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Personal Food Systems of Male Collegiate Football Players: A Grounded Theory Investigation

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Context: Factors that affect food choices include the physical and social environments, quality, quantity, perceived healthfulness, and convenience. The personal food choice process was defined as the procedures used by athletes for making food choices, including the weighing and balancing of activities of daily life, physical well-being, convenience, monetary resources, and social relationships.

Objective: To develop a theoretical model explaining the personal food choice processes of collegiate football players.

Design: Qualitative study.

Setting: National Collegiate Athletic Association Division II football program.

Patients or Other Participants: Fifteen football players were purposefully sampled to represent various positions, years of athletic eligibility, and ethnic backgrounds.

Data Collection and Analysis: For text data collection, we used predetermined, open-ended questions. Data were analyzed using the constant comparison method. The athletes' words were used to label and describe their interactions and experiences with the food choice process. Member checks and an external audit were conducted by a qualitative methodologist and a nutrition specialist, and the findings were triangulated with the current literature to ensure trustworthiness of the text data.

Results: Time was the core category and yielded a cyclic graphic of a theoretical model for the food choice system. Planning hydration, macronutrient strategies, snacks, and healthful food choices emerged as themes.

Conclusions: The athletes planned meals and snacks around their academic and athletic schedules while attempting to consume foods identified as healthful. Healthful foods were generally lower in fat but high in preferred macronutrients. High-protein foods were the players' primary goal; carbohydrate consumption was secondary. The athletes had established plans to maintain hydration. Professionals may use these findings to implement educational programs on food choices for football players.

Key Words: qualitative study, athletic nutrition, sport nutrition, food choices

Key Points

- Time was an important factor in the food choices of these football players, who were balancing academic and athletic responsibilities.
- The athletes focused on ingesting nutritious, low-fat foods. They recognized the value of eating high-protein and high-carbohydrate foods and hydrating adequately to meet their nutritional needs.
- Because of their regular interactions with athletes, athletic trainers may be able to assist their players in making sound food choices.

The athlete's environment influences his or her food choices. Factors that affect those food choices include the physical and social settings, quality, quantity, perceived healthfulness, and convenience.[1–7] In addition, many authors[8–19] have described the amounts and timing of macronutrient ingestion that allow athletes to perform at optimum levels.

However, the literature on athletes' food choice processes is sparse. We found only one quantitative survey[20] with 3-day dietary recall that explored the food choice processes of freshman football players and a single grounded theory approach that identified how those choices were made. Each athlete must be an active participant in choosing appropriate foods[1,2,20,21] and must implement proper sport nutrition strategies to achieve nutritional goals,[3,9–18,22–32] so it is important to understand how athletes in various positions and of different ethnic backgrounds make food choices.[23,29]

Therefore, the purpose of our grounded theory study was to develop a theoretical model to explain the personal food choice process used by football players in a National Collegiate Athletic Association (NCAA) Division II (DII) football program. The *personal food choice process* is defined as the set of procedures used for making food choices, including the weighing and balancing of activities of daily life, physical well-being, convenience, monetary resources, and social relationships.[1,2]

The results of this study may be valuable to athletes, athletic staff, and nutrition practitioners by revealing the larger factors influencing athletes' food choices. Collegiate athletes are in a highly dynamic period of life: They must appropriately weigh

and negotiate food choices in a new physical, social, and cultural environment.[5] Insights into the food choice process used by athletes may allow athletic staff members to provide better nutritional guidance, enabling and encouraging athletes to make better food choices. Nutrition educators may gain tools to work more successfully with athletes in multicultural settings.[33,34] Teammates' social and multicultural influences also affect an individual athlete's food choices; thus, educational nutrition programming for the team may create a positive environment.[5,33,35–38]

METHODS

We selected the grounded theory approach to develop a model based on the perspectives of the athletes.[39–41] Member checking was conducted with 8 of the 15 participants. The findings were also triangulated with existing studies in the literature and audited for accuracy by a person not affiliated with the study. Two well-qualified auditors—one an internationally known speaker, author, and qualitative research methodologist and the other a nationally known registered dietitian—read, critiqued, and monitored the research project for accuracy. Institutional review board approval was obtained for this study, and each participant provided informed consent.

Interviews continued until new information no longer emerged. Saturation occurred after 15 interviews, and coding ceased when interviews became redundant, adding nothing new to what was already known about a category, its properties, and its relationship to the core category.[39,41–44]

Data collection was conducted in a quiet room (to improve recording quality) via personal interviews, either one on one or in focus groups. Data were analyzed using the constant comparison method. Constant comparison allows the researcher to pursue unique themes as they arise from coding previous interviews.[39,40,42] Text data analyses led to the development of a theoretical structure. In this study, we used open, axial, and selective coding to identify the approximation of reality for the population under study.[39]

After we compared the athletes' words, we used them to label and describe their interactions and experiences with the food choice process.[39,44,45] As is common practice in qualitative research, the athlete's own recorded words from the transcript[39,43–45] are provided here to ground the athletes' interaction with the process. Pseudonyms were given to the participants to protect their anonymity.

Sampling Procedures

In purposeful sampling, the researcher intentionally selects individuals to study based on their ability to contribute to the development of the theory.[41] The number of participants is not established as a number or percentage of the population before the start of the project.[46,47] Green et al[48] recommended ensuring that the sample accurately reflects the ethnic background of the population, so that reported themes deepen the existing knowledge.

Participants

We purposefully sampled the participants for this study to determine the influences of ethnicity and playing position on the food choice theoretical model. Fifteen NCAA DII football players were interviewed. To ensure reasonable representation of player skills and sizes, the sample consisted of 2 kickers (1 punter, 1 place kicker), 4 quarterbacks, 3 defensive backs, 2 wide receivers, and 4 linemen. By class level, there were 4 sophomores, 9 juniors, and 2 seniors. For ethnic diversity, the athletes consisted of 10 whites, 3 Hispanics, and 2 African Americans.

Instrument and Protocol Development

Optimal interview questions are created based on the investigators' knowledge of what is missing in the literature and a plan for eliciting the best responses to the purpose statement and the research questions.[44] Our questions (Table) were based on those from the Bisogni et al,[1] Furst et al,[2] and Smart and Bisogni[5] studies. The interviewer used predetermined, semi-structured, open-ended questions[39,40] for more consistency in the interactions with participants.[40]

Demographics were gathered for the participants, including ethnic background, position played, and year of eligibility. The questions were pilot tested with 5 athletes from an NCAA DII football program who were selected on the same basis as the study participants. After pilot testing, the questions were modified slightly to ensure effective data collection.

RESULTS

The food choice process for NCAA DII football players seemed to be circular, as shown in the Figure. Time was identified as the core category because time most easily interacted with the other categories. The athletes consistently chose foods that provided the preferred fuel source for their next athletic endeavor. Their hydration plans were based on past experience or understanding of the need to be adequately hydrated. High-protein foods were selected because the athletes thought their bodies needed protein to remain healthy. Their carbohydrate choices revealed the athletes' working knowledge of the cell's needed fuel source.

Circular Relationships in the Theoretical Model

The athlete can enter the cycle at any point and proceed around the circle clockwise, counterclockwise, or straight across. The athlete who enters the cycle at "Meal Themes" reported thinking of how to get a quick-fix food to decrease cooking time. Academic and athletic schedules were the 2 categories that most affected choices. The chosen quick-fix food also needed to be a food that met the definition of *healthful*. Healthful food choices needed to fit into a food-related decision process for determining where and when the food would be purchased and eaten. The participants thought they needed to eat well to be able to perform at their best. For participants in this study, eating well often meant avoiding fatty foods. For example, Darrick's definition was basic yet functional: "For me, being more healthy is not fast food and [is] stuff that has lower fat content." Judd stated that he chose healthy foods because he had a family history of heart disease: "I have heart problems on both sides of my family, heart disease, heart attacks."

Establishing routines facilitated the athlete's decision-making process about whether to eat in or go out and, if going out, whether to patronize a fast-food or sit-down restaurant. These decisions were balanced to maintain healthful food choices within the available time. The athletes considered the time frame for purchasing and preparing food in relation to academic and sport schedules. The routine of selecting food may

Table. Interview and Probe Questions

Demographic Information	
1. What position(s) do you play? 2. What is your ethnic background?	
Interview Questions	**Follow-Up or Probe Questions**
3. Do you have any food, drink, or meal preferences, traditions, or superstitions in relationship to practices or games?	Something you really like to eat before a game or practice. Something that makes you feel like you have a competitive edge.
4. Describe a typical day in terms of eating and drinking.	What meals do you eat? When do you usually eat meals? How many times a day do you eat something?
5. What sort of self-talk do you engage in when you are choosing foods through a typical day?	Do you find yourself thinking about some aspect of nutritional content? (eg, fat, protein, carbohydrate, or calorie content)
6. What sort of self-talk did you engage in when you first arrived at college?	
7. How is your self-talk regarding food choice different when you are at college than when you are at home?	Home is where your high school, family, and friends are located.
8. How have your approaches to eating and drinking changed, if at all, since your freshman year?	
9. What sort of strategies do you use to plan your meals and snacks?	Do you give meals and snacks any forethought? Do you use different strategies on an average practice day? Do you use different strategies on an average game day? Do you use different strategies on an average off-season day?
10. How do people around you influence your food choices?	Are you influenced by what other people are eating or drinking?
11. What thoughts go through your mind about the food choices made by people around you?	Do you judge people around you by their food choices?
12. With whom do you eat most of your meals?	Do you eat with your teammates on a regular basis? Where are you most likely to go to eat?
13. Where do you eat most of your meals?	Do you eat with your teammates on a regular basis? Where are you most likely to go to eat?

When conducting the interviews, the researcher will be alert to *sometimes, always,* and *never* answers and probe the conditions under which they occur.

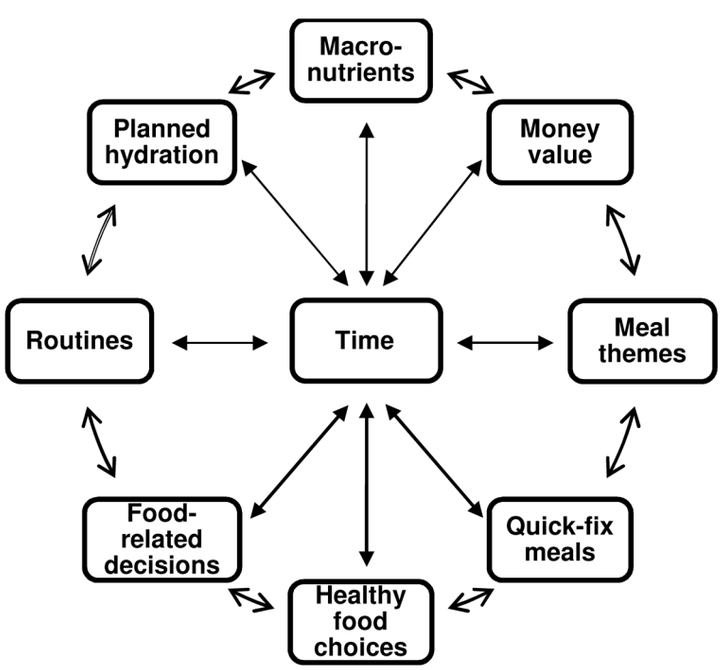

Figure. Food choice process diagram for National Collegiate Athletic Association Division II football players.

be sufficiently established that athletes need not think about it in any detail. For instance, to maintain hydration, they take liquids with them as they leave to start the day of classes and sport activities.

The athletes all reported some type of hydration strategy.[49–51] The hydration strategies were centered on monetary value. Although sport drinks were commonly consumed for their carbohydrate (and sometimes protein) content, they were also viewed as expensive. The athletes reported often looking for a cheaper brand rather than a specific nutrient content. Many football players indicated that their hydration strategy included drinking water when they awoke and carrying a water bottle, which they could refill freely at water fountains through the day.

Football athletes' planning and hydration behaviors may carry over to macronutrient selection. The participants easily identified lean meats, fruits, and vegetables as preferred choices. Mentions of these foods were generally prefaced by a statement about the importance of getting as much food for their dollar as possible. Many athletes shopped at large wholesale locations for cheaper canned goods. Monetary value was a common theme because the athletes in this NCAA DII school were responsible for their own food, except for meals provided by the university while they traveled.

Linear Relationships in the Theoretical Model

Relationships also existed straight across the cycle process. The athlete may enter the model at "Meal themes" and proceed straight to "Routines," skipping the intermediate 3 categories if his habits are sufficiently entrenched. If the athlete enters at "Healthy food choices," he may be influenced by both macronutrient selection and time constraints because of his next sport or academic event. Routines are an important strategy for keeping the athlete's nutrition goals in place.

Individual Components of the Food Choice Process Diagram

Time. Time as a commodity was the central category because it was easily related to all other categories[52] and because the athletes' food choice process was most affected by time. They needed to obtain their own meals in accordance with their nutritional goal of healthful food choices while performing and maintaining their schedules in the academic and athletic realms. Athletes reported quick-fix meals as the best use of their time given their academic and athletic commitments.

Macronutrients. The athletes in this study were concerned primarily with consuming adequate protein.[53] Building muscle mass to maintain a lean look was a consistent theme for ice hockey players.[31] Protein is an essential nutrient for successful athletic performance.[18,54–56]

Secondary to the replacement of protein was the replacement of carbohydrates. Carbohydrates provide an essential fuel source for working muscles.[9,57,58] In many instances, the athletes picked fruits, vegetables, rice, and pasta to fulfill their carbohydrate needs. Physically active people are more apt to choose fruits and vegetables than their counterparts who are not physically active.[8]

Healthy Food Choices. Athletes at the NCAA DII level are responsible for planning, purchasing, and preparing their own meals. Both our athletes and those studied by Smart and Bisogni[5] identified foods they thought of as healthful. Even though athletes reported that healthful foods were more time consuming to prepare, they tried to obtain what they considered to be healthful choices when shopping for the week to come. Participants were busier at school and in season than at other times and thought that they had less time to choose and prepare healthful food.

The athletes noted that it was time consuming to eat properly. Food preparation was also a time-consuming process. Favored foods that were quick and easy to prepare included microwavable foods, open-and-eat or prepackaged foods, and fruit or granola bars.

Monetary Value. Athletes at the DII collegiate level of competition were primarily responsible for obtaining their own food. Getting the most food for their dollar emerged from the text data as a theme. Cory was described as the thriftiest member of his focus group. He was known to travel to a local discount grocery store to stock up on canned fruits and vegetables, which he saw as a better value than fresh fruits and vegetables.

Hydration strategies also depended on the financial situation. Jeff's plan for hydration included a monetary value theme. Many of the athletes liked to include sport drinks in their hydration strategy. They also noted that water was free at any drinking fountain, and water bottles could be refilled at any time of day.

Social Influences

The participants recognized the influence of their teammates on their nutritional strategies. Chad said, "The people around me have a pretty big influence, I would say. . . . I used to live with a guy who was kind of a health freak, so you were always eating really healthy foods." Judd related that he did "not [eat out] on a regular basis. Every once in a while it would be with a teammate . . . and we would go out to eat but not on a regular basis." Chad was influenced by someone he thought had specific nutritional knowledge, but he did not feel influenced by the general public.

Participants seldom ate with more than 3 or 4 teammates apart from the pregame or postgame meal. Football players tended to eat their meals with significant others or with roommates. Darrick stated, "I usually cook for my girlfriend instead of her cooking for me." Although roommates were generally football players, they were not always in the same skill group. The athletes at the DII level indicated that they were responsible for their own food and reported spending more time planning, purchasing, and preparing food than the DI athletes.

Football players thought that only younger players might observe the food choices of upperclassmen. Jeff said, "I have had quite a bit of kids come up to me and ask what I eat and how I get so lean." Judd noted, "As far as the younger players on the team, they pretty much might, you know, look up to me and see what kind of choices I make. Anyone who doesn't really pay attention, probably not." Todd stated that he did not feel influenced by an observer. Christopher ate what he wanted whenever he wanted: "Simply what looks good to me at the time. I just eat whatever I want."

Quick-Fix Foods

Quick-fix foods fit into the athletes' schedules better than did foods that needed time-intensive preparation. Almost all the athletes liked to cook when they had time. When their time was limited, they chose microwavable meals, foods that were ready to eat, and one-skillet dishes with meat added. They also

ate meals in the locker room before practices to supplement their bodies' fuel sources. Some athletes noted that sandwiches, which were commonly mentioned as quick-fix foods, were a good way to meet all the criteria within their time constraints. The sandwich components could be adjusted to accommodate the athlete's taste preferences and needed fuel. More meat could be added during weight-training times, and more vegetables could be added to provide carbohydrates for practices.

Meal Themes. Meal themes emerged from the text data in the food choice process model. Meals were consumed 4 to 5 times per day, which sometimes resulted in a conflict with the academic schedule.[52] Lunch was usually a quick meal on campus or a sandwich carried from home. Afternoon snacks were often eaten in the locker room to provide energy for the upcoming athletic endeavor. Compared with Smart and Bisogni's[5] athletes, who ate most evening meals together as a team, our football players were more apt to eat alone or with one or two significant others during the entire semester.

The football players we studied tended to go back to their college home and eat meals with roommates. Meal components were often shared by those at the meal. For example, each person would be responsible for his own meat, but vegetables and other side dishes were shared. Judd indicated:

> For supper we are kind of a different household, you could say, because we usually will sit down at the kitchen table and actually have supper together; instead of just having everyone parting their own way, we all go out and grill our food and somebody will be in charge of the vegetables or whatever, and we will eat it together as a family."

Strategies varied widely. A few participants did not spend much time thinking about their food choices. Darrick stated that when he began college, he ate anything he wanted at mealtime and did not pay much attention to his food choices. Clint commented that Darrick was his freshman roommate and he made the most of the cafeteria plan: "I was with him as a freshman and he filled some pretty major plates." At the other extreme were athletes who planned 1 meal every 2 hours, for a total of 5 or 6 meals per day. The players who planned ahead were also likely to shop for the week ahead. They would sometimes also cook for the week in order to create leftovers they could microwave as needed.

Planned Hydration. The athletes attempted to maintain adequate hydration levels by drinking water in addition to sport drinks. Consumption of sport drinks is a common component of sport nutrition.[53,59–61] The participants were also very aware of the need to stay hydrated, which may reflect a trend among athletes toward a better sense of the need for adequate hydration.[59,62,63] Ice hockey and football players generally reported conscious hydration plans,[5] including keeping water bottles with them while in classes. Both sets of athletes reported avoiding carbonated soft drinks.

Collegiate athletes consume alcohol more often than collegiate nonathletes.[64,65] Compared with average college students,[66] the ice hockey players reported consuming alcohol less often.[5] Interestingly enough, these athletes did not report drinking alcohol very often; only 2 indicated that they drank alcohol at all.

Routines. Football players did not report eating out very often. They generally cooked for themselves with roommates or their girlfriends, and all stated that they enjoyed cooking and had good cooking skills. In a few instances, the players reported eating the evening meal together.

The athletes did report going together to a local sports bar for all-you-can-eat chicken wings. However, during "wing night," they remained mindful of their nutritional goals.

Food-Related Decisions. For the football players in this study, healthful foods were primarily those that were high in protein, with carbohydrates a secondary consideration. Healthful foods are commonly described as foods high in protein and carbohydrate content.[2,5,7,27] Players at this university have limited access to certified nutritional specialists and athlete-specific food services. Therefore, they must choose foods more independently than athletes at some other institutions. The athletes in this study reported a good understanding of which foods provide which macronutrients.

Many participants in this study adapted their food choices when eating in the university cafeteria during their first few years. They were more likely to eat at sit-down restaurants than at fast-food establishments. The participants sometimes revealed they were overwhelmed with choices in the college cafeteria. A common theme during the freshman year was to eat as much as possible, although football athletes did not report being influenced by teammates' food decisions at meal time. In contrast, hockey players made additional trips to the food line if another player came to the table with "something that looked good."[5]

DISCUSSION

The physical or social environment and availability, quality, quantity, convenience, and perceived healthfulness of the food are among the factors that affect an athlete's food choices.[1–7] The athletes in this study and the ice hockey players in the Smart and Bisogni[5] study had different definitions of healthful foods. For ice hockey players, healthful foods were those that were low in sugar and fat and did not make them feel sluggish and slow on the ice.[31] The participants in the current study reported more traditional definitions of healthful foods, such as items with lower fat content, and avoiding fast foods.[67,68]

Teammates and peers influenced ice hockey players.[5] The football players in this study felt various degrees of influence from others. Hausenblas and Carron[69] found that male athletes were influenced by teammates 28% of the time, even though the athletes did not eat together very often.

Social influences of teammates have been cited in the literature.[5,36,69,70] Ice hockey players ate almost every evening meal together in the school cafeteria,[5] whereas the football athletes in this study seldom ate with more than 3 or 4 teammates apart from the pregame or postgame meal. The ice hockey participants reported having judged each others' food choices and also felt judged by those around them, especially when the team was not succeeding athletically.[5]

The food choice processes of the football athletes in this study were different from those reported by the hockey players in the Smart and Bisogni[5] investigation. The ice hockey players ate together in the college cafeteria during the season; the football players did not. Football athletes ate their meals with significant others or with roommates.

Smart and Bisogni[5] did not specially ask the ice hockey players about their planning strategies. All but one football athlete could outline a meal, snack, and hydration strategy. Many of the football athletes stated that they bought food on the weekend, when they had more time to plan and purchase. Some commented that they cooked large amounts of food on the weekend, so they had leftovers for quick-fix meals during the week. The football athletes brought meal replacements or

fruit and cereal bars to eat in the locker room before practice, so they would be less hungry when practice was over.

Triangulation with the Existing Literature

Participants were asked about their ethnic backgrounds during demographic questioning. The researcher listened for ethnic references to foods or food specialties, but none emerged. There were also no specific references to family specialty or favorite foods. The players were focused on eating to compete and sought macronutrients and healthful foods.

Football athletes and ice hockey players had different definitions of healthful foods. Football players chose fruits, vegetables, lean beef, and chicken because they perceived these foods as more healthful. Ice hockey players identified healthful foods as those that were low in sugar and fat. Both teams recognized that soft drinks were poor choices because they contained calories without nutrients. Soft drinks were commonly replaced with fruit juices, water, or sport drinks. Both teams tended to avoid sweets while training. Finally, both teams reported that when they were traveling, their meals were ordered in advance, so the athletes had fewer food choices and did less active decision making than when at home.

The athletes' physical environment seemed to have minimal influences on their food choices. During meals provided by the university while the players were traveling to contests, the athletes made atypical food choices, a finding consistent with that of Smart and Bisogni.[5] They generally had a breakfast buffet in the mornings, which allowed them more choices than a plated meal. Postgame meals were typically fast food or pizza. With the former, some athletes experienced stomach upset after the meal because they were not accustomed to eating that much fat.

Smart and Bisogni[5] found that as athletes progressed through their years of eligibility, their food choice processes changed. Our football participants also changed their habits. During the freshman year, many ate as much as they could. After the freshman year, however, upperclassmen indicated that their food choice process was consistent in the sophomore, junior, and senior years. All were pursuing what they perceived as healthful food choices and were trying to establish food routines. The desired outcomes of the food choice process for NCAA DII football players were maintaining a comfortable playing weight and feeling healthier.

Implications for Practice

These DII football athletes appeared to have an understanding of proteins and carbohydrates. Conversations with athletes, led by nutrition practitioners or certified athletic trainers, can include more specific information about protein and carbohydrate needs. The players in this study did not pick complex carbohydrates by name, but they did choose complex carbohydrates in the form of fruits and vegetables. Assisting athletes in identifying and selecting other carbohydrates could be beneficial. The participants were concerned only about picking low-fat foods as a general practice and did not distinguish between saturated and unsaturated fats. None of the athletes indicated that they consumed fish high in unsaturated fats because they wanted to eat more unsaturated fats. The lack of differentiation may reflect a lack of awareness about the differences in fat molecules or the benefits of fats as a fuel source.

Lean meats were the typical protein choices. Educating athletes on meat selection and alternative protein sources could help to broaden their protein options. Many athletes planned, purchased, and prepared their own meals. Therefore, instructional offerings could include meal management, shopping tips, grocery store tours, menu planning, cooking demonstrations, and hands-on cooking programs.[23,71] Overall, these athletes have a basic knowledge of general nutrition, but professionals are in a position to communicate specific information about appropriate food choices.

Recommendations for Further Study

The development of theoretical models for athletes' food choices is a new field. To our knowledge, no authors have studied DIII athletes in any sport. Including the current study, only 2 models exist in NCAA DI and DII settings. Models for other sports could be explored.

No investigators have yet delved into the food choice processes for men's noncontact sports or weight-controlled sports (eg, wrestling). Similarly, female athletes' food choices have not been explored. Comparisons of dual men's and women's sports could be conducted. For example, the influencing factors for men's and women's basketball players may or may not be similar.

Men's and women's track athletes who participate as distance runners, sprinters, or field event athletes may have variable influences. Individual interactions within the models could also be investigated. Isolating one of the influences with the core category could reveal more specific themes related to how the athlete interacts with the food choice process. Finally, once a process has been identified, it could be further tested to determine changes in the athlete's choices as a result of the theoretical model. Qualitative projects are often used to develop surveys.[39,43,72] These results could be expanded into a survey to identify the athletes' aptitude in making food choices.

Limitations

The literature revealed several studies that established the food choice process in adults.[1,2,4,21] Only one study[20] looked at freshman football players via a paper-and-pencil survey. One article,[5] published in 2001, revealed the food choice process for NCAA DI ice hockey players. Using an NCAA DII institution may make comparison with DI athletes more challenging because DII athletes are typically responsible for their daily food choices.

Conducting interviews tends to be more personally interactive than a paper-and-pencil survey.[39,44,73] The face-to-face communication hinged on the assumption that the athletes gave truthful answers to the interview questions.[5,39,40,42] There were occasions during the interviews when the scheduled athlete arrived for the appointment with another potential participant. The presence of another person may have influenced the participants' responses and may have further limited the results. The interviews were then conducted as a small group, with both participants being interviewed and their responses analyzed, which may have influenced some of the athletes' responses. Participation by the athletes was voluntary, and the athletes were free to withdraw from the study at any point.

CONCLUSIONS

Football players identified time as the core category of their food choice process. Time was a multifaceted influence,

reflecting not only the time of day but also a spendable commodity similar to financial resources.[21] The athletes at this athletic level are required to plan, purchase, and prepare their own food. Therefore, they were likely to select quick-fix, microwavable, one-skillet, and fresh fruit and vegetable items. Sandwiches, cereal or protein bars, and sport drinks were frequently mentioned as quickly available foods. In addition, the athlete who can easily identify healthful foods will spend less time aimlessly wandering the aisles of the grocery store.

Athletes at the NCAA DII level may have less convenient access to registered dietitians than do higher-division NCAA or professional athletes. Our findings will give practitioners and researchers a better understanding of how DII athletes make food choices. To further educate their athletes, athletic trainers may be able to use the knowledge that football players are more interested in foods that provide protein than in foods that provide carbohydrates and to build on their working knowledge of hydration.

Health care professionals should understand that athletes have personal rules and routines that are based on the social and physical influences of their environment. Those who are assessing the nutrient intake of football athletes should consider factors that may influence the athlete when making food choices.

Although the athletic trainer may not be the player's primary nutritional counselor, he or she is part of a multidisciplinary health care team responsible for the general health and well-being of the institution's athletes. Because the athletic trainer may have more consistent interaction with the athlete than do other members of the health care team, he or she may be able to assist the athlete in making healthful food choices. By understanding the broad demands on the athlete's time, the athletic trainer can encourage appropriate timing of healthful meals around practices and school responsibilities. Our results can also serve as starting points for conversations with athletic directors to create athlete-specific food services.

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