental health and increased their nutrition education confidence when working with clients.

Methods: Ninety-minute training sessions (n=4) were conducted with a total of 40 MHWs. An online pre- and post-training survey (SurveyMonkey®) which included Likert scales were used to assess MHWs' knowledge on nutrition and confidence discussing nutrition topics. Open-ended questions explored topics such as participants' intent and success with integrating knowledge into practice. Quantitative analysis was completed using Microsoft Excel®, and open-ended question responses were thematically analyzed; no significance testing was done.

Results: Twenty-five participants completed both the pre- and post- training surveys. There was improved knowledge related to mental health conditions and nutrition (44% to 100% pre-and post-training respectively) with increased confidence (56-96% pre-and post-training respectively) related to discussing nutrition with clients and referring to registered dietitians (RDs) (44% to 88% pre-and post-training respectively). All respondents felt the training would be useful in their work and wanted more in-depth information as well as information specific to vulnerable populations such as First Nations in remote communities.

Conclusions: Post survey results indicated training sessions increased nutrition knowledge and MHW confidence to provide nutrition education. Feedback will inform revisions. Additional implementation and evaluation in a variety of different settings is needed.

Significance to the Field of Dietetics: By providing nutrition training to MHWs, the role of RDs can be recognized in the treatment of mental health conditions and improve quality of care.

Abstract Title

Development, Implementation and Evaluation of a Teaching Kitchen at an Acute Care Hospital

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Abstract

Background: A literature review was conducted to determine self-perceived food skills and cooking confidence among Canadians. A need for nutrition education and hands-on food instruction was identified. Literature shows that behaviour change has the greatest impact on increasing nutrition literacy and that people learn best and retain more when their learning experience is hands-on.

Objectives: To pilot and evaluate the implementation of the Teaching Kitchen (TK), an interactive platform to explore food, learn about nutrition, elicit behaviour change and enhance participants cooking skills within a hospital setting.

Methods: A 60-minute 'pop-up' style TK was organized each week and included a food skills demonstration; hands-on recipe preparation; a nutrition education talk lead by the dietitian; and discussion period. Class curriculum, recipes, equipment lists, and small wares order guides were developed by Compass One dietitians and chefs to help address this need. The first TK class was piloted with executive senior hospital staff in order to promote the program within Compass One hospitals and engage VIPs before opening the program to community members.

Results: Feedback from the classes show that the TK pilot has been well received by hospital staff and community members. Results from 100 attendees show that overall class experience was rated 4.81/5.00, 99% of participants would recommend the TK to a friend and 85% said classes were "just right" for their skill level. Positive feedback included: learning new skills, trying new foods and hands-on experience.

Conclusions: Successful implementation of the pilot proves opportunity for growth of the TK and expansion to partner with outpatient programs in acute care hospitals and the community.

Significance to the Field of Dietetics: Cooking at home leads to better health outcomes. This innovative approach to nutrition education helps to impact behaviour change, improves food skills and inspires others to cook more in their homes.

Funding: Compass Group Canada

Abstract Title

Describing the Nutrition Knowledge Tool used to evaluate changes in adolescent nutrition knowledge following a smartphone-based nutrition intervention, SmartAPPetite

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Abstract

Purpose: To describe the selection and modification of the tool used to evaluate the effect of a smartphone application in improving nutrition knowledge amongst adolescents.

Summary of content: Diet quality tends to sharply decrease during adolescence and remain low into adulthood. Due to their ubiquity amongst adolescents, smartphone applications may be a convenient and relatively low-cost approach to influence behaviour. In studies examining use of mobile applications to improve nutrition outcomes, only one reported knowledge outcomes. SmartAPPetite is a smartphone application designed to provide evidence-based, dietitian-approved food and nutrition-related messages to improve dietary behaviours.

Systematic approach: Currently there are no validated tools to measure nutrition knowledge in English-speaking Canadians. Our 51-item Nutrition Knowledge Tool was modified from Parmenter and Wardle's 2016 revised validated Nutrition Knowledge Questionnaire. Though originally developed in the UK, the questionnaire was modified to make appropriate for the Canadian adolescent population. It consists of questions regarding dietary recommendations, nutrient sources, food labelling and diet-disease relationships; topics discussed within SmartAPPetite. The tool will be completed at baseline, 10 weeks post-intervention and 4 months post-intervention, distributed via Qualtrics, an online survey software. Nutrition knowledge is measured as a cumulative score determined by the correctness of answers; each correct answer is given a score of 1 and all scores are summed for a final score ranging from 0 (no nutrition knowledge) to 51 (high nutrition knowledge).

Conclusions/Recommendations: Research is underway using the Nutrition Knowledge Tool to assess potential changes in nutrition knowledge resulting from the SmartAPPetite intervention.

Significance to the Field of Dietetics: The Nutrition Knowledge Tool has the potential to assess efficacy of nutrition education programmes. It can shed insight on levels of nutrition knowledge in the Canadian adolescent population, which can be used to address gaps in nutrition education and ultimately provide evidence for public health efforts necessary to improve dietary habits.

Funding: Canadian Institutes of Health Research (CIHR), Heart & Stroke Foundation, Children's Health Foundation

Abstract Title

A needs assessment and environmental scan to inform Culinary Medicine Lab (CML) curriculum to increase nutrition competence of medical graduates at the Northern Ontario School of Medicine (NOSM)

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Abstract

Introduction: Nutrition curriculum is inadequate in most medical schools including NOSM. Culinary medicine combines food literacy with clinical nutrition for medical trainees. Six CMLs aligning with NOSM's Year 1 curriculum were piloted on Sudbury and Thunder Bay campuses (September 2018-April 2019). Future integration requires tailored content.

Objectives: Determine the nutrition-related knowledge, attitudes, and education needs of NOSM medical students; and, identify relevant resources to inform an evidence-based CML curriculum model.

Methods: Phase 1 students (n=128) were invited to complete a voluntary 15-item online survey using Qualtrics[®] assessing current nutrition-related attitudes, knowledge, and perceptions. Results were analyzed using Microsoft Excel[®] and pivot tables; open-ended responses were thematically analyzed. The CMLs were optionally attended by up to 24 students; individual evaluations assessed learning and confidence related to nutrition, food skills, and nutrition competence as future physicians. An environmental scan was conducted using PEN[®], PubMed, and targeted websites. Key search terms related to nutrition, undergraduate medical education, and registered dietitians' (RDs') roles in numerous chronic conditions. Results were appraised using a tool adapted from the National Collaborating Centre for Methods and Tools.

Results: The survey yielded 28 responses; half were first-year students. Many (61%) felt unable to provide brief nutrition intervention counselling. Most (79%) were unsure how to refer to RDs. Post-CML evaluations showed they were effective; learning objectives were met for each session and increased students' nutrition knowledge and competence. The environmental scan generated over 70 sources, the majority adaptable for components of a Canadian CML model (student learning tasks, case studies, lectures, integrated clinical skills, references, etc.).

Conclusions: The needs assessment, environmental scan, and appraisal along with 2018-19 CML student evaluations supported the development of an evidenced-based CML curriculum at NOSM.

Significance to the Field of Dietetics: This innovative model can enhance nutrition curriculum and roles of RDs in medical education.

Funding: Nutrition and Medicine Interest Group at Northern Ontario School of Medicine

Topic Area: Clinical Research (Including Outcomes of Intervention)

Abstract Title

Body composition assessment and nutritional status evaluation in Tunisian children

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Abstract

Background/Objectives: The study of body composition is an important step in the evaluation and assessment of nutritional status. This study aims to evaluate the body composition of children by two techniques impedancemetry and deuterium oxide dilution (D₂O) and to determine the correlation between nutritional status, socio-economic level and dietary habits.

Subjects/Methods: This study was carried out in 156 schoolchildren aged between 8 and 11 years. The children received interrogation specifying lifestyle and food habits. We conducted the study of body composition using two techniques: the technique of impedance and D₂O technique.

Results: The results showed a difference between the percentage of obese and overweight children according to the BMIZ classification (30.1%), the impedance technique (14.7%) and the D₂O technique (42.9%). Despite the difference between the last two classifications, we found a significant correlation between body fat percentages determined by impedancemetry and D₂O technique ($r = 0.695$). There was no observed association of obesity with socio-economic level since the majority of overweight/ obese children (73.1%) were of middle socio-economic class. The study of eating behavior has shown frequent consumption of sugary foods and fast foods. However, no significant correlation was found between the overweight /obesity status and eating habits.

Conclusion: This study has demonstrated that the prevalence of overweight and obesity varied according the methods used. Thus, it would be interesting to use the technique of isotopic dilution as a reference technique for the real determination of the obesity prevalence and therefore a better monitoring of this public health problem.

Funding: International Atomic Energy Agency

Topic Area: Undergraduate Education and Dietetic Internship

Abstract Title

A Secondary Analysis Describing the Nutritional Adequacy of 6 Different Therapeutic Diets in Kelowna General Hospital and Royal Inland Hospital

Mandy Kennedy, Haeli Draper, Abby Hsiao, Violet Liao, Kelsey Moore, Katie Tsoupakis

Abstract

Purpose: In Canada, 45% of patients admitted to hospital have poor nutritional status due to poor intake. This study aims to determine if diets provided by two tertiary hospitals meet the Daily Recommended Intakes (DRIs) for calories and protein for adults and what proportion of patients are on each of these selected diets.

Methods: The study team collected menus for six diets from Kelowna General Hospital (KGH) and Royal Inland Hospital (RIH) and compared the mean calorie and protein values to Health Canada's Estimated Energy Requirement (EER) and Recommended Daily Allowance (RDA) for adults. CBORD® and Excel® were used to organize and analyze the data. Total number of patients admitted in October 2018 and patients on each of the six diets was analyzed.

Results: The six diets analyzed made up 47.02% of all menus at KGH and 48.02% of all menus at RIH in October 2018. Menus at both sites met the DRI for protein for females and males except the General Pureed with Nectar Thick Fluids. Only the High Protein High Calorie, Regular menu met all EERs for females across all age categories and for males, except for males aged 19-30 at KGH.

Conclusion: Most of the six diets at RIH and KGH meet protein needs for females and males, but do not provide enough calories to meet the needs of hospitalized patients. However, these results are compared to Health Canada standards and hospitalized patients require more protein on average than the general healthy population due to factors such as wounds, burns, trauma, infection and cancer. Thus, hospitalized patients on one of these six diets are likely not being provided with adequate protein to meet their nutritional needs. This puts patients at risk for prolonged length of stay and increased chance of readmission within 30 days.

Topic Area: Wellness and Public Health

Abstract Title

Examining the impact of numeric versus traffic light calorie labelling at the point-of-purchase on young adults' food and beverage purchases

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Abstract

Introduction: There is substantial interest in calorie labelling in restaurants and fast-food chains, with some jurisdictions mandating *numeric* labelling (e.g., 250 calories per serving). At the same time, Health Canada is considering front-of-package labels with potential implementation of *interpretive* symbols, such as traffic light labelling (TLL), for packaged foods and beverages. Despite high policy interest, there is limited evidence from naturalistic settings on the impact of numeric and interpretive labelling on point-of-purchase food and beverage purchasing decisions.

Objectives: The objective of this study was to examine the impact of numeric versus interpretive calorie labelling on consumer noticing, perceptions and use of labels, and food and beverage purchasing decisions.

Methods: Using a pre-post intervention design, three residence cafeterias at the University of Waterloo were randomized to receive numeric, TLL (i.e., red, amber, or green symbol, also indicating the number of calories), or no calorie labelling for 2 weeks. Exit surveys were conducted with cafeteria patrons prior to (n=949) and following (n=1110) implementation of labels.

Results: Following implementation, approximately 40% of participants exposed to the numeric labelling condition reported noticing any nutrition information, compared with 55% of those exposed to TLL. In the TLL condition, 58% reported they had observed symbols and 48% recalled numbers. Further, 62% and 49% of respondents who noticed TLL and numeric labels, respectively, reported they used the labels to inform their purchasing decisions.

Conclusions: Preliminary findings suggest that noticing and use was higher for TLL versus numeric labels, though even in the TLL condition, numeric information appeared salient. Further analyses will examine purchasing patterns prior to and following implementation of labels compared to the control condition.

Significance to the Field of Dietetics: This study will inform jurisdictions considering nutrition labelling on menus and arm dietitians in positioning such interventions within a broader strategy for supporting healthy and sustainable eating.

Funding: Canadian Foundation for Dietetic Research and supported by an Ontario Ministry of Research and Innovation Early Researcher Award held by Sharon Kirkpatrick.

Abstract Title

Association entre le statut linguistique et les pratiques alimentaires de mères noires de descendance africaine et caribéenne résidant à Ottawa

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Abstract

Introduction: Au Canada, les francophones en situation minoritaire présentent des déterminants sociaux de la santé défavorables. Par exemple, les francophones en situation minoritaire ont de plus faibles revenus et sont moins scolarisés que les anglophones, ce qui pourrait influencer leurs pratiques alimentaires parentales, telles la restriction et la pression à manger. Ces pratiques alimentaires quant à eux influencent les habitudes alimentaires et le statut pondéral des enfants.

Objectif: Étudier l'association entre le statut linguistique et les pratiques alimentaires de mères noires résidant à Ottawa.

Méthodologie: Nous avons recruté 191 mères noires de descendance africaine et caribéenne habitant à Ottawa et leur enfant de 6-12 ans. La « première langue officielle parlée » des mères a été utilisée pour déterminer leur statut linguistique. Les pratiques alimentaires des mères ont été évaluées à l'aide du Child Feeding Questionnaire. Des analyses bivariées ont été effectuées pour évaluer l'association entre le statut linguistique et les pratiques alimentaires des mères.

Résultats: Soixante-deux pourcent des mères étaient francophones en situation minoritaire. Ces dernières utilisaient davantage de pratiques de restriction ($p < 0.001$) et de pression à manger ($p < 0.001$) que les mères anglophones.

Conclusions: Selon nos résultats, la restriction et la pression à manger semblaient être influencées par le statut linguistique des mères. Puisque, ces deux pratiques alimentaires parentales influencent les habitudes alimentaires et le statut pondéral des enfants, il est important de comprendre les facteurs qui influencent ces pratiques alimentaires.

Importance pour la pratique de la diététique: Une meilleure compréhension des déterminants des pratiques alimentaires maternelles pourrait offrir de nouvelles pistes de solutions dans le développement d'interventions de promotion de la santé efficaces au bénéfice des mères noires de descendance africaine et caribéenne et de leurs enfants.

Projet financé par : Consortium national de formation en santé - Volet Université d'Ottawa

Abstract Title

Indicators of disordered eating are common among urban Canadian young adults

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Abstract

Introduction: Disordered eating describes clinical and sub-clinical eating disorder symptomatology associated with compromised eating patterns and poor physical and mental health, including risk of developing eating disorders. Little is known about the prevalence of disordered eating among young adults in Canada.

Objectives: This study examined the proportions of young urban Canadian adults, aged 16 to 30 years, who reported indications of disordered eating and who were at risk of developing an eating disorder, and sociodemographic correlates of these conditions.

Methods: Cross-sectional data were drawn from a web-based study comprehensively examining diet and health among young adults (n=2895) recruited from five urban Canadian centres. Indicators of disordered eating were captured by the widely used EAT-3 screening tool. The prevalence of disordered eating indicators was estimated, as was risk of developing an eating disorder based on prior validation research with the EAT-3. General linear regression modeling examined sociodemographic correlates of disordered eating.

Result: Preoccupation with thinness was reported among 23% of women, 22% of men, and 31% of individuals affirming non-binary gender identities. Binge eating with a loss of control was most common among women (30%) whereas vomiting to control weight was highest among those with non-binary gender identities (17%). Approximately one in ten women (12%) and men (10%) were deemed at risk for an eating disorder, with the prevalence among individuals with non-binary gender identities closer to one in five. Weight perceptions were associated with eating disorder risk among women and men, race/ethnicity and body mass index were associated among men, and age was associated among women.

Conclusion: Disordered eating is prevalent among young Canadian adults regardless of gender.

Significance to the Field of Dietetics: Registered dietitians are well positioned to take leadership roles in the prevention, early identification, and treatment of disordered eating to prevent its deleterious implications for health.

Funding: Public Health Agency of Canada and support from an Ontario Early Researcher Award held by Sharon Kirkpatrick

Topic Area: Other

Abstract Title

International students' perceptions of healthy eating before and after arrival in Canada: A qualitative study.

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Abstract

Introduction: International student numbers in Canada are increasing with many students planning to reside in Canada after graduation. However, the health of this population tends to decline with time spent in Canada, leading to higher rates of chronic disease. Previous research suggests that international students perceive their traditional diet as healthier compared to that available in North America. There is a gap in the literature exploring the meaning of healthy eating to international students, both in their country of origin and in Canada.

Objectives: To explore international students': (1) perceptions of a healthy diet in their country of origin;(2) perceptions of a healthy diet in Canada; and ,(3) how their perception of a healthy diet has changed since their arrival in Canada.

Methods: A qualitative descriptive design was used where in-depth, one-on-one interviews were conducted with 13 international students at UPEI. The interviews were transcribed from audio recordings and analyzed using thematic analysis.

Results: Nine key themes were identified: Preference for traditional foods and meals, associating traditional foods with healthy eating, the transition from familial to individual cooking practices, reading labels on processed foods, distrust of the food supply, discovering non-traditional foods, traditional food availability in Canada, reliance on convenience foods, and changing views of healthy eating.

Conclusions: International students coming to Canada have unique experiences with food due to a change in way of life, a lack of social ties, and a new food culture.

Significance to the Field of Dietetics: There is increased interest in research of international students' nutrition and health transitions due to the vulnerability of this subpopulation and the impact of the "healthy immigrant effect" on the health system. Researchers, policymakers, and dietitians will benefit from increased research in this area to support evidence-based, culturally appropriate nutrition interventions.

Abstract Title

Percutaneous Endoscopic Gastrostomy Placement for Patients with Traumatic Brain Injuries and Tracheostomies: A Retrospective Chart Review at Vancouver General Hospital

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Abstract

Introduction: Traumatic Brain Injury (TBI) patients often require long-term nutrition support. Patients who receive a tracheostomy need a nasogastric (NG) or orogastric (OG) tube for feeding until a percutaneous endoscopic gastrostomy (PEG) is placed. This may affect patient care and there is a gap in the literature regarding the impact of early versus delayed PEG placements.

Objectives: (1) Describe TBI patients requiring tracheostomy and PEG at Vancouver General Hospital (VGH) and (2) describe differences in caloric deficits between patients receiving an early versus delayed PEG placement.

Methods: A retrospective chart review was conducted on TBI patients admitted to and discharged from VGH Trauma Services between January 1st, 2016 and November 30th, 2018. Data collected included demographics, enteral prescription details, and complications with NG/OG or PEG tubes resulting in disrupted feeds. Data was analyzed using descriptive statistics.

Results: Of the 24 patients included, 23/24 (96%) had delayed PEG placements, between 2-98 days post-tracheostomy. The mean length of stay was 80 days. Patients spent an average of 54% of their stay with a tracheostomy, and 91% receiving tube feeds. Overall, 22/24 (92%) of patients spent over 4 weeks receiving tube feeds and 16/24 (67%) were discharged on feeds. Patients with delayed PEG placements experienced an average caloric deficit of 2590 calories due to NG/OG tube dislodgement.

Conclusions: Our findings suggest a need for long term nutrition support in this population and that having an NG/OG rather than a PEG contributes to the patient's accumulated caloric deficit. At present there appears to be a high prevalence of delayed PEG placements in this population and these results suggest same-day tracheostomy and PEG placements should be considered.

Significance to Practice: Practices regarding PEG placement in this population are not standardized at VGH. This study may inform changes in current practice.

Abstract Title

Macronutrient and folate content of inpatient menu tickets with modified textures

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Abstract

Introduction: Fraser Health (FH) hospital menus intend to meet the estimated average requirement (EAR) of 320 mcg/day dietary folate equivalents (DFE), which is the minimum threshold set by the British Columbia Lower Mainland Nutrition Standards. It was unknown if texture modified diet (TMD) menus that have been adjusted for therapeutic reasons or patient preference met the folate target.

Objectives: To examine the folate and macronutrient content of minced and pureed diet texture menu tickets and compare these values to the EAR and the macronutrient distribution ranges.

Methods: 844 minced and pureed diet texture menu tickets over a 14-day menu cycle were included in this cross-sectional study. Menu tickets were generated between October and December 2018 for three FH prepared hospital sites and analyzed using CBORD®. Nutritional analysis for macronutrients and DFEs was performed using Excel®.

Results: A total of 465 pureed and 379 minced texture menu tickets were analyzed. Mean folate for combined minced and pureed tickets was $229 \text{ mcg} \pm 101 \text{ mcg}$. Only 16% of all menu tickets ($n=132$), 12% of pureed ($n=57$) and 20% ($n=75$) of minced texture menu tickets met the EAR. Mean carbohydrate, protein, and fat was $260 \pm 62.5 \text{ g}$, $77 \pm 23.3 \text{ g}$, and $53 \pm 19.5 \text{ g}$ respectively. Mean energy was 1817 calories.

Conclusions: The majority of menu tickets did not meet the EAR for folate. They did meet the macronutrient distribution ranges outlined in the BCLMNS. Pureed diets had the least number of menu tickets meeting the EAR, likely due to insufficient amount of grains. It is concerning that TMDs do not meet the EAR for folate, especially for inpatients with prolonged length of stays.

Significance to the Field of Dietetics: These findings highlight the need to increase the folate content of minced and pureed texture diets and may inform menu revisions.

Abstract Title

The No Harm Diet: A New Take on Ethical Diets

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Abstract

Introduction: Dietary habits of a population impacts the environment. To lessen the negative environmental effects, the No Harm Diet was designed and based on limiting harm to the organisms we receive our food from. Acceptable foods are plant or animal based and consumption does not harm the source. Fruits, dairy products and unfertilized eggs are acceptable while meat, seafood, grains, legumes, and vegetables are not since these foods harm the organism or subsequent generation.

Objectives: Our aim was to determine if this diet meets Dietary Reference Intake [DRI] recommendations.

Methods: DRI evaluation was done by creating a one-month meal plan (2000 kcal per day), generating nutrient intakes using the Canadian Nutrient file and Nutritionist Pro software. SPSS was used to get descriptive statistics of the nutrient intakes and averages were compared to DRI recommendations.

Results: Our meal plan nutrient averages met the DRIs with the exception of Omega 3, Omega 6, iodine, biotin, vitamin D and vitamin E. Nutritionist Pro limitations account for some of these. Supplements such as algae based Omega-3 supplements can mitigate these lows. Diet averages were compared to the diet nutrient adequacy of Canadians reported by the Canadian Community Health Survey 2004 (CCHS). Most nutrient average of the No Harm Diet were at or above the average intake of Canadians.

Conclusion: Our findings suggested that the No Harm Diet is nutritionally adequate.

Significance to the Field of Dietetics: It is important to consider all the elements that play a role in the foods we consume. Without a healthy planet we cannot have healthy food. The No Harm Diet takes into account not only our own health but the health of the world we live in. It is a sustainable and environmentally friendly diet that could be a better equipped diet to help combat environmental change.

Abstract Title

A survey of Canadian in-centre hemodialysis units' practices around oral intake during hemodialysis

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Abstract

Introduction: Hemodialysis (HD) patients are at risk for malnutrition due to restrictive diets, increased nutritional needs, and lengthy treatments resulting in missed meals. Although oral intake during HD provides opportunities to optimize patients' nutritional status, it is often restricted due to concerns with risks of postprandial hypotension and aspiration.

Objectives: To describe practices surrounding oral intake during HD at adult in-centre HD (ICHHD) units across Canada.

Methods: An online survey was sent to Canadian Association of Nephrology Dietitians for distribution to renal Registered Dietitians (RD) across Canada, targeting those working in adult ICHHD units (N=119). Purposive sampling was utilized. Data was analyzed using descriptive statistics.

Results: Forty-one surveys were returned (34% response rate); of those, twenty-four responses were complete and analyzed. All respondents' facilities permit oral intake. While 92% (n=22) of respondents reported their facility has no written practice guideline pertaining to patients having oral intake while on HD, 87.5% (n=21) of respondents reported their facilities consider some type of safety criteria (e.g. history of hypotension or choking/dysphagia). Fifty-eight percent (n=14) of respondents reported multi-disciplinary approaches with regards to permitting oral intake during HD. Seventy-one percent (n=17) of respondents reported patients can have oral intake any time during HD; 87.5% (n=9) of respondents do not make dietary recommendations to reduce the risk of hypotension.

Conclusions: The results suggest oral intake is permitted at Canadian ICHHD units. However, most sites do not have formal practice guidelines to support healthcare providers in decision-making processes. Practices around safety considerations, timing of oral intake, and dietary recommendations vary amongst units. Future research is needed to standardize oral intake practices during HD.

Significance to the Field of Dietetics: Understanding practices and considerations around oral intake during HD at ICHHD units across Canada may guide, standardize, and optimize nutrition care and safety for patients.

Abstract Title

Inter-rater agreement of visual plate waste audits of patient trays

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Abstract

Background: Hospital plate waste audits provide important information about patient acceptance of menu items. Audits are routinely performed by Fraser Health (FH) Food Services, although there is no formal training and the degree of inter-rater reliability is unknown.

Objectives: To describe the inter-rater reliability of the visual quarter-waste method by analyzing and comparing the plate waste audit scores of two food service supervisors (FSS) at a FH hospital.

Methods: Two FSSs at a FH hospital independently used the validated visual quarter-waste method to evaluate the amount of entree and soup remaining on 162 patient trays. Trays containing either one or both menu items were included. Rater scores for the amount of food remaining for each item was compared using intraclass correlation (ICC). Agreement between raters as to the presence or absence of the food item on the tray was analyzed using Kappa. All analyses were conducted using SPSS.

Results: There was consistency between scores for the amount of food remaining on trays. ICC for entrees (n=140) and soups (n=115) were 0.95 (95% CI: 0.93 - 0.97) and 0.87 (95% CI: 0.81 - 0.91), respectively (p < 0.0001). The kappa for agreement on the presence of menu items was 0.76 for entree (n=160) and 0.58 for soup (n=159) (p < 0.0001).

Conclusions: Plate waste audit scores had good to excellent agreement between raters. However, there was weak to moderate agreement between raters on the presence or absence of an item on the tray. Lack of formal training or rater fatigue could be contributing factors, but this requires further research.

Significance to Field of Dietetics: The level of agreement between raters means that the visual quarter-waste method audit data can be confidently used for menu decision making.