

Reflective essay

Introduction

The study aimed to explore and gather more information on the overall knowledge of supplementation among amateur rugby players in West Wales. It also evaluated their attitudes toward and usage of supplements to provide a comprehensive understanding of the supplementation methods and strategies employed in amateur rugby.

This paper will outline the process of creating the research proposal, explaining the rationale behind selecting the topic and reviewing existing knowledge on supplementation in lower levels of sport. It will also address the challenges encountered during the research and describe how these were overcome, while discussing personal learning growth from the experience. To finalise, potential direction for future research will be evaluated alongside a conclusion.

The research is significant for amateur sports as it helps assess whether players are informed about supplementation and whether further investigation is needed in this area. By gaining such information, this allows clubs to identify potential gaps in their players knowledge and provide adequate training to improve this.

Research proposal development

Initial ideas and Motivation

The initial ideas and motivation for this study stemmed from my undergraduate dissertation research. That study aimed to examine the nutritional intake of amateur rugby players over a 3-day data collection period using questionnaires and written food diaries. It revealed several important insights, particularly highlighting that most players were not adequately fuelling their bodies. Although supplementation was briefly explored, it was not the focus of the study. However, the findings indicated a lack of understanding regarding supplement use, timing, and dosage. This prompted me to pursue a more in-depth investigation into players' knowledge and attitudes towards supplementation in a separate study, which involved a larger sample size and reached more teams across West Wales.

Research question

The research question, "Knowledge, prevalence, and attitudes of West Wales amateur rugby players towards supplementation," seeks to explore three essential aspects. First, "knowledge" aims to evaluate the players' understanding of supplementation, including whether they have undertaken any personal research on the topic, and if so, what sources they have relied on for information. This section will also assess their awareness of proper supplement dosages, timing, and the potential benefits or risks associated with supplementation. Questions will delve into their level of expertise and any misconceptions they may have regarding the safe and effective use of supplements. By gaining insight into their understanding, this part of the study seeks to highlight any gaps in knowledge that could influence supplementation practices among players.

Second, "attitudes" seeks to investigate players' perceptions, beliefs, and approaches towards the use of supplements. This will include exploring whether players view supplementation as a necessary part of their training and performance enhancement, or if they hold reservations about its use. For players who do not currently use supplements, questions will aim to uncover the reasons behind their decision, such as concerns over health risks, cost, or perceived lack of need. The section will also examine players' motivations for using supplements, including performance goals, recovery, injury prevention, and overall well-being. Understanding these attitudes will provide insight into the underlying factors that shape their supplementation habits.

Finally, "prevalence" focuses on determining how widespread the use of supplements is among amateur rugby players in West Wales. This will involve gathering data on how many players incorporate supplements into their routines and how frequently they use them. The study will also explore whether the use of supplementation varies based on factors such as age or experience level. By measuring the extent to which supplementation is a common practice within this group, the research aims to identify trends or patterns that could inform future strategies for promoting safe and effective supplementation practices within the rugby community.

Literature review of the topic

In reviewing the literature, several key terms were used to ensure the most relevant previous studies were identified, including 'rugby, supplementation, supplements, knowledge, amateur, prevalence, attitudes, UKAD, and sports.' Initially, it was essential to understand the rules and regulations applicable to all athletes, guided by UKAD and WADA codes. A study by Hurst, Ring, & Kavussanu (2020) provided valuable insight into the efforts made to establish clean sports programs aimed at preventing doping in junior athletes.

As I expanded my literature review to include rugby, it became evident that there were few studies focused on amateur rugby players' knowledge of supplementation. However, numerous studies on professional athletes' nutritional habits also discussed supplementation use (Black, Black, and Baker, 2018; Bradley et al., 2015). Eventually, I found a study by Sanches-Oliver et al. (2020) that compared the supplementation practices of both professional and amateur players, offering insights into potential knowledge gaps between the two levels. These studies helped me formulate a hypothesis that amateur rugby players' knowledge of supplementation was insufficient.

Additionally, other studies outside of rugby highlighted the general lack of supplementation knowledge among amateur athletes. For example, Jovanov (2019) found that many young athletes were using supplements, but their reasons for doing so and their sources of information raised concerns. After completing my literature review, I felt confident that I had gathered enough evidence to support my rationale for choosing this research topic.

Methodology rationale/ Research methods literature review

To begin my research methods literature review, I compared studies on similar topics to gain insight into the research designs used and understand what had been successful in past studies. This process helped me identify effective methodologies and inform my approach. Given the limited time available for data collection, I needed to carefully consider and plan the methods to ensure that the data collected would be of high quality and yield meaningful results. After weighing my options, I decided to use questionnaires to gather quantitative data for the study.

Questionnaires were an appropriate choice as they allowed me to assess players' knowledge of supplementation in a structured manner, including areas such as

supplement types, amounts, timing, rationale for use, and any potential misconceptions. The design of the questionnaire was crucial to ensure that the responses would be consistent and reliable across participants. In a study by Jovanov (2019), a similar questionnaire was used and validated for reliability through the Cronbach's Alpha measure (Bonett and Wright, 2015), which provided an established method for ensuring accuracy in responses.

Given that this questionnaire addressed the key areas I wanted to explore, I felt it was suitable for my research. However, to tailor it more specifically to the context of amateur rugby players, I decided to pilot the questionnaire before commencing data collection. This pilot allowed me to evaluate the clarity of the questions, identify any areas that might need adjustments, and ensure the questionnaire was well-suited to the target group, ultimately improving the reliability and validity of the data I collected.

Challenges encountered

Challenges with the literature

My initial challenge emerged when I searched for studies that specifically examined the supplementation knowledge of amateur rugby players. Many studies have explored the supplementation habits of athletes across various sports, but the number of studies focused specifically on amateur rugby players was certainly limited. This lack of direct research indicated a significant gap in the existing literature, highlighting the need for further exploration in this area. While broader research on athletes' supplementation habits is valuable, it didn't capture the unique perspectives and needs of amateur rugby players, who may have different levels of knowledge, access to resources, and training environments compared to professional athletes.

In addition to the lack of directly relevant studies, I encountered issues with accessing full text articles. Some of the studies I found only offered limited amounts of the studies to view for free, limiting my ability to engage fully with the material. Others were either not peer reviewed or came from sources with questionable credibility, raising concerns about the reliability of the findings. This posed a further

challenge in ensuring that the literature I reviewed was trustworthy and of academic quality.

As a result, at the beginning of writing the proposal I had to rely on the available peer reviewed literature, which included research on the supplementation knowledge of junior athletes (Jovanov, 2019) and the supplementation habits of professional rugby players (Black, Black, and Baker, 2018; Bradley et al., 2015). While these studies provided some useful context, they did not fully align with the focus of my research, which is specifically on amateur rugby players. However, towards the end of my literature review I came across the study by Sanchez et al (2020) that compared knowledge between professional and amateur rugby players knowledge and habits of supplementation. This study was key in providing valuable knowledge on what has been discovered already on the topic, and the study also confirmed my hypothesis.

I gained my questionnaire from the study by Jovanov (2019) that somewhat aligned with the type of information I was seeking. However, before using it, I needed to ensure its validity and reliability for my research purposes. This involved reaching out to the company that developed the questionnaire to confirm its scientific foundation and relevance to my study. By verifying its validity, I could ensure that the data collected would be robust and accurate, adding credibility to my research findings.

Despite these challenges, the process of gathering and validating literature and tools ultimately provided a clearer direction for my study.

Methodological challenges

Overall, the methods used provided enough data and an insight into amateur rugby players knowledge on supplementation in West Wales. However, wholistically reflecting on the process, there were a few challenges that occurred relating to the methods of collecting the data. The questionnaires were piloted with the original questionnaire used in Jovanov (2019) study. However, feedback from piloting the questionnaire with a couple of amateur rugby players highlighted the confusion with some questions and the unnecessary use for second question asking gender (due to the study being on male amateur players). Therefore, changes were made to the questionnaire before the google sheets link was sent out to participants.

Overall, the data collection method used succeeded in highlighting significant gaps in the players' knowledge, suggesting that their understanding was not as comprehensive as needed for safe supplement use. However, while the questionnaire was effective in gathering a large amount of data in a relatively short time, it primarily provided quantitative insights, such as where players got their information from, without capturing the reasons behind these choices. The end of the questionnaire provided further insight into the reasonings behind the lack of knowledge, 84% of participants voted that they had not attended a safe supplementation/ anti-doping workshop/presentation before.

Although the questionnaire provided valuable baseline data, it became clear that a mixed methods approach combining both quantitative and qualitative data would have been more appropriate for this type of research. Incorporating interviews into the data collection process would have allowed me to explore the players' thought processes, beliefs, and attitudes towards supplementation. This deeper, more contextual understanding would have clarified the reasons behind the gaps in knowledge. By combining both questionnaires and interviews, the research could have yielded a more comprehensive picture of amateur rugby players' knowledge, offering a nuanced understanding that could better inform future studies. However, due to the size of this study, interviewing all the participants would have been very difficult therefore the methods used overall were deemed appropriate, with an alternative mixed methods approach being more suitable for a study with longer to complete.

Time constraints/ Ethical issues

Another challenge faced was one that was anticipated with the data collection method of using questionnaires. Several players did not fill out the questionnaire. I made sure to stick to my timeline and with the help of the team's coaches to send several reminds sent out to the players for them to complete the questionnaire, enough data was gathered.

Fortunately, I encountered only one ethical issue during the process. By using a validated and piloted questionnaire, I was able to avoid including questions that might have seemed intrusive or emotionally triggering for participants. One of the

coaches I contacted was enthusiastic about involving both the first team and the youth team in the study. While I was interested in collecting as much data as possible, my approved ethics application only permitted research involving adults. Thankfully, this was the only ethical concern I faced, and the coach was very understanding when I explained why the youth team couldn't be included.

Personal learning and growth

Research skills developed

By carrying out this study, I have acquired and strengthened a range of transferable skills that will benefit both future research endeavours and my professional development within my chosen career path. Engaging with existing literature has expanded my awareness of the current knowledge surrounding athletes and their understanding of supplementation. Additionally, the process of designing and refining my methodology has deepened my grasp of epistemology and enhanced my appreciation of how research is interpreted across various paradigms.

My communication skills were also significantly improved through the practice of interviewing fellow students prior to finalizing my data collection methods. Although I did not use interviews in my proposal, this experience not only highlighted the importance of effective personal interaction but also helped me recognize the complexities involved in conducting interviews. In particular, the interviews deepened my understanding of the need to remain neutral and avoid bias while gathering meaningful and reliable information, an essential skill for any future role involving direct engagement with people. My communication skills were further developed when I reached out to several coaches and team members to invite them to participate in the study.

My technological proficiency was also enhanced throughout the research process. I gained practical experience using Microsoft Forms to design and distribute my questionnaire, which helped me understand how digital tools can streamline data collection. Furthermore, I utilised SPSS to analyse the responses, allowing me to engage with basic statistical techniques and interpret quantitative data effectively. This exposure to data analysis software has not only strengthened my research

capabilities but also provided me with a valuable skill set that I can apply to future academic and professional projects.

Knowledge gained

Conducting this study allowed me to develop a range of valuable transferable skills, while also generating new insights into the knowledge amateur rugby players in West Wales have on supplementation. Out of the 25 participants surveyed, 56% (14 individuals) reported currently using sports supplements. The primary reason cited for supplement use was to enhance performance, notably, none of the participants indicated using supplements for injury prevention. To explore potential relationships between variables in the data, I conducted several Chi-squared tests using SPSS, as the data collected was nominal. One key test examined the association between age and attendance to a workshop or presentation on nutritional supplements and/or anti-doping. The results revealed a statistically significant p-value (.001), indicating that younger players were significantly less likely to have attended such educational sessions. This highlights a critical need for increased investment in educational initiatives, particularly for younger athletes, who may lack exposure to essential information on supplementation and anti-doping areas that are crucial to the health and performance of all athletes at all levels.

The results also indicated that among the 44% (11 individuals) who did not take supplements, 64% cited a lack of knowledge as the primary reason for their decision. This suggests a significant gap in awareness or education regarding supplementation. Further supporting this, another survey question revealed that 8% of participants believed that no supplements carry any health risks, highlighting misconceptions about the potential dangers associated with improper or excessive supplement use. These findings suggest that increased education and reliable information about supplementation could help individuals make more informed decisions regarding their health.

What to improve

Overall, I'm satisfied with how the data collection and research process unfolded for this project. The planning and execution went smoothly, and I was able to gather useful data that helped address the core research questions. However, there are

several areas that could be improved for future research projects. From the outset, I committed to a quantitative approach, using questionnaires as the primary method of data collection. While this allowed for efficient data gathering and straightforward analysis, in hindsight, I now recognize that a mixed methods approach incorporating interviews alongside questionnaires would have provided a more comprehensive understanding. Interviews would have added valuable context and depth to the data, particularly in exploring the knowledge, attitudes, and personal experiences of these amateur players regarding supplementation.

Looking back, the structure and design of the questionnaire could also have been enhanced. Many of the questions were multiple choice, which limited participants' ability to elaborate on their thoughts or provide nuanced responses. Including more open-ended questions would have encouraged more detailed feedback and potentially uncovered insights that were not initially anticipated. Overall, these reflections highlight the importance of methodological flexibility and careful question design in producing richer, more informative research outcomes.

Conclusions

To conclude, I am pleased that the project successfully gathered valuable information and data on the knowledge and understanding of supplementation among amateur players. These findings contribute to the existing body of research on amateur athletes by offering fresh insights into an area that remains relatively underexplored. While the study had its time limitations, the data collected serves as a useful starting point for future research and highlights the need for improved education around supplementation at the amateur level.

Additionally, the process of reaching out to rugby teams and coordinating participation gave me experience in engaging with sports clubs. This not only enhanced my communication and professional skills but also provided a clearer understanding of the logistics involved in conducting research within a sporting context. Overall, the project has been both informative and rewarding, and it has helped to develop my skills as a researcher while contributing meaningfully to the field.

Word count: 2943

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