

# Canadian Foundation for Dietetic Research Research Showcase Abstracts

## ABSTRACT

The 2022 Dietitians of Canada (DC) National Conference brought together our nutrition and dietetics community for a successful virtual event on September 15 & 16, 2022. We have had three virtual conferences due to the COVID-19 pandemic, but that has not prevented us from sharing our experiences and research. This year the Canadian Foundation for Dietetic Research (CFDR) showcased a wide variety of experience sharing and research abstracts through the online conference platform. There were 33 Early Bird (EB) research abstracts, in which five were selected for live presentations during the conference, and ten Late Breaking research abstracts. Thirty-one posters were presented virtually at the conference. Thank you for all of the abstract submissions!

A sincere thank you to the Abstract Review Committee members for their support, dedication and commitment.

Early Bird Abstract Review Committee: Susan Campisi (University of Toronto); Pauline Darling (University of Ottawa); Andrea Glenn (University of Toronto); Mahsa Jessri (University of British Columbia); Shelley Vanderhout (University of Toronto).

Late Breaking Abstract Review Committee: Lesley Andrade (University of Waterloo); Carla D'Andreamatteo (Consultant, Winnipeg); Pauline Darling (University of Ottawa); Laura Forbes (University of Guelph); Billie Jane Hermosura (University of Ottawa); Christine Nash (University Health Network).

Thanks to the DC Conference team, all of the moderators and conference attendees for supporting the virtual and poster research presentations.

Please consider submitting an abstract for the 2023 CFDR Research Showcase.

Looking forward to seeing all of you at the 2023 Dietitians of Canada Conference in Montreal, QC, from May 24–26, 2023.

Warm regards,

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Chair, 2022 EB/LB Abstract Committees  
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## Supporting Dietitians in Practice: Professional Development Activities of Dietitians of Canada in the Past 30 Years

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**Introduction:** Dietitians of Canada (DC) was established in 1997 from the Canadian Dietetic Association and the provincial associations. At present, there is no comprehensive historical account of the professional development (PD) initiatives DC has provided since its inception; the last history of dietetics was published in 1993.

**Objective:** The aims of the present study are to synthesize a timeline of PD events since 1993, understand the context that led to their development, and to understand their impact on the profession.

**Methods:** A draft timeline was prepared with data gathered from the literature review. Eleven key informants were initially identified; 6 additional informants were identified by snowball sampling. Informants were recruited by email and

semi-structured interviews were conducted with those who consented to participate. Transcripts were analyzed thematically, and a final timeline was developed.

**Results:** Thirteen participants contributed to the final timeline. Six themes were found: (1) the use of technology in PD tools, e.g., online courses, Learning on Demand; (2) conferences and workshops, e.g., national conference, Coast-to-Coast workshops; (3) initiatives that placed DC as a leader in health and nutrition, e.g., Practice-based Evidence in Nutrition (PEN); (4) informal discussion about emerging issues in dietetics, e.g., PEN *Current Issues*, *Practice Blog*; (5) DC actively sought member input to inform PD strategy, e.g., members issues forums; and (6) DC PD events demonstrated their support for research and dietetic education, e.g., relationship with CFDR, public health online course. Key concerns for the future included declining DC membership and funding and dietetics not keeping pace with other professions on PD.

**Conclusion:** Dietitians of Canada developed a robust portfolio of PD activities for their members over the past 30 years.

**Significance:** The successes and failures of initiatives in this time period can inform the development of DC's PD strategy for the coming decades.

**Funded by:** None.

## The Effect of Substituting Soy Milk for Cow's Milk on Lipid Markers: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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**Introduction:** Soy protein holds a health claim for its lipid-lowering effect and cardiovascular benefits. Plant-based milks have increased in popularity. Whether the cholesterol-lowering effect holds for soy milk (as a single soy food matrix) in its intended substitution for cow's milk is unclear.

**Objective:** To quantify the effect of soy milk in substitution for cow's milk on established lipid markers, we conducted a systematic review and meta-analysis of randomized controlled trials (RCTs).

**Methods:** MEDLINE, Embase, and The Cochrane Central Register of Controlled Trials were searched (through March 2021). We included RCTs of  $\geq 3$  weeks assessing the effect of soy milk in substitution for a cow's milk control on established lipid targets: low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides (TG), and non-HDL-C in adults. Two independent reviewers extracted data and assessed risk of bias. Data were pooled using random-effects models and expressed as a mean difference (MD) with 95% confidence intervals (95% CI). GRADE was used to assess certainty of evidence.

**Results:** We identified 2674 RCTs. Eligibility criteria were met by 6 RCTs in 201 adults with normocholesterolemia (3 RCTs), hypercholesterolemia (2 RCTs), or diabetes (1 RCT). Median doses of soy and cow's milk protein were 21.5g (6.9–58.56) and 24.5g (16.7–58.87) per day, respectively. The substitution of soy milk for cow's milk reduced LDL-C ( $-0.20$  mmol/L [ $-0.33, -0.08$  mmol/L]) and non-HDL-C ( $-0.24$  mmol/L [ $-0.41, -0.07$  mmol/L]) and increased HDL-C ( $0.6$  mmol/L [ $0.01, 0.11$  mmol/L]). There was no significant effect on TG. The certainty of evidence was moderate across all outcomes owing to downgrades for imprecision.

**Conclusion:** There is good indication that the substitution of soy milk for cow's milk improves LDL-C, non-HDL-C, and HDL-C in adults.

**Significance:** These findings support the cholesterol-lowering health claim for soy protein as soy milk in substitution for cow's milk.

**Funded by:** Canadian Institutes of Health Research (CIHR), Government of Canada, Diabetes Canada

## Prevalence of Malnutrition and Its Association with Hospital Readmission 30 Days Post-Discharge in Community Clients

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**Introduction:** Little is known about the prevalence of malnutrition among clients receiving home care (HC) and ambulatory care (AC) services. The risk of hospital readmission in malnourished clients transitioning from hospital to home is not well established

**Objective:** To determine the prevalence of malnutrition across Community Health Centres (CHC) in Vancouver and the association between hospital readmission and nutritional status.

**Methods:** A retrospective analysis of newly referred HC and AC clients across six CHCs between January and December 2019 was carried out. Nutritional status was assessed using the Mini Nutritional Assessment-Short Form (MNA-SF<sup>®</sup>) routinely administered by clinicians. The prevalence of malnutrition and at-risk of malnutrition (ARM) was calculated as the number of clients scoring between 0–7 and 8–12 respectively divided by the total number of completed MNA-SF<sup>®</sup>. Ninety-five percent confidence intervals for the prevalence estimates were calculated using the Wilson method. A log-binomial regression model was used to estimate the relative risk of hospital readmission among nutritional status groups for clients referred from hospitals.

**Results:** A total of 3704 MNA-SF<sup>®</sup> were returned, of which 2402 (65%) had complete data. The estimated prevalence of malnutrition and ARM among newly referred HC and AC clients was 21% (95% CI: 19% to 22%) and 55% (95% CI: 53% to 57%), respectively. The estimated risk of hospital readmission for malnourished clients was 2.7 times higher (95% CI: 1.9 to 3.9) and for ARM clients was 1.9 times higher (95% CI: 1.4 to 2.8) than that of clients with normal nutritional status.

**Conclusion:** The prevalence of malnutrition and ARM among HC and AC clients is high in the Vancouver

Community. Malnutrition and ARM are correlated with an increased risk of hospital readmission 30 days post-hospital discharge.

**Significance:** Additional and ongoing education are needed to increase malnutrition screening in HC and AC settings. More resources are needed to target nutrition interventions to help improve nutritional status and lower the risk of readmission.

**Funded by:** Vancouver Coastal Health Research Institute - Robert H. N. Ho

### The Impact of COVID-19 on End of Life Nutrition Processes in Long-Term Care: Challenges and Strategies of Healthcare Providers

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**Background:** End of life (EOL) care is provided to residents in long-term care (LTC) homes in their final 6-12 months and aims to support quality of life until death. EOL care does not meet the expectations of caregivers as they often receive inconsistent and inadequate information about the resident's care at EOL. Issues of short-staffing and lack of EOL nutritional practices in LTC have been further accentuated by COVID-19.

**Objective:** Examine end of life nutrition processes of health-care providers (HCP) in LTC homes during COVID-19.

**Methods:** Telephone interviews with 16 HCPs [female (88%), male (12%); mean age  $\pm$  SD = 42  $\pm$  10.2 years] working in Manitoba LTC homes were audio-recorded and transcribed verbatim. Inductive content analysis was conducted, creating themes.

**Results:** Three themes emerged from the interviews. 1) Modifications to EOL conversations and processes. The pandemic created challenges in EOL nutrition conversations and processes due to new visitor restrictions. Nutrition conversations were no longer able to occur in-person and had to be completed over the phone. 2) Adaptations of HCPs to new COVID-19 restrictions. HCPs experienced changes in their daily practice as duties shifted, and some dietitians reported that they were less involved in EOL nutrition conversations. 3) Conversations about healthcare provided for residents with COVID-19. The content and timing of EOL conversations for COVID-positive residents changed due to rapid disease progression. HCPs updated caregivers more frequently on their health status and residents experienced challenges with eating due to the virus.

**Conclusion:** HCPs in LTC had to make changes to EOL nutrition processes and conversations due to visitor restrictions, shift in duties, and rapid progression of the virus.

**Significance:** Pandemic plans need to be developed to ensure all residents receive quality EOL nutritional care during outbreaks.

**Funded by:** Canadian Foundation for Dietetic Research

### An Online Nutritious Food Basket: A New Valid and Reliable Approach to Measuring Food Affordability in Ontario

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**Purpose:** This project assessed the feasibility, reliability, and validity of online food costing for the 2019 National Nutritious Food Basket (NFB).

**Summary of Content:** The NFB monitors the cost of healthy food in Canada, which is traditionally completed in-store. To maximize resources, increase reach, and adapt to COVID-19, we developed and tested an online protocol in Ontario.

**Systematic Approach:** In grocery chains with online platforms, the NFB was priced online in 12 stores to evaluate agreement in prices between raters (inter-rater reliability [IRR]) using percent perfect agreement and two-way random intra-class correlations (ICC) (n = 572 pairs). Next, the NFB was priced in-store and online for 28 stores to estimate agreement between online and in-store prices (validity) using percent perfect agreement, paired t-tests and Pearson's correlation for all (n = 1708 pairs) and matched items (same product/brand and purchase unit) (n = 1134).

**Conclusion:** NFB items were highly available online (97%); less than 1% were available in-store but not online. The protocol had good IRR (82% perfect agreement; ICC(2,1) = 0.972, F = 69.9, p < 0.001). Across all items, 81% of in-store and online prices were identical. For matched items, 94% of prices were identical. The mean price difference (in-store minus online) of matched products was -1.8 cents (-0.005%). Regardless of whether items were matched, online and in-store prices were strongly correlated (all items: r = 0.967, p < 0.0001; matched items: r = 0.993, p < 0.0001) and did not significantly differ (all items: t = 0.504, p = 0.614; matched items: t = -1.338, p = 0.181). IRR and validity were lower for certain product categories (e.g., meat) and items (e.g., dinner rolls).

**Recommendations:** Online costing is a feasible, reliable and valid method to price the NFB in large grocery chains in Ontario. Minor protocol adjustments and rater training are expected to improve reliability and validity for problematic items.

**Significance:** The online protocol developed can be used as a framework for modernizing food affordability monitoring in other provinces and territories in Canada.

**Funded by:** None

### Relationship Between Disordered Eating Behaviours and Body Image in Perimenopausal Women

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Health Sciences, University of Ottawa, Ottawa, ON; <sup>3</sup>Université de Moncton, Moncton, NB.

**Introduction:** Disordered eating (DE) includes a range of unhealthy eating behaviours that can be detrimental to an individual's physical and psychosocial wellbeing. Little is known about middle-aged women's experience of body image in relation to DE. In particular, the menopausal transition involves hormonal fluctuations, shifts in body composition and increased psychological challenges, which could influence the role of body image in DE development in this population. **Objective:** Investigate differences in body image perception among perimenopausal women with higher compared to lower levels of DE.

**Methods:** This cross-sectional analysis included data from 83 healthy and initially premenopausal women (47–55 years, BMI < 30.0 kg/m<sup>2</sup>) who participated in the MONET prospective cohort study. Perimenopause was defined by menstrual cycle irregularities >3 months or amenorrhea <12 months. DE was assessed using the cognitive dietary restraint, uncontrolled eating, and emotional eating subscales of the Three-Factor Eating Questionnaire-R18. Body image was assessed using Mendelson's Body Esteem Scale. Independent t-tests were used to compare body image scores in women with higher versus lower levels of each DE subscale.

**Results:** Body image scores were significantly better in women with lower cognitive dietary restraint (M = 57.9, SD = 9.1) compared to their higher counterparts (M = 52.9, SD = 9.0),  $t(81) = 2.396$ ,  $p = 0.019$ ,  $d = 0.556$ , while no significant difference was observed for groups of emotional and uncontrolled eating.

**Conclusion:** In perimenopausal women without obesity, poor body image may be more prevalent among women with higher cognitive dietary restraint. Nonetheless, overeating-related behaviours such as uncontrolled- and emotional eating have also been associated with poor body image in younger populations, warranting caution with the interpretation of our results.

**Significance:** Dietetic professionals should be alert to the co-occurrence of disrupted body image and restrictive eating behaviours in women undergoing menopause. Future research may consider investigating risk factors and potential repercussions of DE in this population.

**Funded by:** None

## Dietitians of Canada Involvement in Promotion of the Profession since 1993

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**Introduction:** Over the past 30 years Dietitians of Canada (DC), the national professional association, has made great strides in promoting the profession through advocacy. However, no comprehensive documentation of DC advocacy has been compiled since 1993.

**Objectives:** To create an updated history of advocacy of the dietetic profession by DC as a written article and as an interactive timeline.

**Methods:** A literature review was conducted to create a draft timeline of important events over the past 30 years. Interviews were conducted with 12 current or former dietitians with significant DC advocacy involvement. Interview transcriptions and recordings were used to revise the timeline.

**Results:** Interviews largely concentrated on advocacy at the national level. Advocacy efforts described focused on three main areas: (1) establishing dietitians as experts in diverse areas of nutrition (e.g., infant nutrition, school nutrition, food security, sustainability, women's health, mental health, long-term care); (2) upholding professional standards (e.g., Partnership for Dietetic Education and Practice); and (3) advocating for the importance of dietitians in healthcare and improving accessibility to services (e.g., Primary Healthcare Action Group). Many interviewees also discussed provincial-level initiatives, focused mainly in Ontario. Interviewees also addressed future challenges for DC including decreasing membership, lack of trust in professionals, a need for increased diversity and more internship opportunities.

**Conclusions:** Since 1993, DC has continuously promoted the profession. Many national advocacy efforts were clarified; however, future work on provincial advocacy efforts is needed. Potential challenges for the continued organizational success of DC were also highlighted.

**Significance:** This project captures advocacy events in which DC and its members have participated since 1993. Suggestions (e.g., opportunities for member engagement, more diversity within the organization, advocacy for more internship placements) were provided on how to address potential challenges for DC as an organization to ensure continued success.

**Funded by:** None

## Creating an Interactive Timeline of Canadian Dietetic History: The Public Face of Dietitians of Canada

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**Introduction:** Dietitians of Canada (DC) acts as the voice of dietitians to increase the profession's visibility and communicate the profession's value and their unique combination of skills and expertise to the public. There has been little documentation to describe DC's growth and impact over the past 30 years.

**Objective:** This research aims to document the history of DC promotion initiatives to fill in the gaps in the public face of DC timeline and capture the profession's evolution.

**Methods:** A literature review was first conducted to create a draft timeline for "The Public Face of DC." Then, a qualitative study consisting of online semi-structured interviews with nine key informants was used to verify the accuracy of the

timeline and provide perspectives on the impact of past work and future challenges/opportunities.

**Results:** The timeline identified four key public promotion activities: Nutrition Month, Cookbooks, technological developments (DC website, EaTracker, apps), and information/call centers (Eat Right Ontario and Dial-A-Dietitian services nationwide). Five major themes emerged from the interviews: (1) branding of dietitians through Nutrition Months, (2) creating enhanced access to dietitians by offering Find a Dietitian features and call centers, (3) navigating the implications of dietitians entering social media, (4) decreased funding for public-facing tools and the (5) organizational shift to become a member-facing organization rather than public-facing.

**Conclusions:** Over the past 30 years, public-oriented activities have grown exponentially, especially with the rise of traditional and social media. By taking advantage of enhanced modes of communication and developing publicly accessible tools/resources, DC has increased dietitians' visibility and accessibility and enhanced public perception of their services.

**Significance:** This project has highlighted the achievements of past dietitians and the association while providing a look at the future for the public face of DC as it transitions into more of a supportive role for individual dietitians.

**Funded by:** None

#### Association Between Added Sugars Intake and the Healthy Eating Index-2015 among Canadian Children—Analyses from the Canadian Community Health Survey – Nutrition 2015 Public Use Microdata File

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**Introduction:** There is continuing debate regarding the impact of added sugars consumption on overall diet quality, which remains a research gap using relevant Canadian data.

**Objective:** This study aimed to assess the association between added sugars intake and Healthy Eating Index (HEI)-2015 as an indicator of diet quality among Canadian children.

**Methods:** The first 24-hour dietary recalls of children (2–8 years, n = 1896) from the 2015 Canadian Community Health Survey-Nutrition Public Use Microdata File were used to calculate added sugars intake (as a percentage of energy, %E) and HEI scores. The association between total HEI scores and added sugar intakes was tested for nonlinearity in a

regression model using higher-order polynomial terms. HEI component scores were compared between quintiles of added sugars intake using ANOVA adjusted for age, sex, and dietary misreporting status.

**Results:** The intake ranges of added sugars by quintiles were Q1: <4.1%E, Q2: 4.1–6.8%E, Q3: 6.8–11.0%E, Q4: 9.9–14.0%E, and Q5: >14.0%E. There was a negative non-linear association between added sugars intake and total HEI scores ( $\beta_1 = -0.82$ ,  $\beta_2 = 0.84$ ,  $p < 0.0001$ ). Those in Q5 had significantly lower total HEI scores than all other quintiles, but no difference was observed among Q2 to Q4. When comparing HEI component scores between quintiles, total fruit and total protein scores were lower in Q5 compared to the other quintiles (Q1 to Q4), and there was no difference across all quintiles in whole grain and fatty acid scores.

**Conclusion:** There was a negative nonlinear association between added sugars intake and HEI-2015 scores among Canadian children, with a greater reduction in diet quality for those with the highest added sugars intake.

**Significance:** This research provides the first evidence to assess diet quality using Healthy Eating Index-2015 among Canadian children with different added sugars intake.

**Funded by:** Canadian Sugar Institute

#### Quels sont les déterminants de la motivation à apprendre et à appliquer les compétences interprofessionnelles chez les futurs professionnels de la santé?

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**Introduction:** La motivation est une forme volontaire d'engagement dans le processus d'apprentissage. Chez les futurs professionnels de la santé, la motivation joue un rôle primordial à l'apprentissage et l'application des compétences interprofessionnelles (IP), d'où l'importance d'en connaître les déterminants.

**Objectif:** Identifier, dans la littérature, les déterminants de la motivation chez les étudiants en santé face aux compétences IP.

**Méthode:** Une recherche fut effectuée dans PubMed, CINAHL, PsycInfo, MEDLINE et ERIC avec pour thèmes la motivation, l'apprentissage et l'application des connaissances, les étudiants en santé et l'éducation IP. Les études publiées entre 2015-2021 en français ou en anglais furent importées dans Covidence. La première sélection par titres et abrégés et

la seconde sélection par articles complets furent effectuées par deux auteures.

**Résultats:** Deux-cent-quarante-et-un articles furent identifiés, incluant 54 duplicatas. Suite à une sélection par titres et abrégés, suivi d'un tri par articles complets, 22 articles furent retenus. Les résultats démontrent que l'environnement d'apprentissage ( $n = 16$ ), l'identité professionnelle ( $n = 5$ ), l'exposition répétitive à des expériences IP positives ( $n = 15$ ), la confiance en ses compétences ( $n = 10$ ) et la valeur accordée à la tâche ( $n = 7$ ) étaient les principaux déterminants de la motivation chez les futurs professionnels à apprendre et appliquer les compétences IP.

**Conclusion:** Pour les futurs professionnels de la santé, les compétences IP sont acquises durant la formation universitaire, ce qui renforce l'importance de connaître les déterminants de la motivation chez ces étudiants. Cette revue a identifié 5 déterminants de cette motivation pouvant appuyer le développement d'outils pédagogiques plus efficaces.

**Importance:** Selon les compétences intégrées pour l'enseignement et la pratique de la diététique, la collaboration IP au sein d'une équipe de soins est essentielle pour assurer la qualité des services de santé. Malgré le défi que représente l'organisation d'activités d'apprentissage IP fondées sur ces déterminants de motivation, celles-ci sont importantes pour la formation des diététistes.

**Financé par:** Consortium national de formation en santé (CNFS)-Volet Université d'Ottawa

### Exploring the Usefulness and Relevance of Canada's Food Guide as a Tool When Consulting Patients

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**Introduction:** In January 2019, Health Canada released the new version of Canada's Food Guide (CFG). The detailed portion size recommendations were replaced with general healthy eating guidelines for people of all ages. It is meaningful to explore registered dietitians' perspectives on adopting the new CFG into their practice.

**Objectives:** To explore the use and relevance of CFG as a tool in nutrition counselling for registered dietitians in Ontario.

**Methods:** A link to an online survey was sent to dietitians in Ontario through the Dietitians of Canada (DC) "Find a Dietitian" feature. The survey explored the frequency of use of the new CFG including, most frequently used information, perceived usefulness, concerns, and other resources used.

**Results:** Of the 315 Ontario dietitians invited, 132 complete surveys were received. Most dietitians (76%) reported using CFG for patient education, and 39.5% agreed that CFG is useful or very useful in their practice. Promoting healthy eating concepts, promoting plant-based food, and encouraging home-cooking were the most commonly reported reasons for using CFG in patient education. Aside from CFG, dietitians indicated government health resources were

referenced the most. The removal of serving sizes, recommended number of portions for each food group, and dairy products as a food group were the top concerns with the new CFG.

**Conclusion:** The new CFG combines healthy food, mindful eating practices, and home cooking to present people with a holistic approach to healthy eating. Although it is a useful tool for general healthy eating guidance, there are concerns with the new version, and additional resources are often required when providing nutrition recommendations.

**Significance:** Dietitians, as the experts in nutrition assessment, intervention and counseling, are key stakeholders of CFG. This research highlights how the new CFG is being used and key concerns with the new version that may have an impact on the health of Canadians.

**Funded by:** Brescia University College

### The Effect of Substituting Soy Milk for Cow's Milk Consumption on Blood Pressure: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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**Background:** Cow's milk alone and as a key feature of the Dietary Approaches to Stop Hypertension (DASH) dietary pattern reduces blood pressure (BP) in normotensive and hypertensive subjects. National dietary guidelines are shifting to advising a plant-based diet and plant-based milks are growing in popularity. Research is needed to determine if soy milk is a suitable substitute for cow's milk for BP reduction in adults.

**Objectives:** We conducted a systematic review and meta-analysis of randomized controlled trials (RCTs) to assess the effect of soy milk in substitution for cow's milk consumption on systolic (SBP) and diastolic BP (DBP).

**Method:** We searched MEDLINE, EMBASE and The Cochrane Central Register of Controlled Trials databases (through April 2022). We included RCTs of >3 weeks that assessed the impact of soy milk vs. cow's milk on BP in adults. Two independent reviewers extracted data and assessed risk of bias. A meta-analysis was performed using fixed effects models with data expressed as mean differences (MD) with 95% confidence intervals (95% CI). GRADE assessed the certainty of evidence.

**Results:** Out of the 1137 studies identified, 4 met eligibility criteria in 116 participants with hypertension ( $n = 40$ ) and without ( $n = 76$ ). Of the 76 without hypertension, 29 had diabetes. Doses of soy and cow's milk were 240 mL per day, except for 1 study that provided 500 mL twice daily. Soy milk reduced SBP by  $-8.77$  mmHg [ $-11.06$ ,  $-6.48$  mmHg] and DBP by  $-6.11$  mmHg [ $-8.18$ ,  $-4.04$  mmHg] compared to cow's milk. Certainty of evidence was low for both SBP and DBP owing to downgrades for inconsistency and imprecision.

**Conclusion:** Substitution of soy milk for cow's milk has a moderate decreasing effect on SBP and DBP in adults. Larger and higher-quality trials are needed to improve our estimates.

**Significance:** These findings suggest that the substitution of soy milk for cow's milk may lead to a reduction in BP, a major risk factor for cardiovascular disease.

**Funded by:** Canadian Institutes of Health Research (CIHR), Government of Canada, Diabetes Canada

### An Analysis of the Content of YouTube Videos Regarding Nutrition and Dental Caries

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**Introduction:** Nutrition and dental caries have a strong relationship. Foods and eating behaviours can both increase risk (e.g., sugar) and decrease risk (e.g., meal spacing) of dental caries. YouTube is a popular source for the public to access information; information about YouTube content related to nutrition and dental caries is unknown.

**Objective:** To assess the content of nutrition information regarding dental caries on YouTube.

**Methods:** Six YouTube searches were conducted in May 2021 using keywords related to nutrition and dental caries; the first 20 videos were selected from each search. Videos in English, <20 min, and contained nutrition and dental caries information were eligible for inclusion. Included videos were watched by two individuals and scored for the presence or absence of content related to 17 different evidence-based topics related to nutrition and dental caries (e.g., sugar, sugary drinks, eating frequency, vegetable/fruit).

**Results:** Forty-two videos were included. In total,  $n = 24$ ,  $n = 10$ ,  $n = 6$ , and  $n = 2$  videos were posted by and (or) featured oral health professionals, individuals with no health professional credentials, other health professionals, and government, respectively. One video featured a dietitian. The mean number of topics covered in the videos was 4.9/17 possible topics. Sugar was the most consistent topic mentioned (>70% of videos); no other topics were mentioned in >50% of videos. Some videos contained non-evidenced based information (e.g., avoiding phytic acid to prevent caries).

**Conclusion:** This study found that YouTube videos covered a limited selection of topics related to nutrition and dental caries and rarely featured dietitians.

**Significance:** With the high prevalence of dental caries, the strong link between nutrition and dental caries, and YouTube popularity, there is a strong need for content containing evidence-based recommendations about nutrition and dental caries on this platform. Collaborative development of videos by dietitians, oral health professionals and other professionals is needed.

**Funded by:** Saskatchewan Health Research Foundation Establishment Grant

### What Is the Contribution of Snacks to the Energy and Macronutrient Intake of Military Recruits from the Canadian Armed Forces during Basic Military Qualification?

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**Introduction:** During Basic Military Qualification (BMQ), military recruits often struggle to meet their daily energy requirements, increasing their injury risk. Snacks are classified as any foods consumed between typical breakfast, lunch, or dinner times and provide on average 22.7% of Canadian adults' daily energy intake. Snack intake could be particularly beneficial for populations with high energy expenditure and restricted mealtime such as military recruits.

**Objective:** Evaluate the macronutrient composition of snacks as well as their contribution to daily energy intake amongst military recruits during BMQ.

**Methods:** Food photography was used to capture meal consumption over two days and a questionnaire for daily snack consumption was distributed to recruits. Daily food intake was analysed with ESHA Food Processor using recipes provided by StratJ4 Food Services and the Canadian Nutrient File to determine energy and macronutrient intake.

**Results:** Amongst 33 participants, 27 (82%) and 28 (85%) consumed at least one snack on days 1 and 2 respectively. Average daily energy intake was  $2598.6 \pm 892.5$  kcal/day for recruits who did not consume snacks, compared to  $3151.3 \pm 852.8$  kcal/day for those who did. Average energy intake from snacks was  $478.2 \pm 211.9$  kcal/day, representing 15% of daily energy intake. Snack intake represented 12.5% of daily carbohydrate intake, 12.8% of protein intake and 19.0% of fat intake. Forty-six percent of energy intake from snacks was from vending machines, while 54.0% consisted of healthier snacks from the cafeteria.

**Conclusion:** Snacks represented an important proportion of daily energy and macronutrient intake amongst recruits. These findings confirm that snacks could be beneficial to support military recruits in meeting their daily energy requirements, particularly during times of high energy expenditure such as BMQ.

**Significance:** Dietitians should promote the consumption of snacks in military recruits to help minimize energy deficits, which may in turn help to optimize performance and limit injury in this population.

**Funded by:** Isabelle Giroux's Research Fund and Strat J4 Food Services

### How Can Food Experience Serve as a Medium for Social Integration Among Immigrant Seniors in Canadian Society?

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**Introduction:** Immigrant seniors are among the most vulnerable demographic within Canadian society. Accounting for one-third of the senior population, these immigrants face unique challenges, including a lack of programming, language, socioeconomic and transportation barriers hindering societal integration, health, and well-being.

**Objective:** This study uses a phenomenological approach to explore the experiences of immigrant seniors transitioning to Canadian society by considering their diversity of food knowledge and experiences.

**Method:** Five immigrant seniors who could communicate in English in some capacities were recruited through social media, community organizations, and snowball sampling to participate in an interview. Interviews were recorded and transcribed verbatim. Data were independently coded by the primary investigator and discussed with and verified by a second researcher to establish final themes and subthemes.

**Results:** Participants represented different ethnic and demographic backgrounds. Participants identified several influences that shaped their experiences and identity as an immigrant senior. Three key themes emerged: Embracing change while preserving self; Food knowledge and experiences as an avenue for storytelling and; Identity and significant life changes as an immigrant senior.

**Conclusion:** The experiences of immigrant seniors are a complex and multifaceted phenomenon manifesting in various ways. Habits, norms, and adaptations to novel circumstances are instrumental to these seniors' overall well-being and integration into a new environment.

**Significance:** Food experiences may serve as a medium for understanding, coping with, and sharing differences within new cultural contexts. This medium may provide opportunities for dietitians and others to advance equity and inclusion of immigrant seniors in Canadian society.

**Funded by:** None

### The Mediterranean Diet Pattern Improves Diet Quality and Symptoms in Patients with Ulcerative Colitis Compared to a Habitual Diet: A Pilot Study

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**Background:** Compelling evidence suggests that the Mediterranean Diet Pattern (MDP) may benefit inflammatory bowel disease (IBD); however, data on whether patients can comply with this dietary pattern and the nutritional adequacy of this diet in Ulcerative Colitis (UC) is lacking. We compared the effects of the MDP with the Canadian Habitual Diet Pattern (CHD) in a randomized control trial in adult patients with UC.

**Methods:** Adult participants with quiescent UC were randomized to follow a MDP (n = 15) or CHD (n = 13) for 12 weeks. Demographic, clinical data, quality of life (Short Inflammatory Bowel Disease Questionnaire; SIBDQ), disease activity (Short Clinical Colitis Activity Index; SCCAI), dietary adherence (Mediterranean Diet Serving Score; MDSS), diet quality (Health-Eating Index-2015; HEI-2015) and dietary intake (ASA-24) were assessed at baseline and week 12.

**Results:** MDP participants were able to decrease or maintain disease activity versus the CHD participants (87% vs 69%;  $p = 0.001$ ). The MDP had a significant reduction in tenesmus ( $p = 0.04$ ). Health-related quality of life (bowel domain) showed reductions in the passage of large amounts of gas ( $p = 0.01$ ) and improvements in tenesmus ( $p = 0.03$ ). The MDP (n = 10) achieved a higher level of adherence (MDSS score between 16–24) versus CHD (n = 3),  $p = 0.030$ . In the participants following the MDP, the HEI-2015 significantly increased from baseline to week 12 ( $p = 0.007$ ). The HEI-2015 score at week 12 for the MDP participants was significantly higher than the participants following the CHD ( $p = 0.0001$ ). Both groups consumed sub-optimal calcium, iron, vitamin E, fibre, and choline intakes.

**Conclusions:** A MDP is well-tolerated and improved bowel symptoms, including stool frequency, flatulence, and tenesmus in adult participants with quiescent UC. High adherence to the MDP was achieved with support from a Registered Dietitian; however, a focus on tailored messages about nutrients of concern for individual patients following the

MDP is recommended to ensure nutritional adequacy. ClinicalTrials.gov no: NCT030537

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### **A Content Analysis of Canadian Professional Association Resources on Diet and Tooth Decay**

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**Introduction:** Tooth decay affects individuals of all ages and is an important public health concern within Canada. Dietary intake is critical to tooth decay prevention as both the chemical and physical properties of foods and beverages, as well as how they are consumed (e.g., frequency) can impact tooth decay.

**Objective:** To assess the information available from websites of professional organizations in Canada that are targeted to the public on diet and tooth decay.

**Methods:** The websites of professional organizations and regulatory bodies for dietitians, oral health professionals, nurses, and physicians in Canada were thoroughly searched by two researchers from June-August 2020 for information related to diet and tooth decay targeted towards the general public. The webpages were downloaded and underwent content analysis using NVIVO 12 software. Approximately two webpages focused on diet and tooth decay were selected from each website for readability testing.

**Results:** In total, 213 webpages from 23 websites were found to contain information on diet and tooth decay and/or general oral health. Most websites were from oral health professional organizations; few webpages were from dietitian organizations. Three major themes were identified: Foods, Beverages, & Behaviours to Limit; Foods, Beverages, and Behaviours to Choose; and Mixed & Other Unclear Messages. The most frequently discussed topic was sugar (mentioned in 67% of webpages) as it cut across multiple themes, often being discussed in the context of limitation, infant feeding, and tooth-friendly ways to eat sugar. Mixed and unclear messaging was minimal. The average webpage grade level reading score was  $8.6 \pm 1.7$  which exceeded the recommendation of grade six.

**Conclusion:** Organizations consistently addressed the topic of diet and tooth decay and/or general oral health information as information was scattered everywhere throughout the websites with minimal unclear and mixed messaging.

**Relevance:** This study highlights a need for improved collaboration between oral health professionals, dietitians, and the general public for improving patient care and future resource development.

**Funded by:** Saskatchewan Health Research Foundation Establishment Grant

### **Dietitians' Knowledge and Comfort in Supporting Muslim Clients, Patients, and Communities during Ramadan**

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**Introduction:** Registered Dietitians require the knowledge and comfort to provide culturally safe care to Muslims who fast during Ramadan.

**Objective:** The purpose of this study was to determine Saskatchewan Registered Dietitians' knowledge and comfort in supporting Muslims who fast during Ramadan. Dietitians' preferred methods of acquiring information to support this population were also determined.

**Methods:** An online survey was distributed to Saskatchewan dietitians to collect qualitative and quantitative data from January 31st to February 22nd, 2022.

**Results:** A total of 93 dietitians completed the survey. Of the participants, 71% (n = 65/92) reported they have never worked with Muslim clients or communities related to Ramadan fasting. Only 5% (n = 4/88) of participants agreed to feeling comfortable planning appropriate menus for clients and/or residents within their facility who choose to fast during Ramadan. Majority of participants (85%, n = 75) stated that they did not receive adequate training from their education program and 90% (n = 79) of participants stated they did not receive adequate training from their employer on how to support Muslim clients and communities who choose to fast during Ramadan. However, 65% (n = 57) of Saskatchewan dietitians strongly agree that understanding Ramadan is important to providing culturally appropriate and safe care. Participants suggested that webinars and practice guidelines would be opportunities to increase comfort in this area.

**Conclusion:** Most participants were not comfortable providing culturally safe care to Muslims who fast during Ramadan. This is the first study in Canada identifying dietitians' knowledge and comfort, thus, further research is needed.

**Significance:** Our results suggest a need for more resources and training to support dietitians in Saskatchewan to feel comfortable providing care to Muslim clients and communities who fast during Ramadan.

**Funded by:** None

## Developing Best Practices to Align Food Environments in Recreation and Sports Settings with Canada's Food Guide: A Scoping Review

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**Introduction:** Dietitians are becoming increasingly involved in promoting healthy eating in recreation and sport settings (RSS). Due to the complexity of food environments and the infancy of dietetic practice in RSS, uncertainty remains about ideal food environments for RSS.

**Objective:** This scoping review aimed to generate best practices for achieving healthy food environments in RSS to help design and evaluate healthy eating interventions.

**Methods:** A systematic search of peer-reviewed and grey literature was conducted in September 2021 using 6 databases and Google. After screening, data were extracted from 100 grey documents and 30 peer-reviewed publications themed by Canada's Food Guide key messages ('make water your drink of choice', 'eat a variety of healthy foods'; 'limit highly processed foods and beverages'). Data were synthesized across healthy food environment nudging strategies to generate best practices.

**Results:** Most documents had general healthy eating recommendations (66%), however, fewer explicitly specified vegetables/fruit (10%), whole grains (7%), protein foods (5%), or highly processed foods (15%). Water and sugary drinks were discussed in 35% and 34% of documents, respectively. Approximately 100 best practices were identified related to four principles: (i) healthy food/beverages are available; (ii) pricing and placement of food/beverages favours healthy options; (iii) promotional messages supports healthy eating; (iv) facilities are committed to supporting healthy eating and food environments. Indicators of best practices included measures of absolute and relative availability, affordability, visibility, variety, and portion size of healthy and unhealthy foods/beverages; social and commercial marketing; institutional/government policies; and facility infrastructure and equipment.

**Conclusion:** Numerous best practices related to healthy food environments and policies were identified. RSS can be targets for multi-component nutrition interventions to support Canada's Food Guide.

**Significance:** Findings from this review support dietitians working to design resources and plan interventions that support healthy food environments in RSS - an emerging practice area in Canada.

**Funded by:** Health Canada

## A Content Analysis of Webpages on Diet and Dental Caries Obtained Using Popular Internet Search Engines

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**Introduction:** Dental caries is the most common chronic disease worldwide; diet can both promote (e.g., sugar) and be protective towards dental caries (e.g., vegetables and fruit). The public commonly uses the Internet to access health information. Studies that have evaluated content of webpages on diet and dental caries available through Internet searches are limited.

**Objective:** To assess the readability and messaging regarding diet and dental caries obtained from webpages found using internet search engines.

**Methods:** Three internet search engines (Google, Yahoo, Bing) were each searched four times in June 2020 using Google Chrome Incognito mode with keywords related to diet and dental caries. Webpages on the first search results page containing information on diet and dental caries, and were not scientific/peer-reviewed articles were eligible for inclusion. Webpages were downloaded and underwent content analysis. Webpages underwent readability assessment using an online tool.

**Results:** Overall, 47 webpages were included; six webpages were Canadian. The average Flesch Kincaid Grade Level  $8.9 \pm 2.0$ . Sugar was mentioned in 94% of webpages; 64% of webpages identified dairy products and vegetables and fruits each as protective towards dental caries. Mixed messaging was present in some webpages when discussing certain foods (e.g., milk, dried fruit). Although most webpages promoted evidence-based information, non-evidence based recommendations (e.g., avoiding grains, consuming raw dairy) were common in 10 webpages.

**Conclusion:** These results suggest the public is likely exposed to evidence-based information but also potentially non-evidence based information and confusing messages when searching the Internet for information on this topic. The average webpage readability score was above a grade 6 level.

**Significance:** Collaboration between dietitians, oral health professionals, and others is needed to ensure the public is provided with the best/most accessible information on diet and dental caries when using the Internet to make informed health decisions.

**Funded by:** Saskatchewan Health Research Foundation Establishment Grant

## Blinding the Application Review for Dietetic Practicum Programs

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**Purpose:** Brescia University College is committed to promoting a diverse and inclusive dietetic profession. Post-graduate dietetic practicum programs are the gateway to the profession and could exclude eligible applicants due to biases in the application review process. Our purpose is to share strategies used to blind reviewers to applicants' identifying information in the application process to Brescia's Diploma in Dietetic Education and Practical Training and Master of Science in Foods and Nutrition programs.

**Process:** Applicants were assigned a unique identifier and identifying elements of the application were removed prior to review by the selection committee. The committee reviewed applicants and assigned scores. After the ranking was complete, names of the candidates were revealed.

**Systematic approach:** A blinded and non-blinded committee were formed. The blinded review committee (BRC) (n = 7) reviewed applications for selection into the programs. The non-blinded committee (NBC) (n = 4) had access to all applicant identifying information. Once applications were processed, identifying information was removed by the NBC before review by the BRC. The BRC scored the application packages. Casper, "an online, open-response situational judgment test" was included as an application requirement. To determine final ranking of applicants, z-scores from three components (academic average, application package, and Casper score) were considered. Once the ranking was determined, applicants were unblinded and offers were sent in the order of the ranking until all positions were filled. Applicants were offered the opportunity to share their racial identity; collecting this information will aid in tracking efforts to diversify the applicant pool.

**Conclusion:** Blinding elements can be successfully integrated into the applicant review processes.

**Recommendations:** This strategy can serve as a model for adopting a blinded admission process.

**Significance:** Diversity in the dietetic profession is needed. Blinding the application process to practicum programs to reduce bias is one strategy that can contribute to diversifying dietetics.

**Funding by:** None

### Quelles sont les conséquences des conflits reliés à la langue et l'offre active dans les équipes de soins de santé interprofessionnelles?

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réadaptation, Faculté des sciences de la santé, Université d'Ottawa, ON.

**Introduction:** Les barrières linguistiques posent d'innombrables défis aux équipes de soins de santé interprofessionnelles (IP), tels qu'une mauvaise communication, réduisant la qualité et la sécurité des soins.

**Objectif:** Examiner les conséquences des conflits reliés à la langue des soins dans les équipes IP.

**Méthodes:** Un examen des bases de données MEDLINE, PubMed, PsycINFO et CINAHL fut entrepris à l'aide de mots-clés pour identifier les études pertinentes. Covidence fut utilisé pour filtrer les articles recueillis. Une vérification fut effectuée par deux auteurs, puis une compilation par thèmes effectuée.

**Résultats:** Des 448 articles identifiés, 52 répondaient aux critères d'inclusion. Quatre conséquences principales des conflits reliés à la langue furent identifiées: 1) attentes non comblées en matière de soins menant à un manque d'accès à l'information et une diminution de la qualité des soins (n = 29); 2) relations interprofessionnelles difficiles causant un manque de confiance, de l'anxiété, une communication difficile et de l'insatisfaction (n = 37); 3) identité professionnelle en danger causant une remise en question de l'expertise et des conséquences légales (n = 15); et 4) conséquences organisationnelles défavorables menant à une qualité réduite de service d'interprétation, une confidentialité compromise et des disparités en matière de soins (n = 28). Tous les articles (n = 52) ont soulevé des barrières langagières entre les patients et professionnels de la santé. De plus, seulement un article discutait de conflits linguistiques entre les professionnels.

**Conclusion:** Les conflits liés à la langue et à l'offre de soins dans la langue du patient ont plusieurs conséquences variées sur l'équipe IP. Peu d'information existe concernant les conflits liés à la langue entre les professionnels.

**Importance:** Les diététistes doivent considérer la possibilité de conflits IP reliés à la langue des soins de santé et chercher à les atténuer pour favoriser l'accès à de meilleurs soins. La collaboration des équipes IP est nécessaire pour offrir des soins linguistiquement adaptés.

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### Registered Dietitians Practice Perspectives in End-of-Life Care within the Long-Term Care Context

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**Introduction:** Provision of high quality end-of-life nutrition care is critical to the quality of life of residents in long-term care (LTC) settings.

**Objective:** The purpose of this study was to explore registered dietitians (RDs) practices, attitudes, knowledge, and experiences of end-of-life nutrition care in the LTC context.

**Methods:** Interpretive description methodology guided this study, allowing an in-depth view of the roles RDs play at end-of-life for residents. Informed consent was obtained from participants. Semi-structured interviews were conducted via secure WebEx platform. Verbatim transcripts were analyzed using NVivo software.

**Findings:** Thirty RDs participated across five provinces (BC, AB, SK, ON, NB). Nine key themes were developed from the data: adapting the goals of care; contributing dietetic specialization to the interprofessional care team; lack of involvement in care team; supporting families; combatting misconceptions; uncomfortable conversations; balancing resident comfort and safety; navigating ethical concerns; and advocating for care needs. The RD role in end-of-life care is vast and varied. RDs bring strong expertise to the table but are not always invited. When they are, they may feel like they are in a challenging position navigating ethical considerations and ensuring the resident's quality of life is prioritized.

**Conclusion:** The study highlights the variety and complexity in the roles RDs play at end-of-life. Whether or not RDs are given opportunities to participate in someone's care at this stage depends on time, expertise, comfort level, and perceived role within the LTC home and care team. Enabling RDs to participate thoroughly and implementing guiding policies and procedures would contribute to increasing the quality of nutrition care provided for residents at end-of-life.

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### What Do We Mean by Evidence-Based?: Qualitative Publishing in the Canadian Journal of Dietetic Practice and Research

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**Introduction:** Qualitative research is essential to elucidating the complex role that food plays in the health and well-being of all Canadians, and is thus, a necessary complement to quantitative research. However, dietetic scholars have raised concerns about the lack of understanding, regard for, and theoretical rigour of qualitative research published in the Canadian dietetic literature, which may limit the availability and quality of qualitative research available to Canadian dietitians.

**Objectives:** To evaluate the qualitative research publishing record and the use of appropriate theoretical frameworks in Canadian dietetic literature.

**Methods:** A content analysis of all articles published in the last ten years (2012–2021) by the Canadian Journal of Dietetic Research and Practice (CJDRP) was conducted. Quantitative (i.e., number of articles per year) and qualitative (i.e., methodology, method, and theoretical framework used) data were

collected and analyzed using descriptive statistics and thematic analysis respectively.

**Results:** Between 2012 and 2021, 28.5% of all articles published in the CJDRP used qualitative methods; an additional 12.1% used mixed-methods and 1.5% used arts-based methods. Per year, an average 15.0% of the articles published in the CJDRP used qualitative methods. Few articles were theoretically informed.

**Conclusion:** Overall, qualitative research is underrepresented in CJDRP. Theoretically informed qualitative research, in particular, is lacking. Efforts to enhance the conduct and publishing of qualitative research may be needed to ensure that high quality qualitative research is available to Canadian dietitians.

**Significance:** Qualitative research is essential to establishing a robust evidence base, which is fundamental to evidence-informed dietetic practice.

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### Assessing the Quality of Dietary Assessment Methods Used in Nutrition-Focused mHealth Research for Cardiovascular Disease Management

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**Introduction:** Mobile Health (mHealth) interventions are capable of supporting dietary modification among patients with cardiovascular diseases (CVDs), a population with high rates of nonadherence. However, the ambiguous quality of dietary assessment methods used in mHealth intervention effectiveness studies limits the quality of their findings.

**Objective:** This secondary analysis of a systematic review assessed the overall quality and appropriateness of dietary assessment measures used in studies examining the impact of mHealth interventions on dietary adherence for the secondary prevention of CVD in adults.

**Methods:** The Ovid-Medline, Ovid Cochrane, CENTRAL, CINAHL, EMBASE, Scopus, Web of Science, ProQuest Dissertations/Theses and PsycINFO databases were searched. Studies were included if they involved adults with CVD, used mHealth interventions, measured dietary adherence, and were quasi-experimental or randomized controlled trials. Systematic reviews were excluded. After screening and review, thirteen studies and fourteen dietary assessment tools (one study used two tools) were evaluated for quality. Assessment criteria were developed to evaluate the quality of the primary dietary outcome measures in each study, informed by existing risk of bias assessment tools.

**Results:** The majority (n = 12) of dietary assessment tools relied on participant self-reports and two included objective urinary measures. Six tools were validated for measuring the nutrients/foods of interest, out of which, only three were validated for the intended populations. Only one tool was capable of assessing usual intake, with none of the remaining thirteen tools including adjustments to account for variation

in day-to-day intake. Only two studies conducted assessments of over or under-reporting of nutrient/food intake.

**Conclusion:** The identified mHealth intervention studies used dietary assessment measures that had a high risk of bias from subjectivity, systematic error and lack of validation, sensitivity, and day-to-day variation assessments.

**Significance:** These findings highlight the need for using higher quality dietary assessment measures in mHealth nutrition intervention research for CVD management.

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### **Performance militaire et facteurs de stress: effets individuels et combinés de la nutrition, du sommeil et du stress psychologique**

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**Introduction:** Les militaires subissent plusieurs facteurs de stress incluant des entraînements intensifs, des restrictions de sommeil, du stress psychologique et une limitation d'apport alimentaire.

**Objectif:** Examiner l'influence des facteurs de stress, dont la restriction d'apport alimentaire, le manque de sommeil et le stress psychologique sur la performance des militaires.

**Méthode:** Les thèmes principaux «militaires», «nutrition», «sommeil» et «stress», furent recherchés sur Embase, MEDLINE et PsychInfo. Les articles en français et en anglais publiés entre 2000 et 2021 furent importés dans COVIDENCE. Un tri par titre et abrégé fut suivi d'un tri par article complet. Une synthèse des résultats fut effectuée. Cinq-cent-trente-cinq articles furent importés, dont 194 duplicatas. Au premier tri, 293/341 articles furent exclus. Au deuxième tri, 26/48 articles furent exclus, laissant 22 articles.

**Résultats:** Les facteurs de stress identifiés chez les militaires comprenaient la nutrition inadéquate (n = 10), le manque de sommeil (n = 10) et le stress psychologique (n = 4). L'impact de ces facteurs de stress sur la performance fut aussi soulevé, dont ceux de la nutrition (n = 8), du sommeil (n = 5) et du stress psychologique (n = 4). Les facteurs de stress semblaient être interreliés (n = 7) et avoir un effet combiné défavorable sur la performance (n = 3).

**Conclusion:** Cette revue démontre que plusieurs facteurs de stress sont présents dans la population militaire, interagissent entre eux et ont un impact à la fois individuel et combiné sur leur performance.

**Importance:** Ces résultats indiquent la pertinence d'étudier davantage les facteurs de stress, dont le rôle de la nutrition. Vu la nature physiologique, psychologique et nutritionnelle

des facteurs de stress et la complexité des interactions entre ceux-ci, une équipe interprofessionnelle comprenant une diététiste favoriserait la santé et la performance des militaires. Des interventions faisant la promotion des saines habitudes de vie, tel le sommeil adéquat, la gestion du stress psychologique et la saine alimentation pourraient être envisagées.

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### **Implementing Non-Weight Focused Practice Approaches Used by Registered Dietitians in Canada**

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**Introduction:** Registered Dietitians (RDs) often use non-weight focused practice approaches (NWFAs) when working with higher weight clients. Broadly, NWFAs reject weight loss as an indicator of health with a view to reducing weight stigma and promoting long-term, sustainable behaviour changes. However, little is known about the barriers and facilitators RDs experience in implementing NWFAs.

**Objectives:** To describe the barriers and facilitators experienced by RDs related to the implementation of NWFAs.

**Methods:** A cross-sectional, national online survey of Canadian RDs who work with higher weight clients. Between-group analyses were conducted to determine the differences in barriers/facilitators among RDs.

**Results:** Overall 383 (82% white; 95% women) respondents completed the survey. Barriers more commonly reported by those who have not yet implemented NWFAs compared to those who have implemented NWFAs included: not having sufficient knowledge; NWFAs not fitting within treatment approaches of the clinical area; and NWFAs being difficult to implement. RDs who were implementing NWFAs reported that the main barrier to doing so was that clients were previously told to lose weight. The facilitating factors that supported NWFAs included: Clinical Practice Guidelines, publications, and educational materials; Dietitians of Canada support; and undergraduate and practicum training.

**Conclusions:** Lack of knowledge and expectations of RDs to focus on weight were the most significant barriers to implementing NWFAs in practice. More education related to NWFAs is important to increasing successful implementation of NWFAs.

**Significance:** Understanding the barriers and facilitators of implementing NWFAs is important to facilitating RD's implementation of NWFAs in practice, which may reduce weight stigma.

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