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Analysis of Eating Patterns and Diet Strategies Among Athletes and Active Sports Practitioners

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Abstract

This study anaxlyzes the eating patterns and dietary strategies adopted by athletes and active sports participants. The background issue indicates that athletic performance is significantly influenced by nutrition, yet many individuals do not fully understand the importance of balanced nutrient intake. The research method used is quantitative with a descriptive approach, involving 30-50 respondents from various sports communities. Data were collected through an online questionnaire and analyzed using IBM SPSS Statistics. The results show that respondents' nutritional knowledge is still limited, with eating habits being fairly good but low regarding breakfast before training. Dietary strategies are generally determined independently without professional consultation, and family support along with the availability of healthy food are important supporting factors. This study concludes that better nutrition education and the involvement of nutritionists are needed to enhance the practical application of optimal eating patterns in the sports domain.

Keywords: athletes; dietary strategies; eating patterns; nutrition; sports performance.

Introduction

In the world of sports, the performance of athletes and active individuals is greatly influenced by various factors, one of which is diet and dietary strategies (Chodkowski, 2024). According to Cornish & Barnes (2024), proper nutrition not only serves as a source of energy but also plays a crucial role in recovery, training adaptation, and injury prevention. However, in reality, many athletes and active individuals still lack a full understanding of the importance of balanced nutrition tailored to the type, intensity, and frequency of their training (Jalph & Kaur, 2023). This lack of awareness often leads to the implementation of inappropriate eating patterns, further exacerbated by popular diet trends that circulate widely without strong scientific foundations.

Diet trends such as the ketogenic diet, intermittent fasting, and plant-based diets are often adopted without consideration of individual physiological needs and specific physical activities (Malsagova et al., 2021). In some cases, these diets are implemented in extreme ways or without guidance from qualified professionals, posing risks such as fatigue, decreased performance, metabolic disturbances, and increased injury susceptibility. On the other hand, some athletes also neglect important aspects such as meal timing, nutrient proportions, and hydration due to time constraints, lack of access to nutrition education, or insufficient support from their sports support teams (Carter et al., 2023). This reality highlights a significant gap between the nutritional needs of athletes and the actual dietary practices they follow.

Therefore, this research is essential to comprehensively analyze how diet and dietary strategies are applied by athletes and active individuals. This study aims to uncover daily consumption patterns, dietary approaches used, and their impacts on performance and physical health. The findings of this study are expected to contribute scientifically to the development of evidence-based sports nutrition strategies, as well as serve as practical references for coaches, nutritionists, and athletes in designing dietary plans that align with their training and competition demands.

Methods

This study uses a quantitative method with a descriptive approach to describe the eating patterns and diet strategies of athletes and active sports participants (Carey et al., 2024). This approach was chosen because it is efficient and allows for objective and measurable data analysis through online questionnaires (Mawarni Saputri, 2022). The data were then statistically analyzed using SPSS to obtain a clear picture of the respondents' dietary habits (Iftikhar et al., 2019).

Research Design

This design aims to systematically and objectively describe and analyze the eating patterns and diet strategies used by athletes and active sports participants without testing cause-and-effect relationships. Data were collected using structured questionnaires administered online and statistically analyzed to provide a clear depiction of the variables studied.

Participants

The participants in this study are athletes and active sports practitioners from various sports communities, fitness centers, and sports clubs within the relevant research area. Participant selection was conducted using purposive sampling, which involves choosing respondents based on predetermined criteria (Nyimbili & Nyimbili, 2024). The number of participants ranges from 30 to 50, considered sufficient to represent the eating patterns and diet strategies used by this group.

Instrument

The instrument used is a structured questionnaire with a Likert scale (1–5), multiple-choice questions, and short answers to collect data on eating patterns, diet strategies, as well as knowledge and perceptions related to the diet of athletes and active sports participants.

Procedure

Data were collected online using the Google Form platform to facilitate respondent access and speed up the data collection process (Mawarni Saputri, 2022). The questionnaire link was distributed through social media platforms such as WhatsApp, Instagram, and others commonly used by athletes and active sports participants (Zafar Ali, 2023). This method was chosen because it is efficient, flexible, saves time and costs, and simplifies automatic data compilation.

Data Analysis

The collected data were analyzed descriptively using IBM SPSS Statistics version 22 software (Iftikhar et al., 2019). The analysis included calculating percentages and frequencies to identify respondent answer trends, as well as computing means and standard deviations to assess the intensity and consistency of diet strategy implementation (Pető, 2021). The results were presented in tables and graphs to facilitate interpretation.

Results

Nutrition Knowledge

Figure 1
Calorie needs

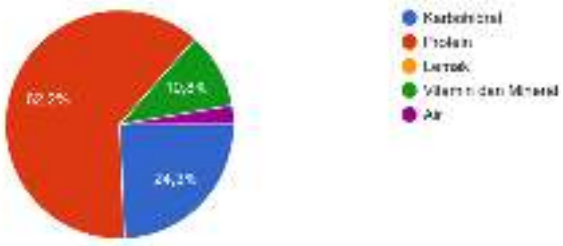


Figure 2
Understanding of daily calorie needs

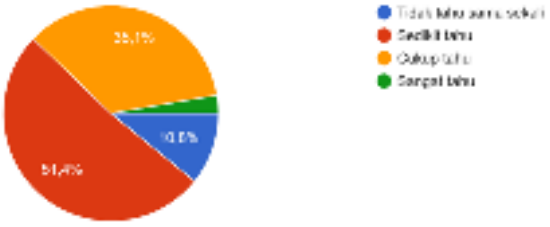
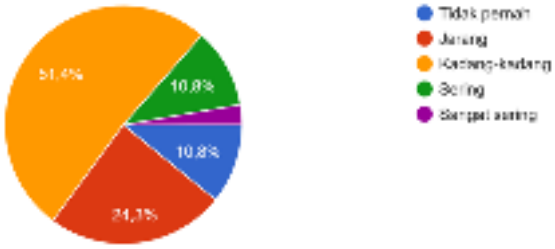


Figure 3
Awareness of the importance of nutrition information



Most respondents in this survey showed limited understanding of their daily calorie needs. As many as 51.4% of respondents stated that they only knew a little about how many calories they actually need each day. Meanwhile, 35.1% felt they had sufficient knowledge,
indicating that although there is some awareness, the information they possess is not yet entirely accurate or thorough.

Furthermore, 10.8% of respondents admitted that they had no knowledge at all about their daily calorie needs, indicating a lack of education or access to nutritional information. Only 2.7% of respondents felt they knew very well, showing that only a small portion truly understands the concept of calorie requirements and is able to apply it in their daily lives.

The majority of respondents, 62.2%, considered protein as the most important nutrient to support sports activities due to its role in muscle building and recovery. Meanwhile, 24.3% chose carbohydrates as the main energy source. About 10.8% prioritized vitamins and minerals that help maintain optimal body functions, and only 2.7% regarded water as an important element. No respondents chose fat, indicating that its benefits are still not well understood in the context of sports. As many as 51.4% admitted that they only sometimes seek information about sports nutrition from reliable sources. Meanwhile, 24.3% stated that they rarely do so, and 10.8% often look for such information. Interestingly, 10.8% of respondents never seek information about sports nutrition, and only 2.7% very frequently access reliable sources. This indicates that awareness of the importance of nutrition information in sports is still relatively low.

Eating Habits

Statement KM4, "I eat according to a regular schedule," has the highest mean score of 3.30 with a standard deviation of 0.702, indicating that most respondents tend to eat regularly and their

Tabel 1
Respondents Eating Habits

Variable	N	Min	Max	Mean	Std. Deviation
KM 1	37	1	5	2.84	1.143
KM2	37	1	5	2.86	.948
KM3	37	2	5	3.27	.990
KM4	37	2	5	3.30	.702
KM5	37	1	5	3.24	1.164
Kebiasaan Makan	37	8	21	15.51	3.015
Valid N (listwise)	37				

perceptions of this statement are relatively consistent. This is followed by KM3, "I consume fruits and vegetables every day," with a mean of 3.27 and a standard deviation of 0.990, showing that this habit is fairly common among respondents, although there is moderate variation in their answers.

Next, KM5, "I read nutrition labels when buying food," has a mean score of 3.24 and a standard deviation of 1.164, indicating that this habit is fairly common but shows greater variation among respondents. KM2, "I avoid fast food," has a mean of 2.86 and a standard deviation of 0.948, suggesting that this behavior is practiced at a moderate frequency. Meanwhile, KM1, "I eat breakfast before training," has the lowest mean score of 2.84 with a Standard deviation of 1.143, indicating that this habit is less frequently practiced compared to other indicators, and there is considerable variation in this behavior among individuals.

Overall, the total score for the Eating Habits variable has a mean of 15.51 and a standard deviation of 3.015, suggesting that, in general, respondents have moderate to good eating habits, although individual differences remain.

Diet Strategies

Most respondents reported having more than one reason for implementing a diet strategy. A total of 57.9% selected weight loss as their primary goal, making it the most common objective. Meanwhile, 44.7% aimed to increase muscle mass, indicating a strong focus on body building and physique development.

Then, 31.6% of respondents aimed to improve athletic performance, while 13.2% followed a diet to speed up recovery after physical activity. These findings reflect that diet strategies are not solely focused on weight loss but also emphasize performance enhancement and body recovery.

Around 63.2% of respondents developed their eating patterns through self-learning, such as reading articles, watching videos, or experimenting until they found what worked best for them. Meanwhile, 18.4% were influenced by trending diets on social media or the internet. Additionally, 10.5% relied on guidance from their sports coaches, and only 7.9% actually consulted a nutritionist. This indicates that dietary approaches are still largely shaped by easily accessible sources rather than professional expertise.

63.2% of respondents occasionally adjust their eating patterns to match their training rhythm or competition schedule, suggesting an awareness of its importance though it hasn't become a consistent habit. Meanwhile, 21.1% never make such adjustments, akin to competing without proper nutritional preparation. Only 15.8% often tailor their intake to meet their physical demands, indicating a deeper understanding of nutritional strategy. Interestingly, none of the respondents reported always making adjustments, highlighting a real challenge in maintaining consistent, training-based dietary planning.

Diet Support Factors

Based on descriptive analysis, family support (PD1) had a mean score of 3.35 with a standard deviation of 0.949, indicating a fairly high level of support with moderate response variability. The availability of healthy food (PD2) scored a mean of 3.57 and a standard deviation of 0.801, suggesting that access to nutritious food is considered relatively good, with less variation in responses.

Nutritional knowledge (PD3) showed a mean of 3.49 and a standard deviation of 0.804, indicating a good level of nutritional understanding with stable data distribution. Regular training schedules (PD4) had a mean of 3.43 and a standard deviation of 0.929, suggesting that training routines are fairly well-structured, with moderate variability among responses. Meanwhile, guidance from coaches or experts (PD5) had the lowest

Figure 4
Reasons for implementing diet strategies

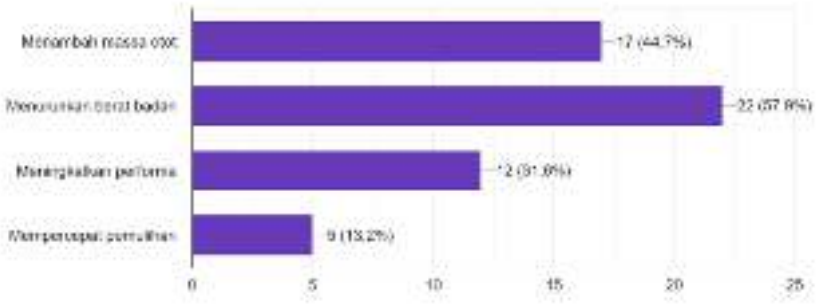


Figure 5
The approach to diet is still largely influenced

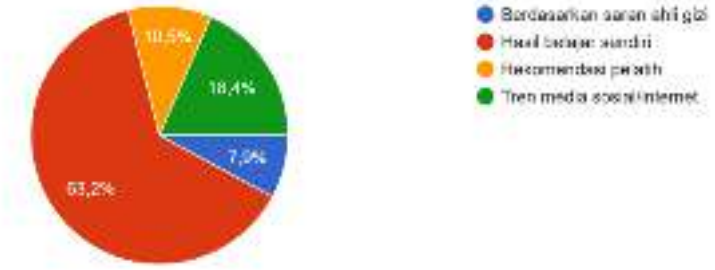
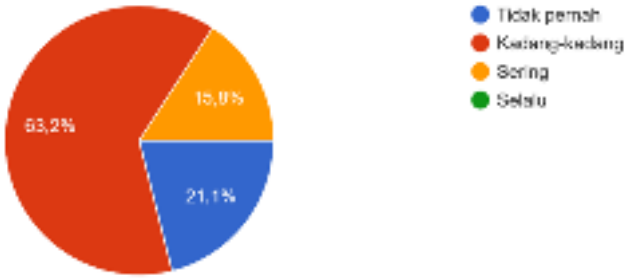


Figure 6
Consistency in managing diet based on training cycles



mean at 2.92 and the highest standard deviation of 1.256, indicating that this factor is considered less influential and shows greater variation across participants.

Overall, the combined mean for the supporting factors was 16.76 with a standard deviation of 3.467, placing these factors in the "fairly good" category.

Discussion

Based on the results of the conducted research, it is known that the level of nutritional knowledge among athletes and active sports practitioners is still considered less than optimal. The majority of respondents admitted to having only a limited understanding of their daily calorie needs, while only a small portion truly understood their nutritional requirements accurately. This fact indicates that education related to sports nutrition is still unevenly distributed and has not yet become a priority in the daily lives of athletes. This lack of understanding is also reflected in the respondents' perceptions, who tend to prioritize protein, while the role of other nutrients such as healthy fats and water receives less appropriate attention. In the context of sports performance, however, the balance of all macronutrients and adequate hydration are crucial factors that cannot be ignored.

Regarding eating habits, this study found that the respondents' dietary patterns are generally categorized as fairly good. Regular meal schedules

Tabel 2
Supporting factors for diet

Variable	N	Min	Max	Mean	Std. Deviation
PD1	37	1	5	3.35	.949
PD2	37	2	5	3.57	.801
PD3	37	2	5	3.49	.804
PD4	37	1	5	3.43	.929
PD5	37	1	5	2.92	1.256
Faktor Pendukung	37	9	25	16.76	3.467
Valid N (listwise)	60				

and consumption of fruits and vegetables are habits that are quite consistently followed, although there are still variations among individuals. Nevertheless, the habit of having breakfast before engaging in sports activities is still relatively low. If not improved, this habit can risk energy deficiency during exercise, decreased performance, and even increase the likelihood of injury. This indicates the need for more targeted interventions to raise awareness about the importance of meal timing, especially the consumption of food before physical activity begins.

Concerning the diet strategies applied, most respondents admitted to regulating their diets with the main goals of losing weight or increasing muscle mass. Unfortunately, the approaches used to formulate these diet strategies mostly come from self-learning efforts, such as reading articles or following videos on social media, with only a few consulting professional nutritionists. This situation raises concerns because information obtained independently is not necessarily accurate or suitable for individual physiological needs. The lack of guidance from professionals makes some athletes more vulnerable to adopting unbalanced diet patterns, which in the long term can negatively affect both their health and performance.

Adjusting dietary patterns based on training or competition cycles is also rarely done consistently by respondents. Most only occasionally make adjustments, and some never adjust their diet at all. Yet, adjusting food intake according to training load is one of the important principles in sports nutrition aimed at optimizing recovery, training adaptation, and performance during competition.

From the perspective of supporting factors for diet, this research shows that family support and the availability of healthy food are quite influential aspects in helping the successful implementation of good dietary patterns. However, support from coaches or nutritionists is still relatively low, indicating that in the athlete training ecosystem, the role of professional guidance related to nutrition has not been fully optimized. The low level of guidance from experts poses a distinct challenge, considering their vital role in shaping eating patterns that suit the specific needs of each athlete.

Based on these findings, it can be concluded that although there is initial awareness about the importance of dietary patterns and diet strategies among athletes and active sports practitioners, practical implementation in the field still needs improvement. Providing more comprehensive nutrition education, active involvement of nutritionists in training programs, and establishing more consistent eating habits in accordance with each athlete's physiological needs are important steps that need to be taken immediately to optimize performance and maintain long-term health.

Conclusionss

This study indicates that nutritional knowledge among athletes and active individuals remains limited, with most unable to implement optimal dietary patterns and strategies. Although there are positive tendencies such as regular meals and consumption of fruits and vegetables, important habits like having breakfast before training are still often overlooked. Dietary strategies are generally self-designed without professional consultation, making them prone to improper implementation. Family support and the availability of healthy food are helpful, but the involvement of coaches and nutritionists remains minimal. Future research should include more intensive nutrition education programs and further studies with larger sample sizes and qualitative approaches to better understand the factors influencing athletes' eating habits.

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