Exploring food choice influences in athletes and active populations in Ireland

Conor C. Carey[1], Eve M. Creedon[1], Fionn Molloy[1], Morgan Lewis[1], Ben Leen Smith[1] and Elaine K. McCarthy[1,2]

[1]*School of Food and Nutritional Sciences, University College Cork, Ireland*
[2]*INFANT Research Centre, University College Cork, Ireland*

Food choice determinants in the general population are influenced by sociocultural, sensory, nutritional, and economic factors, among others[1]. For athletes, these choices are further complicated by additional sporting and nutritional demands[2]. The objective of this study is to conduct the first large-scale analysis of the determinants of food choice in athletes and active individuals, and to conduct comparison of these determinants across competition levels and sporting categories.

Participants, aged over 18, residing in Ireland, and engaged in competitive sport or structured physical activity at least twice weekly, completed an online survey via Qualtrics. The survey included the previously validated Athlete Food Choice Questionnaire (AFCQ)[3,4]. The AFCQ comprises of 32 statements divided into 9 categories where athletes rate the frequency that their food choice is affected by various factors. Data were collected in February 2024, analysed using SPSS V28.0, with statistical significance set at $P<0.05$.

A total of 1,148 athletes (38% male, 62% female), median [IQR] age 26 years [21-40 years], reported participating in 7 hours [5-10 hours] of structured physical activity per week, spanning 32 sports. Participation levels ranged from non-competitive (32%) to those involved in international competitions (6%). Sensory appeal was highlighted as the most influential factor on food choices ($P<0.01$), followed by food and health awareness ($P<0.01$)—encompassing cooking ability, nutrition knowledge, and food planning. Performance-related factors were joint second most influential, with no significant difference with food and health awareness ($P = 0.30$). This included statements related to choosing food that enhances fuelling for competition, recovery and feeling energetic during training.

Ordinal logistic regressions showed variables such as age, gender, education level, and sporting variables such as competition level, sport type and average hours of exercise per week showed distinct impacts on food choice. For example, the nutritional attributes of a food impacts choice more as participants got older (Odds Ratio (OR) 1.02, 95% CI [1.01, 1.04], $P = 0.01$). However, the nutritional attributes had less influence if the participant was born in the USA (OR 0.37, 95% CI [0.16, 0.86], $P = 0.02$) or the rest of the world (OR 0.38, 95% CI [0.18, 0.81], $P = 0.01$) compared with those born in Ireland, and if the participant was a team sport athlete rather than an endurance athlete (OR 0.55, 95% CI [0.37, 0.81], $P<0.01$).

The determinants of food choice for athletes are multifaceted and more complex than those of the general population, attributed to additional exercise-related factors. Despite this complexity, sensory appeal remains the predominant influence across all sport types and competition levels. Understanding the dynamics of this food choice matrix in athletes allows for more personalised nutrition advice and identification of those at risk of poor dietary practices that may negatively impact upon their performance and health.

References

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