



Psychological and Social Factors Influencing Eating Behaviors in College Athletes

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ABSTRACT

Eating behaviors among college athletes are influenced by a complex interplay of psychological, social, and nutritional factors, which can significantly impact their health and performance. This study aims to elucidate these multifaceted influences, providing a deeper understanding of the factors that shape eating behaviors in collegiate sports environments. This qualitative study involved semi-structured interviews with 30 collegiate athletes from various sports disciplines across several universities. Theoretical saturation guided the data collection process until no new themes emerged. Data were transcribed verbatim and analyzed using NVivo software to conduct thematic analysis, focusing on identifying patterns related to psychological drivers, social influences, and nutritional knowledge. Three main themes were identified: Psychological Drivers, Social Influences, and Nutritional Knowledge. Psychological Drivers included Emotional Eating, Dietary Attitudes, and Motivation to Eat Well. Social Influences encompassed Peer Dynamics, Family Influence, Coaching Guidance, and Social Media Impact. Nutritional Knowledge was characterized by Understanding of Nutrition, Sources of Information, and Dietary Planning. Each theme and its categories were supported by specific concepts illustrating the complex and interconnected factors influencing athletes' eating behaviors. The study highlighted the significant role of psychological and social factors alongside nutritional knowledge in shaping the eating behaviors of college athletes. Interventions aimed at improving athletes' eating behaviors should consider these dimensions to effectively support athletes in managing their dietary habits in a way that promotes both optimal performance and general well-being.

Keywords: College athletes, Eating behaviors, Psychological factors, Social influences, Nutritional knowledge, Qualitative research.

1. Introduction

Eating behaviors and disorders represent a significant concern within the realm of collegiate athletics, where the pressures and demands on athletes can have profound effects on their physical and psychological well-being (1). Research has consistently shown that athletes face unique pressures related to body image and performance, which can contribute to disordered eating behaviors. Sundgot-Borgen and Torstveit (2010) have highlighted the prevalence of such disorders in high-intensity sports, suggesting that the drive for performance enhancement and body composition ideals can lead to unhealthy eating practices (2). This is particularly relevant in aesthetic and weight-class sports where physical appearance or meeting a weight category can be integral to an athlete's success (3).

The influence of the athletic environment on eating behaviors is multifaceted. According to Scott, Haycraft, and Plateau (2019; 2022), teammates play a significant role in shaping an athlete's eating and exercise habits, often through established norms and shared practices (4, 5). These social interactions can either mitigate or exacerbate the risk of developing eating disorders, depending on the nature of the relationships and the behaviors modeled within the team setting.

Furthermore, the transition from an athletic career to a post-collegiate lifestyle can bring additional challenges. Reifsteck et al. (2018) evaluated the effectiveness of transition programs in helping athletes maintain healthy lifestyles after their collegiate careers. Their findings suggest that continued support is necessary to prevent the onset of unhealthy behaviors that may arise due to the loss of structured dietary and training regimes (6).

Individual psychological factors also play a critical role. Clermont et al. (2022) discuss how self-determination and the satisfaction of psychological needs can influence dietary restrictions among athletes. Athletes who feel autonomous and competent are less likely to engage in restrictive eating practices, indicating the importance of fostering a supportive environment that promotes psychological well-being (7).

The role of nutrition knowledge and literacy cannot be overlooked in this context. Lai et al. (2021) found that higher nutrition literacy mediates the relationship between multi-level factors and healthy eating behaviors in college students. For athletes, being informed about nutritional

needs and how to meet them can be a protective factor against the development of eating disorders (8).

Athletes' perceptions and attitudes towards food are also influenced by external media. Fu et al. (2022) explored how media internalized pressures can lead to restrained eating behaviors among college students, highlighting the impact of societal beauty standards and the portrayal of ideal body types in the media. This external pressure can be particularly pronounced in college athletes who may feel an additional burden to maintain a certain image (9).

By focusing on both the psychological and social dimensions, this study seeks to contribute to a more holistic understanding of the factors that influence dietary habits, thereby offering a foundation for developing better support systems for athlete health and well-being.

2. Methods and Materials

2.1. Study Design and Participants

This qualitative study was designed to explore the psychological and social factors influencing eating behaviors among college athletes. Participants were recruited from a diverse range of sports disciplines within collegiate athletics programs across several universities. Eligibility criteria included being an active member of a college sports team at the time of the study. Efforts were made to ensure a diverse sample in terms of gender, age, and sports type to enrich the data's breadth and depth.

Theoretical saturation was used to determine the sample size, with data collection continuing until no new themes were identified in the interviews. This approach ensured comprehensive coverage of the range of experiences and perspectives regarding the eating behaviors of college athletes.

Prior to the interviews, all participants were informed about the study's purpose, the voluntary nature of their participation, the confidentiality of their responses, and their right to withdraw from the study at any time without penalty. Written informed consent was obtained from each participant.

2.2. Measures

2.2.1. Semi-Structured Interview

Data were collected using semi-structured interviews, which allowed for the exploration of specific topics while providing the flexibility for participants to introduce new ideas. The interview guide was developed based on a review of literature and preliminary discussions with sports nutrition experts. Key topics included personal and cultural food preferences, the role of social interactions in eating habits, and the impact of athletic demands on dietary choices.

Interviews were conducted by trained researchers, either in person or via secure online platforms, depending on participant preference and logistical considerations. Each interview lasted approximately 45 to 60 minutes and was audio-recorded with the participants' consent.

2.3. Data Analysis

All interviews were transcribed verbatim and uploaded into NVivo software, which facilitated efficient organization

and analysis of the data. A thematic analysis was conducted following Braun and Clarke's six-phase method, which involves familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. This methodical approach allowed for the systematic exploration and identification of underlying patterns related to psychological and social influences on athletes' eating behaviors.

3. Findings and Results

The study sample comprised 30 collegiate athletes, encompassing a balanced distribution of genders with 15 males (50%) and 15 females (50%). The participants represented a wide age range from 18 to 22 years, with a mean age of 20 years. These athletes were enrolled in various universities and competed in a range of sports disciplines, including track and field (n=10, 33%), basketball (n=8, 27%), soccer (n=6, 20%), and swimming (n=6, 20%). Most participants were undergraduate students, with 90% (n=27) pursuing their bachelor's degrees and the remaining 10% (n=3) involved in postgraduate studies.

Table 1

The Results of Qualitative Analysis

Categories	Subcategories	Concepts (Open Codes)
Psychological Drivers	Emotional Eating	Stress relief, Reward mechanisms, Comfort eating, Mood swings
	Dietary Attitudes	Health consciousness, Weight management, Body image, Athletic performance
	Motivation to Eat Well	Discipline, Role models, Long-term health goals, Team expectations
Social Influences	Peer Dynamics	Group meals, Peer pressure, Role of seniors, Team bonding
	Family Influence	Family dietary habits, Parental advice, Cultural traditions
	Social Media Impact	Influencer followings, Trend diets, Visibility, Public scrutiny
	Coaching Guidance	Coach's dietary prescriptions, Nutrition plans, Compliance
Nutritional Knowledge	Understanding of Nutrition	Macronutrients, Hydration needs, Caloric intake, Supplement use, Meal timing
	Sources of Information	Nutritionists, Online resources, Workshops, Athletic trainers
	Dietary Planning	Meal prepping, Snack management, Recovery foods

Our analysis revealed three primary categories influencing the eating behaviors of college athletes: Psychological Drivers, Social Influences, and Nutritional Knowledge. Each category comprised various subcategories, which are detailed below with associated concepts and quotations from the participants.

3.1. Psychological Drivers

Emotional Eating: Participants described eating as a coping mechanism for stress and emotional fluctuations.

One athlete mentioned, "When I'm stressed about a game or schoolwork, I tend to eat sweets as a quick pick-me-up," highlighting the use of food for mood regulation and comfort. Concepts identified include stress relief, reward mechanisms, comfort eating, and mood swings.

Dietary Attitudes: Athletes expressed varying attitudes towards food, often influenced by their personal goals related to health and performance. "I watch what I eat very closely because my performance depends on it," as one participant noted, illustrating the intertwining of health

consciousness, weight management, body image, and athletic performance.

Motivation to Eat Well: Motivation stemmed largely from personal and team expectations. An interviewee stated, "Our coach and my teammates expect us to stay in top shape," pointing to the influence of discipline, role models, long-term health goals, and team expectations on their dietary choices.

3.2. Social Influences

Peer Dynamics: Group interactions significantly affected dietary choices. "We often eat together after training; it's part of how we bond," one athlete shared, reflecting on the role of group meals, peer pressure, and team bonding.

Family Influence: Many athletes cited family as a significant factor in their eating habits. "My parents have always emphasized healthy eating at home, which sticks with me at college," indicating the impact of family dietary habits, parental advice, and cultural traditions.

Social Media Impact: Athletes are not immune to the effects of social media on their eating behaviors. "Seeing other athletes on Instagram post about their diets makes me think about my own choices," reveals the influence of influencer followings, trend diets, and public scrutiny.

Coaching Guidance: Coaches play a critical role in shaping athletes' dietary behaviors. "Our coach mandates high-protein diets during the season," describes adherence to coach's dietary prescriptions, nutrition plans, and compliance.

3.3. Nutritional Knowledge

Understanding of Nutrition: Knowledge about nutrition varied among participants, but many demonstrated a sophisticated understanding. "I focus on getting enough carbs and proteins, especially on match days," an athlete explained, discussing macronutrients, hydration needs, caloric intake, supplement use, and meal timing.

Sources of Information: Participants frequently cited professional advice and online platforms as key sources of nutritional information. "I often consult with our team nutritionist and check out a few trusted websites," points to the reliance on nutritionists, online resources, workshops, and athletic trainers.

Dietary Planning: Effective dietary planning was crucial for many athletes. "Meal prepping helps me maintain my diet during busy school and training schedules," emphasizing the importance of meal prepping, snack management, and recovery foods.

4. Discussion and Conclusion

The qualitative analysis of semi-structured interviews with college athletes revealed three main themes influencing their eating behaviors: Psychological Drivers, Social Influences, and Nutritional Knowledge. Each theme encompassed various categories with distinct concepts providing a comprehensive view of the factors affecting athletes' dietary habits. Psychological Drivers included Emotional Eating, Dietary Attitudes, and Motivation to Eat Well. Social Influences were represented by Peer Dynamics, Family Influence, Coaching Guidance, and Social Media Impact. Nutritional Knowledge covered Understanding of Nutrition, Sources of Information, and Dietary Planning.

The Psychological Drivers theme encompassed three categories: Emotional Eating, Dietary Attitudes, and Motivation to Eat Well. Emotional Eating was characterized by concepts such as stress relief, reward mechanisms, comfort eating, and mood swings, highlighting how athletes use food to manage their emotions. Dietary Attitudes included health consciousness, weight management, body image, and athletic performance, reflecting the personal and performance-related factors influencing athletes' food choices. Motivation to Eat Well was defined by discipline, role models, long-term health goals, and team expectations, illustrating the internal and external motivations impacting dietary discipline.

Under the Social Influences theme, four categories were identified: Peer Dynamics, Family Influence, Coaching Guidance, and Social Media Impact. Peer Dynamics involved group meals, peer pressure, role of seniors, and team bonding, indicating the significant influence of teammates on eating behaviors. Family Influence was marked by family dietary habits, parental advice, and cultural traditions, underscoring the foundational role of family in shaping early eating patterns. Coaching Guidance included coach's dietary prescriptions, nutrition plans, and compliance, reflecting the authoritative influence coaches have over athletes' diets. Social Media Impact captured

influencer followings, trend diets, visibility, and public scrutiny, showing how external media influences can pressure athletes into specific eating behaviors.

The Nutritional Knowledge theme comprised three categories: Understanding of Nutrition, Sources of Information, and Dietary Planning. Understanding of Nutrition was articulated through concepts such as macronutrients, hydration needs, caloric intake, supplement use, and meal timing, illustrating the technical knowledge athletes possess about their dietary needs. Sources of Information included nutritionists, online resources, workshops, and athletic trainers, highlighting the diverse and reliable sources athletes use to inform their eating practices. Dietary Planning was represented by meal prepping, snack management, and recovery foods, which are strategic actions athletes undertake to maintain optimal dietary habits.

Our study identified key psychological drivers such as emotional eating, dietary attitudes, and motivation to eat well, which are pivotal in shaping the eating behaviors of athletes. Emotional eating was frequently mentioned as a coping mechanism for managing stress and negative emotions, a finding consistent with the observations of Clermont et al. (2022), who noted that psychological needs and self-determination could significantly impact eating behaviors in athletes (7). Furthermore, the athletes' strong motivation to maintain dietary discipline underscores the findings of Karpinski and Milliner (2016), who emphasized the importance of healthful dietary intentions among collegiate athletes (10).

Social influences emerged as a significant theme, with peer dynamics, family influence, coaching guidance, and social media impacts playing substantial roles. The influence of teammates, highlighted in our findings, aligns with the research by Scott, Haycraft, and Plateau (2019; 2022), which documented the profound impact of teammate behaviors on athletes' eating and exercise patterns (4, 5). Similarly, the guidance and dietary prescriptions from coaches as observed in our study mirror the dynamics discussed by Trigueros et al. (2020), emphasizing the role of the trainer's social behaviors in shaping athletes' dietary habits (11).

Family influences also remained a vital component, corroborating the studies by Francisco, Narciso, and Alarcão (2013), who noted the role of individual and relational factors in the development of eating disorders among

adolescent athletes (12). The impact of social media, as discussed by Fu et al. (2022), further complements our findings, indicating how external images and societal expectations can pressure athletes into specific eating behaviors (9).

The theme of nutritional knowledge, including understanding nutrition and sources of information, was crucial in our findings. Athletes who exhibited higher nutritional knowledge were more adept at managing their eating behaviors effectively. This is in line with the findings from Lai et al. (2021), who found that nutrition literacy mediates the relationship between various factors and healthy eating behaviors in college students (8). Our study extends this by specifically highlighting how athletes use their knowledge in practical dietary planning, a key aspect that supports the notion of informed dietary choices leading to better health outcomes.

The variation in the sources of information, from nutritionists to online resources, reflects a diverse landscape of nutritional education among athletes, which can significantly influence their eating behaviors and overall well-being. This diversity in sources is crucial for providing athletes with a broad spectrum of reliable information, as highlighted by Schaal et al. (2011), who emphasized the importance of psychological balance and informed decision-making in maintaining an athlete's health and performance (13).

Integrating these findings with the broader research landscape reveals that while many athletes are aware of and actively manage their dietary needs, the psychological and social pressures they face can complicate their eating behaviors. This aligns with Rudd and Carter (2006), who argued for a socially responsible approach to building positive body image and eating behaviors among athletes (14).

This qualitative study investigated the psychological and social factors influencing eating behaviors among college athletes, identifying three main themes: Psychological Drivers, Social Influences, and Nutritional Knowledge. Psychological drivers included emotional eating, dietary attitudes, and motivation towards healthy eating, reflecting how personal and internal factors affect dietary choices. Social influences, such as peer dynamics, family impacts, coaching guidance, and the role of social media, highlighted

the significant role of interpersonal relationships and external pressures. Lastly, nutritional knowledge among athletes indicated a variable understanding of dietary needs, affecting their ability to make informed eating choices effectively.

The study underscores the complex interplay between psychological and social factors and their significant impact on the eating behaviors of college athletes. It highlights the crucial role of both internal psychological drivers and external social influences in shaping these behaviors, alongside the protective and informative role of nutritional knowledge. These insights are essential for developing targeted interventions that address both the mental and social dimensions of eating behaviors in athletic settings, aiming to support athletes in achieving both their performance goals and maintaining optimal health.

This study has several limitations. The use of a qualitative approach, while rich in detailed insights, limits the generalizability of the findings across the broader athlete population. Additionally, the sample was confined to collegiate athletes from select universities, which may not fully represent the diverse experiences and backgrounds of athletes at different competitive levels or from different regions. Furthermore, relying solely on self-reported data through interviews may introduce biases such as social desirability or recall bias, potentially influencing the authenticity of the reported behaviors.

Future research should aim to expand the demographic and geographical diversity of participants to include a wider array of sports disciplines and competitive levels. Quantitative studies could be employed to measure the prevalence of specific psychological and social factors identified in this study, providing a broader epidemiological perspective. Longitudinal studies could also be beneficial to examine how these factors evolve over an athlete's career and their long-term impact on eating behaviors and overall health.

The findings suggest that interventions should not only focus on educating athletes about nutrition but also address the psychological and social dynamics that influence eating behaviors. Sports organizations and coaches should consider implementing regular workshops and counseling sessions that address stress management, body image, and team dynamics. Additionally, fostering an environment that

promotes open discussions about the challenges associated with eating behaviors and body image could help mitigate the stigma and pressure often experienced by athletes. Practical implications also extend to policy-making in sports organizations, advocating for policies that support mental health and well-being alongside physical training and nutrition.

Authors' Contributions

RH: Contributed to the conceptualization and design of the study, data collection, analysis, interpretation of results, and drafting of the manuscript.

PG: Provided expertise in the conceptualization of the study, data analysis, interpretation of results, and critical revision of the manuscript for important intellectual content.

ST: Assisted in the design of the study, data analysis, interpretation of results, and critical revision of the manuscript for important intellectual content.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study placed a high emphasis on ethical considerations. Informed consent obtained from all participants, ensuring they are fully aware of the nature of

the study and their role in it. Confidentiality strictly maintained, with data anonymized to protect individual privacy. The study adhered to the ethical guidelines for research with human subjects as outlined in the Declaration of Helsinki.

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