

Education and Training of Sport Dietitians in Canada: A Review of Current Practice

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ABSTRACT

Purpose: The study was undertaken to evaluate the education and training background of Canadian registered dietitians (RDs) practising in sport and exercise nutrition, as well as learning opportunities in the practice area.

Methods: A secondary analysis of a 2009 Dietitians of Canada (DC) Sport Nutrition Network survey of members (n=70) was conducted to describe members' educational background. Through the use of publicly available information, Canadian dietetic internship, undergraduate, and graduate sport nutrition educational opportunities were identified.

Results: Most (72.9%) respondents indicated they had some type of formal education in sport nutrition; learning from undergraduate courses and conference sessions was cited most frequently. The majority (86.7%) of accredited universities offered undergraduate courses in sport/exercise nutrition. No DC-accredited internship program offered sport nutrition as a mandatory rotation, while 15.8% of graduate programs in Canada had faculty with research interests in the area. Among respondents, 91.4% felt sport nutrition education in Canada was inadequate; all expressed interest in participating in more formal learning experiences, and 97.1% were interested in a specialized credential.

Conclusions: Canadian dietitians working in sport and exercise nutrition have diverse educational backgrounds and must direct their own learning. Improved career development pathways and more available formal education are desired and needed.

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RÉSUMÉ

Objectif. Décrire le niveau de scolarité et de formation des diététistes canadiennes (R.D.) pratiquant dans le domaine de la nutrition du sport et de l'exercice de même que les possibilités de formation offertes dans ce domaine de la pratique.

Méthodes. Une analyse secondaire réalisée à partir d'une enquête de 2009 du réseau Nutrition sportive des Diététistes du Canada (n = 70) a été menée afin de décrire le niveau de formation des membres. À l'aide d'information publique, les possibilités de formation en nutrition du sport, qu'il s'agisse d'internat ou de stage, ou de formation de premier cycle ou aux cycles supérieurs, ont été identifiées.

Résultats. La plupart (72,9 %) des répondantes ont indiqué avoir suivi une certaine forme de formation formelle en nutrition du sport. Les cours universitaires de premier cycle et les séances de congrès ont été les sources les plus souvent citées. La majorité (86,7 %) des universités agréées offrent des cours de premier cycle en nutrition du sport et de l'exercice. Toutefois, aucun programme d'internat agréé par les DC n'offre la nutrition du sport en tant que rotation obligatoire. Par ailleurs, 15,8 % des programmes d'études supérieures au Canada comptent au sein de leur corps professoral des personnes ayant de l'intérêt pour la recherche dans ce domaine. Les répondants considéraient, dans une proportion de 91,4 %, que la formation en nutrition du sport était inadéquate au Canada. En outre, la majorité souhaitait suivre de la formation formelle (100 %) et obtenir des titres de compétences spécialisés dans le domaine (97,1 %).

Conclusions. Les diététistes canadiennes qui pratiquent dans le domaine de la nutrition du sport et de l'exercice possèdent divers niveaux de scolarité et doivent gérer elles-mêmes leur apprentissage. Des possibilités de développement de carrière améliorées et une plus grande disponibilité en matière de formation formelle sont souhaitées et nécessaires.

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INTRODUCTION

Sport and exercise nutrition is a unique and complex dietetic practice specialty. An effective sport dietitian must have comprehensive knowledge of sport nutrition guidelines and dietary supplements, as well as an understanding of exercise physiology (1-3). A sport dietitian services a broad athletic population, including individuals active in recreational sports, young athletes, and varsity competitors, as well as Olympians, Paralympians and professional athletes (1-3).

Australia, the United States, and the United Kingdom have developed required credentialing and education pathways for those wishing to practise sport dietetics; however, no such educational requirements or credentials exist for Canadian registered dietitians (RDs) (4-6). A paucity of research is available on RD training and learning opportunities in this area.

PURPOSE

The study aim was to investigate the educational background of Canadian RDs practising in sport dietetics, and to describe the current formal education avenues available.

METHODS

An electronic survey was developed and administered by the Dietitians of Canada (DC) Sport Nutrition Network (SNN) to all 274 SNN members (Appendix 1). A pilot study of this survey was conducted with five SNN members to assess readability and understanding. Feedback was highly favourable and no changes were required or recommended. The survey's primary purpose was to permit an investigation of member interest in a national sport nutrition education event. Members were given one week to complete the survey. Because of time limitations associated with the planned educational event, efforts to improve the response rate were not possible. Data were collated by DC and provided to the SNN with no identifying respondent information. The SNN and DC gave permission for a secondary analysis of the data in order to permit a description of survey respondents' educational background. The study received University of Victoria Human Research Ethics Board approval.

Data relevant to educational background and training were selected from the SNN survey and analyzed (Appendix 1, Questions 1 to 9). The availability of sport nutrition education within Canadian accredited dietetic internships, undergraduate programs (DC-accredited universities), and graduate programs was identified. Internship and undergraduate programs were identified via the DC website (7,8). Graduate programs were identified from the Campus Starter website (9). Data (course descriptions, research, faculty names, and departments) were collected via publicly available information (websites), phone, and e-mail communication with program faculty. Findings were summarized as means and percentages.

RESULTS

Seventy (25.5%) SNN members completed the survey. Respondents indicated that, on average, 20.3% (range, 0 to 100%) of

Table 1

Sport performance level of clients seen by 2009 Sport Nutrition Network survey respondents (n=70)

Level of athlete currently seen in practice	n (%)
Recreational	
Weekend warrior ^a	56 (31)
Beginner	49 (27)
Provincial level	34 (19)
National level	19 (11)
Professional level	13 (7)
Other	9 (5)

^a "Weekend warrior" is a common term used to describe an individual who participates in sport or exercise somewhat infrequently when work commitments are not present, usually on weekends.

their dietetic practice was related to sport nutrition. The sport performance level of respondents' clients is summarized in Table 1. The majority (72.9%) of RDs reported formal sport nutrition education. When asked to describe their education, participants most often cited an undergraduate course in sport or exercise nutrition (n=29), DC conference sessions (n=38), and other conference sessions (n=32). A smaller number reported education from a sport nutrition-related internship rotation (n=7), a master's program in sport nutrition/exercise science (n=2), and the International Olympic Committee Diploma in Sport Nutrition (n=6) (10). Other types of formal learning (n=8) were described as "self-taught research," "International Society of Sport Nutrition certificate (CISSN)," the "Nancy Clark Workshop," and the "Sport Nutrition Advisory Committee (SNAC) workshop."

The majority (91.4%) felt that sport nutrition education in Canada was inadequate and all expressed interest in participating in formal learning experiences; 97.1% (n=69) were interested in a sport nutrition credential for Canadian sport dietitians, and 85.1% (n=67) agreed with the idea of a standardized Canadian sport nutrition certification program. Respondents were divided in their opinions about annual renewal of this credential; 59.4% (n=32) opposed the idea.

Most (86.7%) DC-accredited universities offered at least one undergraduate course in sport and exercise nutrition (Table 2). No DC-accredited internship programs offered sport nutrition as a mandatory rotation. Students with an interest in the area are advised to use elective placement rotations. A small percentage (15.8%) of graduate programs had faculty members with identified research interests in sport/exercise nutrition. The majority of faculty members were within exercise science and kinesiology departments.

DISCUSSION

This is the first Canadian study in which the educational background of dietitians working in sport and exercise nutrition is described, and in which available opportunities for education are explored.

Table 2

Undergraduate, internship, and graduate sport and exercise nutrition education opportunities in Canada

Type of education	Program response rate	Availability of sport nutrition education
DC-accredited university programs	15/16 (93.7%)	<ul style="list-style-type: none"> The majority (13/15, 86.7%) of programs offered one or more sport nutrition undergraduate courses that dietetic students could access. In most cases, sport nutrition courses are not a mandatory part of dietetic programming, and thus are taken as electives.
DC-accredited dietetic internship programs	25/30 (83.3%)	<ul style="list-style-type: none"> In all programs (25/25, 100%), sport nutrition was not offered within the mandatory rotations. Dietetic interns must use allotted elective or community rotations for sport nutrition education.
Canadian graduate programs ^a	63/63 (100%)	<ul style="list-style-type: none"> Few (10/63, 15.8%) program websites list faculty with research interests or graduate programs in sport/exercise nutrition. Two programs have RD faculty within a dietetics department. Eight programs are within exercise science, nutritional science, and kinesiology programs with non-RD faculty.

DC = Dietitians of Canada; RD = registered dietitian

^a Universities that are members of the Association of Universities and Colleges of Canada

The survey provides valuable preliminary observations. Respondents were educated in a variety of ways, with undergraduate courses and conference sessions reported most frequently. Access to formal learning experiences in graduate degree programs appears limited. An important finding was the overwhelming opinion that, in Canada, current sport nutrition education opportunities are inadequate. A majority of respondents were interested in further education in sport nutrition and sport nutrition certification programs.

Working with and learning from countries with established sport nutrition education and credentialing systems will help shape standardized and evidence-based education pathways for Canadian RDs (11). Recently, DC partnered with Sports Dietitians Australia to offer a four-day sport nutrition certificate course, which was fully subscribed by Canadian RDs within one week of being announced. This high level of interest and participation in such an educational event provides evidence to support the validity of the survey results.

Study limitations

In addition to a small sample size, the original intent of the survey was not for research. A more robust assessment of sport RDs' education could provide even more information. Further, a narrow scope of sport nutrition education opportunities (undergraduate, internship, and graduate programs) was identified. Investigation of other formal education opportunities such as college programs, certificates, and workshops is needed.

RELEVANCE TO PRACTICE

Sport nutrition is a dietetic practice specialty that requires specific education and training. Learning opportunities for Canadian RDs within the field are limited and often self-directed. The survey results reveal that RDs are very interested in formal training and education, as well as in a sport nutrition credential. Enhanced education and training in sport nutrition will

likely be popular and will result in RDs' ability to practise with competence and provide a well-informed, evidence-based service to their active clients.

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Appendix 1

Sport Nutrition Network 2009 member questionnaire

1. What percentage of your current practice is in sport nutrition?
2. With what level of athlete are you currently working? Choose all that apply.
 - Recreational (beginner)
 - Recreational (weekend warrior)
 - Provincial
 - National
 - Professional
 - Other
3. Have you ever had any formal sport nutrition education to date?
 - Yes/No
4. If yes, please describe it. Check all that apply.
 - University course in sport nutrition
 - Master's in sport nutrition/exercise science
 - Internship rotation
 - IOC Diploma in Sport Nutrition
 - Sport Dietitians Australia course
 - DC conference session or teleconference
 - Conference session on sport nutrition
 - Other:
5. Do you feel that you have adequate opportunities for sport nutrition education in Canada?
 - Yes/No
6. Are you interested in more formal learning opportunities in sport nutrition?
 - Yes/No/Not sure
7. Would you be interested in a sport nutrition credential for Canadian sport dietitians?
 - Yes/No/Not sure
8. Do you feel that a standardized Canadian sport nutrition certification program is needed?
 - Yes/No/Not sure
9. If there were a sport certification program, should there be annual renewal to be considered a sports nutritionist?
 - Yes/No/Not sure
10. Considering workload, travel, and personal commitments, during which time of the year are you most likely to attend a professional education event? Check all that apply.
 - Fall (September, October, November)
 - Spring (April, May, June)
 - Winter (January, February, March)
11. Considering workload, travel, and personal commitments, would you be willing to travel to one location on an annual basis?
 - Yes
 - Yes, but vary the location
 - No
12. Considering workload, travel, and personal commitments, what length of session do you prefer for a professional education event for sport nutrition certification training? Check all that apply.
 - Weekday – three to four days
 - Weekend/weekday combo – three to four days
 - Weekend – two and a half days
13. What do you consider to be a reasonable cost for a DC member to attend a four-day educational event with international speakers/experts, where meals and snacks are included?
14. Are you familiar with the four-day sport nutrition course offered by the Sport Dietitians of Australia?
 - Yes/No/Not sure
15. If "yes," would this be a course you would be interested in taking if it were offered in Canada?
 - Yes/No
16. Please indicate your current location – province and city.

DC = Dietitians of Canada; IOC = International Olympic Committee

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