

Reflection Essay

I acknowledge the use of Grammarly (<https://www.grammarly.com/>) on 12th March 2026 to check my work using the prompt(s):

1. Please check the following text for readability, grammar and syntax.

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes, and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

I acknowledge the use of **Gemini** (<https://gemini.google.com/>) between **28th April** and **10th May 2026** to assist in the structuring and academic refinement of my reflective paper. The AI was used as a collaborative tool to:

1. **Refine the academic tone** of my originally drafted paragraphs.
2. **Verify the correct application of statistical terminology** (e.g., Cronbach's alpha, ANOVA, and Paired-samples T-tests) in relation to my specific research findings.
3. **Identify appropriate sections** for critical analysis based on the Driscoll (2007) reflective framework.

I confirm that the **core data, personal reflections, and research findings** presented are my own. I have not presented any AI-generated text as my own work without substantive editing and personal input. I confirm I have copies of my initial drafts, SPSS outputs, and the full conversation history of this interaction, which I can provide as evidence if required.

Introduction

Reflective practice has become an accepted and generally essential part of professional practice in a number of professions (Picknell *et al.*, 2024). On completion of the master's programme, I will become eligible to join the Sport and Exercise Nutrition Register held by the British Dietetics Association, and reflective practice is a concept they expect their members to engage in (BDA, 2026). To truly gain understanding and furtherance of practice from the reflective process, it needs to incorporate critical thinking (Thompson and Thompson, 2023). This requires deeper questioning of the process, not just around the task being completed, but the thought processes and context in which the events occurred. Reflective practice challenges the why behind the substantive elements at the core of the matter being reflected upon (Thompson and Thompson, 2023).

I am centring my reflection around key themes; firstly, the alignment of my study and analysing whether I took the right approach to reach the aims I set for the research. Secondly, the experience of conducting a piece of research, for me, was the first time I had conducted a primary piece of research, and so it was very different from anything I had done in the past. Within this, I will also be considering the ethical implications of completing research. The final theme I will be reflecting upon will be the implications of this piece of research on any future study I undertake, and also from a professional practice standpoint, and how this would link in with that.

Reflective practice is an important part of the learning-by-doing ethos. In the learning process, you cannot simply think about something from a theoretical perspective or just do it from a practical perspective (Gibbs, 1988). But rather take both the theoretical and practical side and merge them before reflecting to see what has been learnt and what can continue to be learnt for the future. This way of thinking is evident in reflective models such as the Gibbs Reflective cycle (Gibbs, 1988) or Driscoll's model of reflection (Driscoll, 1996 as cited by McMorrow, 2020). There are other learning and reflective cycles out there; for this piece of work, Driscoll's model of reflection will be used, which has three stages: What? So What? Now What? The study design (The What), the experience and ethical consideration of the research (That What and So What section) and then the implications for the future (Now What).

What

The question I was addressing with my research was 'What is the nutritional knowledge of recreational runners?' This question falls within the positivist paradigm of research as it had an objective measure (Drummond, 2022). The idea being that someone either has knowledge or they do not. In the case of recreational runners, it could be that they either know the number of grams of carbohydrates they need to consume per hour or they do not (Thomas *et al.*, 2016). With this measure of knowledge in mind, a quantitative approach to the research topic was the most appropriate measure for this. Using a questionnaire allows for higher levels of validity and replicability between studies and sample sizes than non-standardised approaches (Drummond, 2022).

Nutritional information, along with sports-specific nutritional knowledge, does have its share of nuances, and within the space, there are arguments for fat adaptation and using fat as the primary fuel source instead of carbohydrates (Volek *et al.*, 2016). An athlete's nutritional knowledge can be influenced by these niche views. However, to have true knowledge and be able to make informed choices about nutrition, an athlete would need to know what the recommendations are and why they exist. So, although

these niche views exist and may have merit in some circumstances, knowing them without the context and nuance associated with them would not constitute true knowledge. The positive paradigm in which my research was situated relies on standard guidance defined by consensus (Maughan *et al.*, 2018).

Due to a lack of research completed using validated questionnaires (Janiczak *et al.*, 2022), I researched this concept and found the Sports Nutrition Knowledge questionnaire (SNKQ) (Trakman *et al.*, 2017) and the Platform for Evaluating Athletes' Knowledge in Sports Nutrition Questionnaire (PEAKS-NQ) (Tam *et al.*, 2021). Both the PEAKS-NQ and the SNKQ originate from research done in Australia, and both had long question sets of 94 and 89, respectively (Tam *et al.*, 2021; Trakman *et al.*, 2017). After some guidance from the lecturer around long questionnaires and how this correlates with low response rates, I came across an abridged version of the SNKQ (A-NSKQ), and so this was the version I settled on to try to improve response rates and also frustration or boredom impacting results due to a long question set (Trakman *et al.*, 2018).

Once I had collected the data and entered it into SPSS for analysis, I had to decide which analytical tests to run. I had obtained a reasonable data set with 32 responses, and I had collected some demographic and additional information, such as gender, age, and 5K time, as well as where the participant got their nutritional information from. I opted to convert the data for raw numbers into percentages, taking into account both the total score and the two subgroups of general and sports nutrition. Using the mean percentage average, it gave me clear data that could be compared. In the A-NSKQ, there were 11 questions related to general nutrition and 23 questions related to sports nutrition. As such, this data could not be directly compared using a mean score and needed to be converted into percentages.

The first analysis was to categorise the finishers into their knowledge grading (poor, average, good, excellent) as this is the data that would ultimately give me the answer to the research question of 'What is the nutritional knowledge of recreational runners' To add further context to this I then ran a paired samples T-Test which allowed me to compare the general and sports nutrition knowledge section to identify if there was a difference between the 2 and to see how the knowledge in these 2 areas compared (Kranzler and Anthony, 2022 p120-121). This highlighted that generally the participants had an 'average' level of knowledge when it came to general knowledge, scoring an average of 57.95, and the sports nutrition knowledge fell into the poor category (43.49%). This would support the theory present in a study by Hansen *et al.* (2014) that lack of knowledge could be a reason for recreational runners under-fuelling in events. It also strengthens that running interventional/educational programs with recreational

runners could enhance their nutritional knowledge and therefore their fuelling practices (Mattar *et al.*, 2024).

The final analysis test I ran was a one-way ANOVA Test, and this compared whether where participants got their nutritional information from impacted their score (Kranzler and Anthony, 2022 p129). This would allow me to identify where recreational runners are currently getting their nutritional information from and the impact this has on their knowledge level. Previous research had identified that coaches generally lack sufficient nutritional knowledge themselves, and yet athletes tend to seek advice from them regarding nutrition (Botsis & Holden, 2015). In the participant group for this study, only one runner got nutritional information from a coach, and they had the second lowest average score (31.43%), only scoring higher than those who were not sure where they got their information from (25.71%). The highest frequency from where runners got their nutritional information from was the internet (16), followed by social media (6) and generative AI models (4). As my questionnaire was posted on the internet and utilised social media it is not necessarily surprising that these came out on top, as this could have been impacted by selection bias (Bethlehem, 2010). However, a 2016 study by Hatch *et al.* concluded that online recruitment was no more prone to selection bias than other forms of recruitment.

So What

One of the concerns I had throughout the research process was that of a power imbalance, which is usually associated with qualitative research; however, due to my circumstances, I was aware of it from a participation perspective (Olmos-Vega *et al.*, 2023). My study was looking at recreational runners, and as a member of a local running group, I had access to them. However, as a coach within the club, there is also a potential power imbalance present. Poulton (2023) discusses the challenges of being an 'insider-researcher' and how being self-aware and acting with virtues such as sincerity and respectfulness can reduce the chances of unethical behaviour. I was conscious of my position in the club and in posts on our club's Facebook page, ensuring I stayed factual and highlighted that participation was on a voluntary basis. When at club training sessions, if I spoke about what I was doing, I never directly asked club members to take part and allowed them to initiate participation themselves. This maintained a degree of separation, especially during training sessions when that power imbalance would have been at its highest. By not soliciting participation from club members, it minimised pressure on anyone to take part, and with the link being on the club Facebook page, they had to actively seek it out in order to take part. The risk of someone taking part who was not invested in the research could give the potential for

the questionnaire to have been rushed, and therefore, inaccurate responses provided. This would have impacted the results and potentially skewed the data.

I was concerned that having a small sample size of runners would make the data I collected unreliable, which can be seen with smaller sample sizes (Columb and Atkinson, 2016). The Cronbach's alpha score for the data I collected was .574 which is on the lower end of the reliability scale (0-1) (Tavakol and Dennick, 2011). Although a direct comparison with the original validation study cannot be done due to the use of different reliability calculations, a general indication can be seen. The original study by Trakman *et al.* (2018) had an overall reliability of .8 and a general nutrition section reliability of .6 using the Rasch model. The original data had a reliability score just over the accepted range, whereas mine fell just below the accepted range (0.7-0.95) (Tavakol and Dennick, 2011).

Data reliability can be impacted by a number of factors, including the demographics of the participants. Trakman *et al.* (2018) had a sample that included athletes who had completed nutrition studies, whereas I excluded participants from my study who had nutrition or sport science-related undergraduate degrees or higher. I made this decision based on wanting to get a clearer idea of the knowledge of the average runner by controlling the confounding variables that could influence the data.

I found it harder to gather responses than I had thought. I distributed the link using my personal Instagram account and then posted it in Facebook groups, including my own running club group. I came across a few issues with Facebook groups, including groups not allowing links to be posted, posts needing approval, and groups not allowing research posts without approval from admins. Secondly, due to the anonymous nature of the study, when posting about it the posts got little to no engagement, which meant the algorithm did not actively show them to users (Singh, 2023). This would also have had an impact on how many people saw the post. Having gone in with a view of thinking I would have the 64 participants I set as a figure, I easily found it much harder and ended up with half this number.

I did consider reaching out to some runners who had larger followings than I do; however, I did not feel overly comfortable with asking someone else to do this. It also raised ethical concerns for me, as if someone else were posting the link on my behalf, I would have less control over the phrasing of any posts. I had been cautious in my own posts to avoid using language that could be seen as persuasive, and especially with my role as a run coach within a club, I was very aware of using neutral language when speaking about the study. Due to these reasons, I chose not to ask anyone to post the link on my behalf.

Now what

As a sports nutrition practitioner with an interest in running, I am likely to find myself working with recreational runners. During this research project, having chosen to exclude those with nutritional qualifications, it has given me more of a more realistic idea of the nutrition knowledge level I am likely to come across in practice. More than half of the participants (56%) in my study had a poor nutritional knowledge level, and only 1 (3.1%) scored above average. Prior to this, I had a preconceived misconception that people generally understood the basics of nutrition. So, although around 41% came in at the average level, it highlights significant gaps which I can use to guide my professional practice down the road. Being able to assess the nutritional knowledge of the athlete I am working with will be essential for being able to guide them in making nutritional choices that suit their goals (BDA, 2026b). This study has highlighted the need to ascertain this, and assuming an athlete has a higher level of knowledge than they do could leave them unsupported and unable to reach their goals.

Assessing an athlete's baseline nutrition understanding in terms of both general and sports-specific knowledge will be important in being able to support them. However, using a formal knowledge questionnaire will not be essential in all cases. Some of the sports nutrition questions are not necessarily applicable to everyday runners. The A-SNKQ asked about supplements in terms of which ones were beneficial for performance and which ones were banned substances within sport. These may be relevant questions to elite athletes or top-end amateur athletes that are not necessarily applicable to the majority of recreational runners who are running 4-plus-hour marathons.

In future research, I would focus less on social media as a way of distributing a survey or questionnaire, although I still feel that social media can be a good way of getting something out there. I would need to be posting it to larger numbers of people than I was and actively engaging with group admins in advance before doing this. I would rely more on emailing out to groups of runners, such as running groups. I would consider actively approaching runners online with a larger following and potentially asking them to share a post I had created on the study. I would avoid someone else writing anything on my behalf that I might not agree with. I would also consider contacting other running groups and asking if I could come along in person to an event and speak to runners about the research, and gain participation that way. If I were a questionnaire having a QR code they could scan and then follow would be a potential way to do this while still not adding any pressure for someone to take part.

Following the end of this module, my final piece of work to complete my master's degree will be my dissertation. While doing the literature review and proposal for this study, I came across a couple of ways I could expand on the topic. The research I completed suggested that recreational runners, like other groups of both elite and non-elite athletes, lack nutritional knowledge, with a systemised literature review from 2022 showing that, in general, athletes had poor nutrition knowledge (Janiczak, 2022). There were a couple of studies that concluded more research was needed on intervention programs for athletes and how this could improve nutrition and fuelling of events (Mattar *et al.*, 2024). Taking a concept like that forward in my dissertation would allow me to develop the research I have already done and start to produce a program to support recreational runners. Knowing that this issue exists and just ignoring it does not feel like it would serve the academic world or the recreational running population well. Data suggests that running, and in particular marathon running, is growing in popularity, meaning more recreational runners are lacking in sufficient nutritional knowledge to support their training and racing.

The alignment of this study within the positivist paradigm allowed for the objective measurement of recreational runners' nutritional knowledge using the A-NSKQ. The tool had been validated in both a long version and an abridged version. The questionnaire allowed for a measure of knowledge that could then be compared to a scale. The research was completed by sending out the questionnaire link on social media platforms, where participants were invited to complete the questionnaire. There were a number of issues with using social media to gain responses, including the reach of posts and the challenges behind Facebook group rules.

One of the biggest challenges I faced was a potential power imbalance between my role as a running coach within my local running community and the role of the researcher. This type of 'insider-research' power imbalance is not uncommon within the research and can be managed by having a self-awareness of that power imbalance and holding true to personal virtues such as respectfulness and sincerity (Poulton, 2023). To ensure the research stayed ethical, conversations around the research were kept general with no direct in-person invites to participate being made during sessions where a power imbalance would have been higher.

In terms of impact on the future, the study itself highlighted that nutrition knowledge is generally poor within the recreational runner community. This is supported by other research. There is scope to build on the study to see the impact of an interventional programme and whether this improves the nutritional knowledge of recreational runners. The lack of awareness around sports nutrition knowledge could account for the under-fuelling highlighted in the literature. From a professional perspective, it highlights

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the importance of meeting athletes where they are in terms of nutritional awareness and knowledge. This includes general nutritional knowledge along with sport-specific nutrition guidelines.

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