

SPORTS NUTRITION KNOWLEDGE IN WELSH PARA ATHLETES ON PERFORMANCE PROGRAMMES

J. Postles

BACKGROUND

Sports nutrition plays a vital role in optimising training adaptations and enhancing athletic performance [1]. For para athletes, having an optimum diet is particularly important as they are often more prone to fatigue, stress, and poor performance [2]. Energy intakes in para athletes can vary significantly and this can lead to issues such as low energy availability, micronutrient deficiencies, injuries, and impaired training capability [3]. One of the reasons for this is a lack of education and understanding of what is required nutritionally for high performance [4]. Research suggests improving sports nutrition knowledge among para athletes could be a simple and effective strategy to help reduce their dependence on incorrect information whilst helping to improve dietary intake and performance [5]. To date, no studies have been conducted in Wales to understand the levels of nutrition knowledge of para athletes and we don't have a true picture of where they are getting their sports nutrition education from. Furthermore, with the recent withdrawal of Sport Wales nutritional support for Welsh athletes on performance programmes (excluding WCP), para athletes have even fewer opportunities for nutritional education.

AIMS & OBJECTIVES

This study aimed to assess the level of sports nutrition knowledge in Welsh para athletes on performance programmes with a secondary objective of understanding their sources of sports nutrition information.

1. Thomas, D.T., Erdman, K.A. and Burke, L.M. (2016) 'Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance', *Journal of the Academy of Nutrition and Dietetics*, 116(3), pp. 501–528.

2. Rastmanesh, R. et al. (2007) 'Nutritional Knowledge and Attitudes in Athletes with Physical Disabilities', *Journal of Athletic Training*, 42(1), pp. 99–105.

3. Scaramella, J., Kiri-hennedige, N. and Broad, E. (2018) 'Key Nutritional Strategies to Optimize Performance in Para Athletes', *Physical Medicine and Rehabilitation Clinics of North America*, 29(2), pp. 283-298.

4. Broad, E. (2019) *Sports Nutrition for Paralympic Athletes*. 2nd edn. Boca Raton: CRC Press.

5. Madden, R.F. et al. (2022) "Sports Nutrition Knowledge in Athletes with a Spinal Cord Injury and Coaches of Para Sports," *Applied Physiology, Nutrition, and Metabolism*, 47(11), pp. 1075–1084.

6. Trakman, G.L. et al. (2018) "Development and Validation of a Brief General and Sports Nutrition Knowledge Questionnaire and Assessment of Athletes' Nutrition Knowledge," *Journal of the International Society of Sports Nutrition*, 15(1), pp. 17–17.



METHOD

Research design: This research adopted a quantitative approach. It involved a descriptive cross-sectional study which aimed to describe the levels of nutrition knowledge among para athletes in Wales at one point in time.

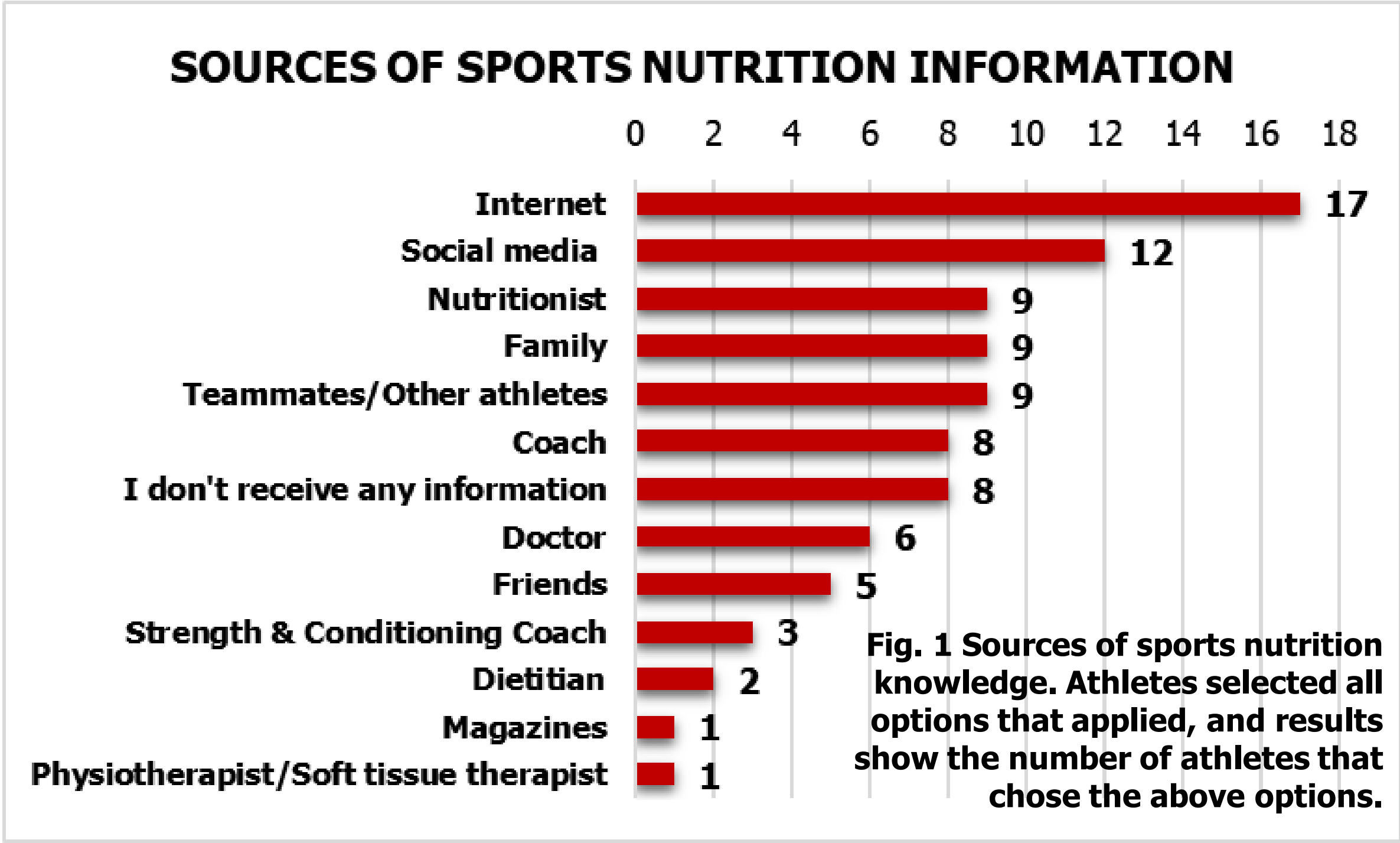
Participants: Welsh para athletes (18+ years) (n = 88) across 17 para sports, who are on a performance programme in Wales were invited to participate in an online questionnaire. Participants were recruited via email through their sports national governing body or Disability Sport Wales.

Data collection: The Abridged Nutrition for Sport Knowledge Questionnaire (ANSKQ) [6], a validated instrument with 35 questions (general nutrition knowledge (GNK) n = 11, sports nutrition knowledge (SNK) n = 24) was used to assess sports nutrition knowledge. Scoring of the ANSKQ involved 1 point for the correct answer and 0 points for the incorrect answer or 'unsure' option. The scoring categories were: ≤49% = poor, 50-65% = average, 66-75% = good and ≥ 76% = excellent. In addition, athlete-specific questions (n = 15) on demographics, disability, sporting event, and programme level, alongside questions on sources of sports nutrition education (n = 5) were asked.

Data analysis: The data was analysed using SPSS. Demographics, sources of information and scoring categories for ANSKQ questions were analysed based on frequency. Means and standard deviations for the overall score and two categories (GNK and SNK) were calculated using One-Sample T-Tests. Missing responses to ANSKQ items were coded as incorrect. Comparisons between athlete mean scores and workshop attendance, 1:1 nutrition support and nutritional qualifications were analysed using Independent Samples T-Tests. Comparisons between athlete mean scores and performance programme type were analysed using a One-Way Analysis of Variance (ANOVA).

RESULTS

- 34 Welsh para athletes (mean age 34 ± 14 years, 12 female, 21 male, 1 non-binary) from 9 para sports (Archery, Athletics, Basketball, Boccia, Bowls, Equestrian, Para Powerlifting, Rugby and Swimming) participated.
- The mean total ANSKQ score for athletes was 43 ± 13% which is reflective of “**poor knowledge**”. However, the mean score for the 11 GNK questions was higher at 53 ± 16%, rating their knowledge as “average” but their SNK was “poor” at only 38 ± 15%.
- 50% of athletes had attended a sports nutrition workshop and those who did (n = 17) scored higher 48 ± 9% compared to those who hadn't (n = 17, 38 ± 15%).
- Athletes who had received 1:1 nutrition support from a Nutritionist or Dietician (n = 10) scored higher at 48 ± 18% compared to those who hadn't (n = 24) at 41 ± 10%.
- Athletes’ **top sources of sports nutrition information were the Internet (49%)**, social media (34%, a nutritionist (26%), family (26%) and teammates/other athletes (26%). 23% (n = 8) don't receive any nutrition information at all.



CONCLUSIONS

Ensuring para athletes have solid sports nutrition knowledge could help optimise training adaptations and athletic performance. This study highlights there are significant gaps in Welsh para athletes sports nutrition knowledge and further education is required. Education will also help reduce athletes' dependence on potentially incorrect information learnt from current sources.