

# Understanding Nutritional Behaviour in Athletes through the Knowledge-Attitude-Practice Model

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**Abstract**—Sports nutrition is crucial in improving athletes' performance, recuperation, and health in general; nevertheless, discrepancies in nutritional habits among athletes have been an issue of great concern. The presented research is expected to analyze a nutritional behavior with the help of the Knowledge-Attitude-Practice (KAP) model, with the help of a systematic review of the latest research. An orderly SLR method was used in accordance with the PRISMA requirements, which led to the incorporation of twelve peer-reviewed studies that were published between 2020 and 2025. The chosen articles underwent thematic synthesis analysis to find some trends in nutrition knowledge, attitudes, and practices among athletes.

The results have shown that the overall level of nutritional knowledge of the athletes is moderate, with a positive attitude towards the role of nutrition. Nonetheless, the foodie habits tend to be rough and incongruent with the suggested standards. The identification of the enduring knowledge-practice gap can be regarded as one of the crucial findings of the review, suggesting that the better the knowledge and attitude are, the better the nutritional behavior can be. The review also identifies the impact of external variables like accessibility, social conditions, cultural behaviors, and motivation on dietary choices.

The study assumes a modified KAP framework, including moderating variables between attitudes and practices, in light of such findings, and thus provides a better explanation of athlete behavior. The research concludes that it is important to have effective interventions that go beyond enhancing knowledge and responding to environmental and behavioral determinants to promote nutritional habits in athletes.

## I. INTRODUCTION

It is as a result of this that sports nutrition has come to be realized as an important element of the performance, recovery, and overall well-being of sports. Since competitive sports are constantly adapting, athletes must be able to satisfy complicated physiological requirements, which require proper diet plans. Nutrition, which is sufficient, helps generate energy, improves endurance and strength, and helps in the rehabilitation process; hence, it is a very vital phenomenon in athletic preparation. Nevertheless, as such awareness of its health benefits has been available, gaps have existed in how athletes appreciate and apply nutritional behaviours.

Nutritional behavior research of athletes has been traditionally carried out in the Knowledge-Attitude-Practice (KAP) paradigm that offers a systematic mechanism of knowledge acquisition, perception formation, and the resulting action. In this context, knowledge can be taken to be the awareness of the nutritional principles, or the beliefs and perceptions towards nutrition, and practices are the reality of the diet behaviors. The KAP model traditionally presupposes a linear flow; the greater the knowledge, the higher the attitudes, and consequently, better practices. Emerging evidence, however, is pointing to the fact that this is not always the case, especially in sports nutrition.

What has been recently pointed out is that there has always existed a gap between what athletes are

familiar with and what they put into practice. Although most of the athletes achieve moderate nutritional awareness and weekly show a positive attitude to the role that nutrition plays, their nutritional habits have a troubling habit of being weak and inconsistent. The importance of this gap is that it poses one with important questions regarding the efficacy of knowledge-based interventions, and indicates that there could be other factors that impact behavioral results. Environmental factors like barriers, availability of nutritional sources, social factors, and individual motivation are becoming more and more identified as decisive factors of behavior.

Considering these intricacies, it is necessary to have a synthesis of the available research to have a clearer picture of those factors that influence the formation of nutritional behavior among athletes. The systematic literature review (SLR) offers a proper methodological means to reach this goal as it allows the incorporation of results of numerous studies and reveals similar patterns and gaps.

Hence, the objective of the current research is to explore the nutritional behavior in athletes through the KAP model in terms of a systematic review of the recent literature. By doing that, it aims at critically analyzing the links between knowledge, attitude, and practice and determining the important determinants of behavior and suggesting a conceptualized knowledge of the KAP model contexts with respect to sports nutrition.

## II. METHODOLOGY

### 2.1 Research Design

The current article follows a Systematic Literature Review (SLR) methodology to research nutritional behavior amongst athletes in terms of the concept of Knowledge–Attitude-Practice (KAP) model. The SLR approach offers a systematic and transparent system of integrating the body of preexisting research, which enables covering the patterns, discrepancies, and gaps in the body of research in the field of sports nutrition. The SLR approach has defined protocols, as compared to the traditional form of narrative review that is normally subjective, thus increasing reliability and reproducibility. The significant importance of this

methodological rigor can be especially important in relation to the field of sports nutrition, where behavioral outcomes are subject to the influence of several interacting factors and demand a complex analytical framework.

### 2.2 Review Protocol and Reporting Framework

The PRISMA guidelines are adhered to in this review, as it is commonly known as a guideline that should be adhered to when conducting a systematic review. PRISMA framework helps to achieve methodological transparency as it organizes the steps of the review process in order and provides such stages as identification, screening, eligibility, and inclusion of studies. Following this framework, the research will limit the selection bias and increase the validity of the results. The systematic reporting also makes the duplication easier and enables the readers to grasp the way in which the ultimate group of studies was obtained.

### 2.3 Search Strategy

The systematic search strategy was adopted to ensure that literature on the topic of sports nutrition and the KAP model among athletes was identified in a thorough manner. The search was performed in the key academic databases, including Google Scholar, PubMed, and Scopus, which would provide extensive coverage of peer-reviewed studies. These databases were chosen on the grounds of their relevance to the health sciences research, sports science, and nutrition. A very well-thought-out set of keywords was used in the search, along with Boolean operators, to identify research that would meet the target audience of an athlete population in terms of nutritional behavior. Such terms as sports nutrition, knowledge, attitude, practice, athletes, nutrition behavior, dietary practices, and sportspersons were applied in different combinations. This methodology made sure that they included both the general and sport-specific nutrition research. Moreover, the reference lists of the chosen articles were reviewed by hand in order to find out any other related studies that could not be identified during the preliminary search of the database, and, therefore, this contributed to the exhaustiveness of the review.

### 2.4 Inclusion and Exclusion Criteria

In order to make sure that the chosen studies are relevant and of superior quality, the screening process

was preceded by the development of the inclusion and exclusion criteria. The inclusion criteria were that the studies must have been published as early as 2020 and later, be related to the athletes or sportspersons, and cover at least one of the KAP framework elements. Articles that were published in peer-reviewed journals, with full text and written in the English language, were also eligible to join the study.

On the other hand, those studies that were not about non-athlete populations, those that did not discuss nutritional knowledge, attitudes, or practices, as well as the ones that were classified as review articles, editorials, or opinion papers, were eliminated. All duplicate research found in databases was eliminated, and the articles were not available or had no complete data. These criteria were used to make sure that the final choice consisted of high-quality empirical studies that could be directly related to the purpose of the review.

### 2.5 Study Selection Process

The process of the study selection consisted of the organized steps that were divided into the PRISMA framework. In the first stage, a wide range of research papers was located by using databases. Titles and abstracts were then filtered after the elimination of duplicate records to determine their applicability to the research problem. Potentially interesting studies that had satisfied the preliminary set were then put through to the full-text assessment to decide whether or not they fit into the predetermined inclusion and exclusion criteria.

This is a strict screening process that led to the inclusion of twelve studies to be used in qualitative synthesis. These studies capture a wide range in terms of population, as they are based on adolescent athletes, elite community, gym-goers, and university athletes, thus offering a broad perspective of nutritional behavior with respect to various sporting environments.

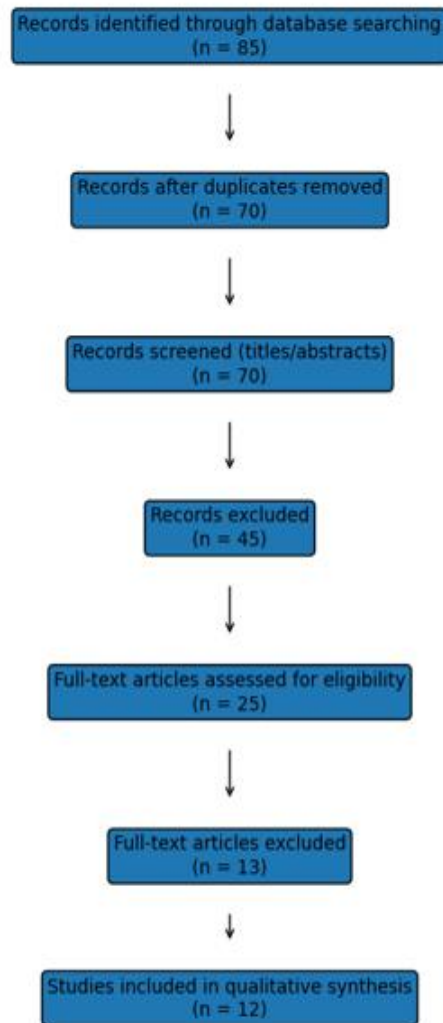


Figure 1: PRISMA Diagram of Study Selection Process

### 2.6 Characteristics of Included Studies

The latter group of studies that are included in this review is the empirical background of the studies on the subject of nutritional behavior analysis with the use of the KAP framework. The variety of these studies is connected with the geographical context, the characteristics of the samples, and the research design, providing a general view of the issue. Table 3.1 provides a summary of the details of the included studies.

Table 1: Summary of Selected Studies for SLR

Author(s) & Year	Population	Study Focus	Key Contribution
Gibbs and Becker 2025	Adolescent athletes	Knowledge & behavior	Low knowledge and poor dietary practices
Hopper et al. 2025	Athletes (review)	Dietary knowledge	Identifies research gaps in nutrition
Hoe et al. 2025	Mixed populations	KAP framework	Extends KAP to NE-KAP model
Jayawardena et al. 2025	Track athletes	Intervention	Education improves knowledge but not behavior
Al-Quran et al. 2023	Gym users	KAP study	Moderate KAP levels
Pehlivan et al. 2020	Sports students	Supplement use	Poor knowledge influences behavior
Qoqazeh et al. 2024	Athletes	Supplements & KAP	Misconceptions affect behavior
Zaman et al. 2021	University athletes	Education impact	Improved knowledge, weak practice
Sharma and Singh 2025	Indian athletes	KAP study	Moderate knowledge, inconsistent practices
Laavanya and Kumbamoorthy 2024	South Indian athletes	Knowledge & diet	Poor diet diversity
Rasouli et al. 2025	Bodybuilders	KAP study	Behavior influenced by external factors
Vázquez-Espino et al. 2022	Team athletes	Knowledge & habits	Link between knowledge and habits

2.7 Data Extraction and Synthesis

The systematic process of data extraction was used to systematize the appropriate information on the chosen studies. Authorship, year of publication, population of the study, research design, and key findings regarding knowledge, attitudes, and practices were key variables that were documented. This systematic methodology made cross-study comparison and consistency easier. A thematic synthesis approach was then applied to extract the data. The approach allowed defining the common patterns and relationships between the literature that were divided into several key themes, such as nutritional knowledge, nutrition attitudes, dietary behaviors, the knowledge-practice gap, and behavior determinants. The thematic view permitted a vast understanding of the results, at the same time staying compliant with the KAP framework.

2.8 Quality Assessment

To make this review sound, all the chosen studies were critically assessed in terms of quality and relevance in terms of methods. The evaluation process took into account factors like research objectives being clear enough, the study design being appropriate, sample size, and statistical analysis. Although the research

used a cross-sectional design, a few studies used an experimental or interventional design, which adds further insight into the research.

Even though the cross-sectional studies are useful in providing information on the association between variables, they do not work well in determining causal relationships. This weakness has been accepted in the discussion of the findings and outlines the necessity of further longitudinal and experimental studies in this field.

2.9 Limitations of the Review Method

Although the systematic method is followed in this research, some limitations have to be admitted. The limitation to publication in English might have led to the omission of other publications that could be important in the related study in other languages. Also, the differences in measurement tools and scoring systems in different studies can have an impact on the comparability of their findings.

Moreover, the use of mostly cross-sectional studies constrains the capacity to come up with causal implications based on the relationship between knowledge, attitudes, and practices. Still, thematic synthesis will serve to overcome these deficiencies by

concentrating on a larger trend and pattern instead of individual findings.

### III. RESULTS

#### 3.1 Overview of Included Studies

The systematic review utilized 12 studies that had been published in the period 2020 to 2025, and which covered a wide geographical area, including India, Iran, Jordan, Malaysia, and European settings. The studies chosen were mainly cross-sectional studies, randomized controlled trials, and scoping reviews; hence, the chosen studies provided both empirical and conceptually based information about sports nutrition behavior. The analyzed populations consisted of teenage athletes and college athletes, as well as high-level athletes and people using gym workouts, which guaranteed an in-depth presence of athletic community representatives.

The Knowledge-Attitude-Practice (KAP) framework has become one of the main irreplaceable analytical frames, according to the reviewed literature, to comprehend nutritional behavior. Nevertheless, certain differences in the measurement instruments, sample attributes, and the context were also observed, though this affected interpretations of findings. Despite these variations, uniformity was found in research across studies, especially with regard to intermediate knowledge levels, positive perception, and incoherent eating habits.

#### 3.2 Nutritional Knowledge among Athletes

One of the similarities that can be made in the chosen studies is the issue of moderate but incomplete knowledge about nutrition among athletes. According to Gibbs and Becker (2025), the general and sport-specific nutrition knowledge of adolescent athletes showed fairly low scores that may reflect inadequate knowledge of dietary needs that should be used to achieve optimal performance.

On the same note, Sharma and Singh (2025) established that elite Indian athletes had a moderate level of knowledge, especially deficient in more complex concepts such as intake of micronutrients and hydration techniques. The research of Laavanya and Kumbamoorthy 2024 is also relevant in this sense, as the authors defined gaps in dietary diversity and nutrient consciousness in South Indian athletes.

In a larger context, Hopper et al. (2025) emphasized the fact that athletic populations do not possess consistency in their level of nutritional knowledge because of the inability to access structured learning and professional advice. This provides the assumption that the process of knowledge development can be quite informal and disorderly, with resulting knowledge gaps.

Despite the fact that knowledge has been established as one of the supporting factors of dietary behavior, the reviewed literature suggests that the type of knowledge offered by athletes is sometimes not comprehensive enough to address the maximization of the decision-making process, especially when the emphasis is on high-performance.

Table 2: Summary of Nutritional Knowledge, Attitudes, and Practices

Study	Knowledge Level	Attitude Level	Practice Level	Key Observation
Gibbs & Becker (2025)	Low-Moderate	Moderate	Poor	Knowledge gaps affect behavior
Hopper et al. (2025)	Variable	Not primary focus	Inconsistent	Lack of structured guidance
Hoe et al. (2025)	Conceptual	Conceptual	Conceptual	Expanded KAP framework
Jayawardena et al. (2025)	Improved (post-intervention)	Improved	Limited improvement	Education ≠ behavior change
Al-Quran et al. (2023)	Moderate	Positive	Inconsistent	Weak implementation
Pehlivan et al. (2020)	Low-Moderate	Positive (supplements)	Risky practices	Misinformation influence

Study	Knowledge Level	Attitude Level	Practice Level	Key Observation
Qoqazeh et al. (2024)	Moderate	Influenced by peers	Inconsistent	Social influence dominant
Zaman et al. (2021)	Improved	Improved	Weak	KAP gap persists
Sharma & Singh (2025)	Moderate	Positive	Inconsistent	Indian athletes gap
Laavanya & Kumbamoorthy (2024)	Moderate	Moderate	Poor	Low diet diversity
Rasouli et al. (2025)	Moderate	Positive	Inconsistent	Behavior affected by environment
Vázquez-Espino et al. (2022)	Moderate	Positive	Moderate	Knowledge linked to habits

### 3.3 Attitudes towards Sports Nutrition

Contrary to the knowledge levels, the literature reviewed on a similar subject is consistent because the overall theme is that the sport nutrition published by athletes is generally positive. As Vazquez-Espino et al. (2022) noted, athletes acknowledge the issue of nutrition to aid their performance, recovery, and condition.

The positive attitudes are, however, influenced more often by outside factors than by scientific knowledge. Qoqazeh et al. (2024) concluded that peers, coaches, and social media have a significant impact on the attitudes of athletes towards supplements and dietary habits, and do not necessarily have proper information. Equally, the same author of the study by Pehlivan et al. (2020) has found that sports students had positive attitudes towards dietary supplements regardless of their level of knowledge, which suggests a perception-based, but not evidence-based, approach to nutrition. In addition, Zaman et al. (2021) showed that, using educational interventions, it is possible to improve attitudes, but the changes may not be the ones that result in the long-term improvement of behavior. This implies that although their attitudes are usually good, they might not be profound and critical enough to drive in the long-term practices.

### 3.4 Nutritional Practices among Athletes

Although the knowledge and attitudes of the reviewed articles are moderate, the common result is that the nutritional habits of athletes are not consistent and optimal. Rasouli et al. 2025 indicated that even athletes do not adhere to given eating plans often, and

the habits are conditioned by the convenience, availability, and misunderstanding.

On the same note, Al-Quran et al. (2023) discovered that people who use gyms had an unbalanced diet and insufficient genetics regarding their nutrition planning, though they understood the need to be healthy in terms of nutrition.

India Sharma and Singh 2025 noted that even athletes do not adhere to any organized diets, and hence there is inconsistency in the levels of nutrient consumption. This is also supported in Laavanya and Kumbamoorthy (2024), where they indicate that the diversity of diets and the lack of compliance with balanced nutrition are prevalent.

Besides, an intervention-based study by Jayawardena et al. (2025) established that knowledge is enhanced by the educational interventions, but it is not necessarily converted into better dietary habits. This implies that behavioral change does not need simply informational interventions.

All in all, the nutritional practices of athletes can be said to be the weakest aspect of the KAP framework since this aspect presents a lack of commitment in relation to knowledge and attitudes, as well as the behaviour patterns.

### 3.5 The Knowledge-Attitude-Practice (KAP) Gap

The existence of a consistent knowledge, attitudes, and practices gap is one of the most valuable conclusions that have appeared because of this review. In several studies, athletes reported being aware of nutritional principles and having a positive attitude; however, they could not adopt proper dietary behaviors.

Both Gibbs and Becker (2025) and Zaman et al. (2021) emphasized the fact that better knowledge does not necessarily translate into better practices. On the same note, Jayawardena et al. (2025) established that even structured educational interventions are no good to sew this gap.

This discrepancy smacks against the traditional linear assumption of the KAP model, in which one would assume that the knowledge results in an attitude formation and later results in behavior. Rather, the results show that the connection between such components is complicated and that several mediating variables are involved.

### 3.6 Determinants of Nutritional Behavior

The studied literature has uncovered various important determinants that dictate nutritional behavior in athletes that go beyond the KAP model. These are the socio-demographic, environmental, and psychological factors.

The study by Rasouli et al. (2025) placed emphasis on the place of experience and exposure to training that influenced the type of dietary practices, with more experienced athletes exhibiting a relatively positive adherence to nutritional practices. On the same note, Sharma and Singh (2025) identified the impact of education level on nutritional knowledge and behavior.

The surroundings, such as the presence of good food, professional counselling, and the cultural mode of dining, were also identified as influential to nutrition. Lack of access to evidence-based nutrition support is a significant impediment to effective dietary behavior, as reported by Hopper et al. (2025).

Also, the social factors, such as coaches, peers, and the media, are a major determinant of attitudes and practices, as suggested by Qoqazeh et al. (2024). Such results show that nutritional behavior is multidimensional and cannot be accounted for entirely by knowledge and attitudes only.

## IV. DISCUSSION

### 4.1 Interpreting Nutritional Behavior through the KAP Model

The current systematic review is a complete insight into the nutritional behavior in athletes with the Knowledge-Attitude-Practice (KAP) model. Although

the traditional form of the KAP model presupposes that the knowledge is converted into attitudes and then to practices in a linear manner, the results of this review contradict the assumption. In all the chosen articles, there is one common pattern, namely, athletes have moderate amounts of nutritional knowledge and, overall, positive attitudes, but have no intentions to put them into proper eating habits.

The Gibbs and Becker (2025) evidence and the Sharma and Singh (2025) evidence demonstrate that levels of knowledge, despite their existence, lack sufficient details or pragmatism. Simultaneously, the research, including Vazquez-Espino et al. (2022), indicates that athletes are aware of the role of nutrition in performance enhancement as a sign of good attitudes. Nevertheless, these elements do not necessarily result in better dietary habits, which is where the gap in the KAP model is manifested.

This variation indicates that the behavior of athletes with respect to nutrition cannot be sufficiently attributed using a straightforward linear model. Rather, it calls on a more subtle interpretation that includes a variety of interacting factors that in turn affect decision-making and behaviour.

### 4.2 The Knowledge–Practice Discrepancy

The knowledge-practice gap has been present all along and is one of the greatest discoveries of this review, which has been regularly documented in several studies. Even though the athletes are aware of what is appropriate in nutrition, they often neglect to practice proper eating habits.

Research works like Zaman et al. (2021), and Jayawardena et al. (2025) are convincing and provide sufficient evidence that, despite the improvement in knowledge due to educational interventions, the changes in dietary practices are still minimal. This means that learning is not enough to induce change in behavior.

Moreover, the study by Rasouli et al. (2025) notes that sportspeople do not use knowledge to make a systematic decision on which food to eat as they tend to use convenience, routine, and external factors. This adds to the belief that there are forces outside of cognitive comprehension that affect behavioral implementation.

The fact that this gap persisted reflects an inherent weakness of the classical KAP framework and indicates that an additional, more detailed framework

must be developed that would help understand the nuances of human behavior.

#### 4.3 Role of Attitudes as a Mediating Factor

It is said that attitudes represent a mediating variable between knowledge and practice, but the results of this review reveal that the mediation role of attitudes is not as straightforward as it is perceived to be. Although it is true that the attitudes of athletes towards sports nutrition are mostly positive, they do not always result in similar behavior.

Balance of research studies by Qoqazeh et al. (2024) and Pehlivan et al. (2020) shows that in numerous cases, the external sources of influence on attitude formation include peers, coaches, and media, and not evidence-based knowledge. This leads to the fact that the athletes can form positive attitudes toward some eating habits or supplements without an in-depth understanding of their consequences.

Moreover, Al-Quran et al. (2023) illustrate that despite a positive attitude, practical opportunities such as time budget, availability of healthy food, and the absence of regime steps may prevent the integration of the right practices. This implies that attitudes are not enough to overcome the gap between knowledge and behavior.

#### 4.4 Influence of External and Environmental Factors

The major findings in this review are the importance of the external and environmental factors in influencing nutrition behavior in athletes. These are also moderators in the KAP model that determine the realisation of knowledge and attitudes into practice.

Availability of credible nutritional knowledge and expert advice comes out as a decisive factor. According to Hopper et al. (2025), numerous athletes do not have access to evidence-based nutrition assistance, which prompts them to turn to informal and thus unreliable information.

The socio-cultural ones are also very important, especially in the areas where the traditional eating patterns might not correspond to the current sports nutrition guidelines. Research by Laavanya and Kumbamoorthy (2024) and Sharma and Singh (2025) points to the effects of cultural habits and the availability of resources on dietary habits.

Additionally, social factors such as coaches, team teammates, and media platforms have a great impact on decision-making. Qoqazeh et al. (2024) show how athletes tend to use a form of their practice, depending on the recommendation of their peers, instead of referring to scientific research. These results suggest that nutritional behavior exists within a larger social and environmental context and that one should be taken into account when examining an analytical framework.

#### 4.5 Re-evaluating the KAP Model: Towards a Behavioral Perspective

The overall results of the review indicate that the classic KAP framework should be reviewed in the framework of sports nutrition. This linear development of knowledge to practice is not an adequate assumption that can address the complexities noticed in the behavior of the athlete.

The necessity to develop a broader framework that would involve other dimensions beyond knowledge, attitudes, and practices can be supported by such studies as Hoe et al. (2025). The suggested Nutrition-Exercise Knowledge -Attitude-Practice (NE-KAP) model, for example, incorporates more widespread behavioral and situational determinants, which provide a more elaborate insight into health-related behaviors.

It is on the same view that the current study offers an enhanced conceptualization of the KAP model; the external variables, like environment, accessibility, social influence, and motivation, are used as moderating variables between attitudes and practices. This change considers the fact that internal cognitive processes do not entirely define behavior, but rather external conditions do so as well.

#### 4.6 Proposed Conceptual Model

According to the analysis of results, there is a refined model of the comprehension of nutritional behavior among athletes. The role of knowledge in this model is in contributing to the development of attitudes, but the transformation of the attitudes into practices is facilitated by various outside factors.

The given model may be conceptualized as:

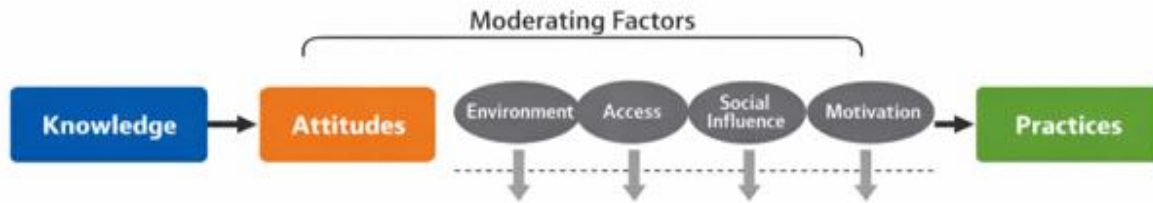


Figure 2: Proposed KAP Model for Understanding Nutritional Behavior among Athletes

This model focuses on the fact that the behavioral results are dependent on the internal and external factors. It also shows the need to tackle the

environmental and structural barriers, besides enhancing knowledge and attitudes.

Table 3: Key Determinants of Nutritional Behavior Identified in the Literature

Determinant	Description	Supporting Studies	Impact on Behavior
Knowledge Level	Understanding of nutrition principles	Gibbs (2025), Sharma (2025)	Insufficient knowledge limits decision-making
Education	Formal nutrition learning	Zaman (2021), Jayawardena (2025)	Improves knowledge but not always practice
Experience	Years of sports participation	Rasouli (2025)	Experienced athletes show better habits
Social Influence	Coaches, peers, media	Qoqazeh (2024), Pehlivan (2020)	Strong influence on dietary decisions
Accessibility	Availability of healthy food & guidance	Hopper (2025)	Limits ability to implement knowledge
Cultural Factors	Traditional dietary patterns	Laavanya (2024), Sharma (2025)	Shapes food choices
Motivation	Personal willingness to follow diet	Multiple studies	Determines consistency
Supplement Beliefs	Perception of supplements	Pehlivan (2020), Qoqazeh (2024)	Can lead to risky practices

#### 4.7 Implications for Research and Practice

The results of this review have significant implications for research and practice. From a research point of view, there is a propensity to go beyond descriptive research on knowledge and attitude towards extensive research on behavioural determinants. The future research ought to include longitudinal and

experimental designs to gain more insight into the causal associations.

From a practical perspective, nutritional behavior interventions among athletes must be developed in a holistic perspective. Even though education is crucial, it has to be coupled with interventions that deal with environmental limitations, improve access to expert advice, and foster positive conditions in societies.

## V. CONCLUSION

The current systematic literature review offers a concise study of the nutritional behavior of athletes by the use of the Knowledge-Attitude-Practice (KAP) model. The results show a coherent pattern among the literature studies, which is moderate nutritional knowledge, usually a positive nutrition attitude, but highly unstable eating habits. The deviation leads to the most important limitation of the classic KAP model, which presupposes a linear flow between the knowledge and the behavior.

Among the greatest contributions that this study can make is the determination of a sustained knowledge-practice gap. Although there is a high understanding of the principles of nutrition and the realization of the significance of nutrition, athletes often do not convert their knowledge into real dietary behaviours. This conclusion is supported by the fact that even organized educational interventions, though effective in the creation of knowledge and attitudes, do not always result in any significant changes in practice. This kind of observation raises the issue that knowledge alone cannot bring about a behavioral change.

The review also focuses on how external and contextual variables influence nutritional behavior. Such variables as access to high-quality food, the presence of professional nutrition consultation, cultural eating habits, and the social influence of coaches, colleagues, and media play a major role in the dietary choices of athletes. These considerations are the mediators in the KAP framework and determine the success of knowledge and attitudes to be put into practice.

Based on such observations, the paper hypothesizes a new conceptualization of the KAP model, thereby applying moderating variables between attitudes and practices. This revised framework recognizes the fact that nutritional behavior is not always determined by cognitive factors, but it is a product of a complex interaction of individual, social, and environmental factors.

In a pragmatic sense, the results highlight the importance of comprehensive interventions that do not just stop at knowledge dissemination. Good strategies would bring in education with supportive systems of structure, like access to nutrition experts, specific diet planning, and conducive training settings.

Finally, the proposed study contributes to the existing literature, offering detailed insight into the issue of nutritional behavior in athletes and contributing to the theoretical implementation of the KAP model. Further inquiry on behavioral determinants should be investigated by the use of longitudinal and intervention research in the future in order to come up with evidence-based measures of enhancing nutritional behaviour in athletic groups.

## REFERENCES

- [1] Al-Quran, M., Ayu Suzailiana Muhamad, Nur Syamsina Ahmad and Foong Kiew Ooi 2023. Sports nutrition knowledge, attitude, and practice among male gymnasium users in Jordan. *Malaysian journal of nutrition*, 29(3). <https://doi.org/10.31246/mjn-2022-0112>
- [2] Gibbs, R.L. and Becker, T.B. 2025. General and sport-specific nutrition knowledge and behaviors of adolescent athletes. *Journal of the International Society of Sports Nutrition*, 22(1). <https://doi.org/10.1080/15502783.2025.2477060>
- [3] Hoe, Z.Q., Joseph, R., Dick, N., Thio, C.S.H., Wallen, M., Chua, L.D., Miller, C., Lee, J., Chan, R.J. and Han, C.Y. 2025. Nutrition and Exercise Knowledge, Attitude, and Practice: A Scoping Review of Assessment Questionnaires in Cancer Survivorship. *Nutrients*, [online] 17(9), p.1412. <https://doi.org/10.3390/nu17091412>
- [4] Hopper, C., Mooney, E. and Mc Cloat, A. 2025. Nutritional Intake and Dietary Knowledge of Athletes: A Scoping Review. *Nutrients*, [online] 17(2), p.207. <https://doi.org/10.3390/nu17020207>
- [5] Jayawardena, R., Weerasinghe, K., Nanayakkara, I., Madhujith, T., Hills, A.P. and Kalupahana, N.S. 2025. Improvement of sports nutrition knowledge by a dual method education program in track and field athletes: a randomized controlled trial. *Journal of the International Society of Sports Nutrition*, 22(1). <https://doi.org/10.1080/15502783.2025.2519517>
- [6] Laavanya, s. and Kumbamoorthy, S. S. 2024. A Comprehensive Analysis of Sports Nutrition Knowledge and Diet Diversity Among South Indian Athletes. *Physical rehabilitation and recreational health technologies*, 9(2), pp.52–60. [https://doi.org/10.15391/prrht.2024-9\(2\).02](https://doi.org/10.15391/prrht.2024-9(2).02)

- [7] Pehlivan, L. T., Özcan, B. A., Erem, S., Ercan, A., Akkaya, İ. and Başarır, A. 2020. Knowledge, attitude, and behaviour of physical education and sports students about dietary supplements: Dietary supplement use of sports students. *Progress in Nutrition*, [online] 22(2-S), pp.e2020015–e2020015.  
<https://doi.org/10.23751/pn.v22i2-S.10499>
- [8] Qoqazeh, A., Ala'a Al-Bakheit and Hadeel Ghazzawi 2024. A Cross-Sectional Study on Knowledge, Attitudes, and Practices (KAP) toward Sport Supplements and Doping Agents in the Jordanian Community. *International journal of human movement and sports sciences*, 12(1), pp.84–98.  
<https://doi.org/10.13189/saj.2024.120111>
- [9] Rasouli, A., Badpeyma, M., Kazemi, M., Majnouni, A., Mohammadi, S.G., Khederlou, H., Mohammadi, A., Moridpour, A., and Kamali, K. 2025. Knowledge, attitudes, and practices (KAP) regarding nutrition among bodybuilders of Zanjan, Northwest of Iran: a cross-sectional study. *BMC Sports Science, Medicine and Rehabilitation*, 17(1).  
<https://doi.org/10.1186/s13102-025-01196-1>
- [10] Sharma, A. and Singh, P. 2025. Knowledge, attitude, and practices of sports nutrition amongst elite track and field athletes in India: A pilot survey. *International Journal of Physical Education, Sports and Health*, [online] 12(3), pp.341–344.  
<https://doi.org/10.22271/kheljournal.2025.v12.i3.e.3817>
- [11] Vázquez-Espino, K., Rodas-Font, G. and Farran-Codina, A. 2022. Sport Nutrition Knowledge, Attitudes, Sources of Information, and Dietary Habits of Sport-Team Athletes. *Nutrients*, 14(7), p.1345. <https://doi.org/10.3390/nu14071345>
- [12] Zaman, N.N.Z.K., Muhamad, A.S. and Jusoh, M.R.C. 2021. Knowledge, attitude, practice (KAP) and dietary intake of young university athletes following sports nutrition education. *Malaysian Journal of Nutrition*, 27(2).  
<https://doi.org/10.31246/mjn-2020-0098>