

9-2023

Convenience Over Nutrition for Recreation League Youth Sport Team Snack and Mealtime Choices

Morgan Ashley M.S., R.D.

University of North Carolina at Greensboro, mtashley@uncg.edu

Tony Weaver Ph.D.

Elon University, tweaver@elon.edu

Andrew Ramsey M.S.

University of North Carolina at Greensboro, asramsey0417@gmail.com

Lauren Haldeman Ph.D.

The University of North Carolina at Greensboro, Department of Nutrition, lahaldem@uncg.edu

Follow this and additional works at: <https://scholarsjunction.msstate.edu/jhse>



Part of the [Education Commons](#), [Food Studies Commons](#), [Medicine and Health Sciences Commons](#), [Nutrition Commons](#), and the [Sports Studies Commons](#)

Recommended Citation

Ashley, M., Weaver, T., Ramsey, A., & Haldeman, L. (2023). Convenience Over Nutrition for Recreation League Youth Sport Team Snack and Mealtime Choices. *Journal of Human Sciences and Extension*, 11(2), 11. DOI: <https://doi.org/10.55533/2325-5226.1407>

This Original Research is brought to you for free and open access by Scholars Junction. It has been accepted for inclusion in *Journal of Human Sciences and Extension* by an authorized editor of Scholars Junction. For more information, please contact scholcomm@msstate.libanswers.com.

Convenience Over Nutrition for Recreation League Youth Sport Team Snack and Mealtime Choices

Acknowledgments

Thank you to all participants who completed surveys. The authors would also like to thank Tabeer Khan and Lauren Vincent for their involvement in data collection.

Convenience Over Nutrition for Recreation League Youth Sport Team Snack and Mealtime Choices

Morgan Ashley

Andrew Ramsey

Lauren Haldeman

University of North Carolina Greensboro

Tony Weaver

Elon University

Fifty-six percent of school-aged children participate in team sports, yet there is limited evidence on how participation in youth sports impacts the dietary behaviors of participants and their families. Our team surveyed parents and caregivers of children participating in recreation league youth sports ($n = 178$) to assess the foods and beverages offered as team snacks and factors that influence team snack choices. Juice was the most popular beverage, and crackers were the most popular snack reported by parents. Convenience, followed by cost and child preference, were the most frequently reported factors influencing team snack choices. Survey items also included factors that influence mealtime behaviors on game and practice days. Convenience, followed by nutrition and taste, were most frequently reported as factors that influenced mealtime behaviors. Almost half of parents said their family's eating habits changed as a result of recreational youth sports activities, and more than half said their family often or always eats dinner outside of the home on game and practice days. Professionals who work with this age group and their parents, including extension agents, can tailor education to encourage healthy team snacks and promote strategies to make healthy meals accessible on evenings with youth sports.

Keywords: nutrition, physical activity, youth sports, snacks, family meals

Introduction

As of 2018, 56% of children 6–12 years old participated in team sports, and 38% reported regularly playing on sports teams throughout the year (The ASPEN Institute, 2019). The commitment of time and other family resources, the impact on routines and scheduling, and the foods available at games and practices all influence the eating behaviors of youth sports participants and their families. To protect and maximize youth sports as a health-promoting part of childhood, the impact on nutrition and mealtime requires more consideration.

Team snacks, provided through a volunteer effort by parents, are a norm in recreation league youth sports (Bennion et al., 2020; Rafferty et al., 2018; Spruance et al., 2019; Thomas et al.,

2012; Yoshinaga et al., 2020). Parents' decisions around the foods and beverages offered for team snacks are influenced by cost, convenience, children's preferences, social norms, efforts to balance healthful with less healthful items, and meal timing (Rafferty et al., 2018). Parent perceptions of team snacks as a reward have created a tradition of offering foods that are considered "treats" as team snacks (Irby et al., 2014; Rafferty et al., 2018; Spruance et al., 2019; Thomas et al., 2012). An observational study of team snacks offered in recreation league youth sports found that baked goods, fruit snacks, crackers, and chips were among the most popular team snacks and that sugar-sweetened beverages were offered as part of the majority of snacks (Bennion et al., 2020).

Beyond team snacks, participation in youth sports impacts dietary behaviors for the household (Chircop et al., 2013; Irby et al., 2014). In many families, mealtime is scheduled around games and practices, leading to increased reliance on takeout, fast food, and convenience options (Chircop et al., 2013; Larson et al., 2020). Recently it was observed that 56% of parents with a child involved in sports reported that sports interfered with family meals (Larson et al., 2020). These parents reported less frequent family meals and more frequent purchases from fast food restaurants (Larson et al., 2020).

Research on team snacks and the impact of recreation league youth sport participation on mealtime is limited (Bennion et al., 2020; Irby et al., 2014; Rafferty et al., 2018; Spruance et al., 2019; Thomas et al., 2012; Yoshinaga et al., 2020). Recreation leagues are generally less of a time and financial commitment and, therefore, may attract more children and impact more families, compared to competitive leagues. Our study was designed to explore behaviors and beliefs related to team snacks and the impact of games and practices on mealtime within recreation league youth sports.

Methods

Recruitment

Participants were recruited at youth recreation fields in four counties in central North Carolina during games and practices for recreation league youth sports. Those who identified as a parent or guardian of a child aged 5–12 years playing on a soccer, football, or flag-football team and who were fluent in English were invited to participate in the study. Permission to distribute surveys was granted by league Athletic Directors or the host recreation facility. Study participants were made aware of the study requirements through consent forms detailing collection procedures and the protection of confidential information. Protocols were approved by the University of North Carolina Greensboro human subjects review board.

Survey Design

Study participants, herein referred to as “parents,” completed a 13-question survey designed to assess food and beverage choices for team snacks, factors that influenced team snack choices, mealtime behaviors, and factors that influenced mealtime behaviors on game and practice days. The surveys were completed on paper, took about five minutes to complete, and members of the research team were available to clarify questions as needed. Prior to use for this study, the survey was content validated by nutrition faculty at the University of North Carolina Greensboro. Face validation was performed with parents at a randomly chosen soccer practice prior to data collection.

Responses to some questions were assessed on a three-point Likert scale. The researchers considered participant burden and the descriptive nature of the study when deciding to use a three-point scale in their survey design.

Parents self-reported their race and gender, and provided the number of children living in their household. They also provided the age and gender of their youth sports participant child and the sport in which the child was participating.

Team snacks were assessed with the following open-response question: “When it is your turn to provide snacks for your child’s sports recreation team, please list the snack (food and drink) choices you most often make.” Parents were asked to indicate factors that most influenced their team snack choices. Cost, convenience, nutrition, taste, and child’s preference were provided as fixed responses, and participants could provide additional responses under *other*. In separate questions, parents were asked to indicate how important they felt it was for their child’s team to provide team snacks and how important it was for team snacks to be healthy by selecting from *not important*, *important*, or *very important*. Game duration was assessed with the question: “About how long do these games last?”

Factors that influenced dinner choices on game and practice nights were assessed with the following question: “On game and/or practice nights, what influences your decision on what to eat for dinner?” Cost, convenience, nutrition, taste, and child’s preference were provided as fixed responses, and participants could provide additional responses under *other*. Parents were asked to indicate whether they *seldom*, *often*, or *always* ate dinner at home and outside of the home on game and practice evenings. A three-point scale was also used for these questions to limit participant burden.

A total of 200 surveys were completed. Surveys completed by parents of children younger than 5 years old and older than 12 years old were excluded from our analyses, resulting in a sample of 178 participants.

Data Analysis and Statistics

A descriptive analysis of survey responses was performed using SPSS Version 28.0. Frequency analyses were conducted for survey items related to perceptions of team snacks provided at youth recreation sporting events, team snack and beverage choices, factors influencing team snack and dinner choices, and household mealtime behaviors. Chi² analyses were used to assess for differences in the percentage of parents who reported cost, convenience, nutrition, taste, and child's preference as important factors when making team snack and mealtime choices by child age, child gender, and number of children in the household. Chi² analyses were also used to assess for differences in the percentage of parents who said their family's eating habits changed as a result of youth sports by sport type. Finally, Chi² analyses were run to assess for differences in the percentage of parents who said their family *seldom*, *often*, or *always* eats out on game and practice nights by sport type.

Results

Of the parents who provided race/ethnicity data ($n = 162$), most were white (70.4%). Of the parents who identified their gender ($n = 147$), most were female (69.4%). Households had an average of 2.24 children. The mean age of the youth sports participants was 8.25 years old. The length of the average game was 55.40 minutes.

Child sport was collected from 178 parents (58.4% soccer, 28.1% flag football, 13.5% football). Child gender was collected from 174 parents (67.2% male, 32.8% female). Male children made up 53%, 80%, and 100% of the children who played soccer, flag football, and football, respectively.

Table 1. Participant Race and Ethnicity Data ($n = 162$)

Race/Ethnicity	<i>n</i>	%
White	114	70.4%
Black	32	19.8%
Multiple/Mixed	10	6.2%
Hispanic	4	2.5%
American Indian	1	.6%
Asian	1	.6%

Note. The total dataset includes 178 parents. Some parents ($n = 16$) did not provide data on race and ethnicity.

Of the surveys that indicated typical team snack beverage choices, juice was the most popular beverage, followed by water and sports drinks. Crackers were the most popular snack food, followed by chips, fruit, and sweets like cookies, cupcakes, snack cakes, and rice crispy treats. Team snack and beverage choices are listed in Table 2.

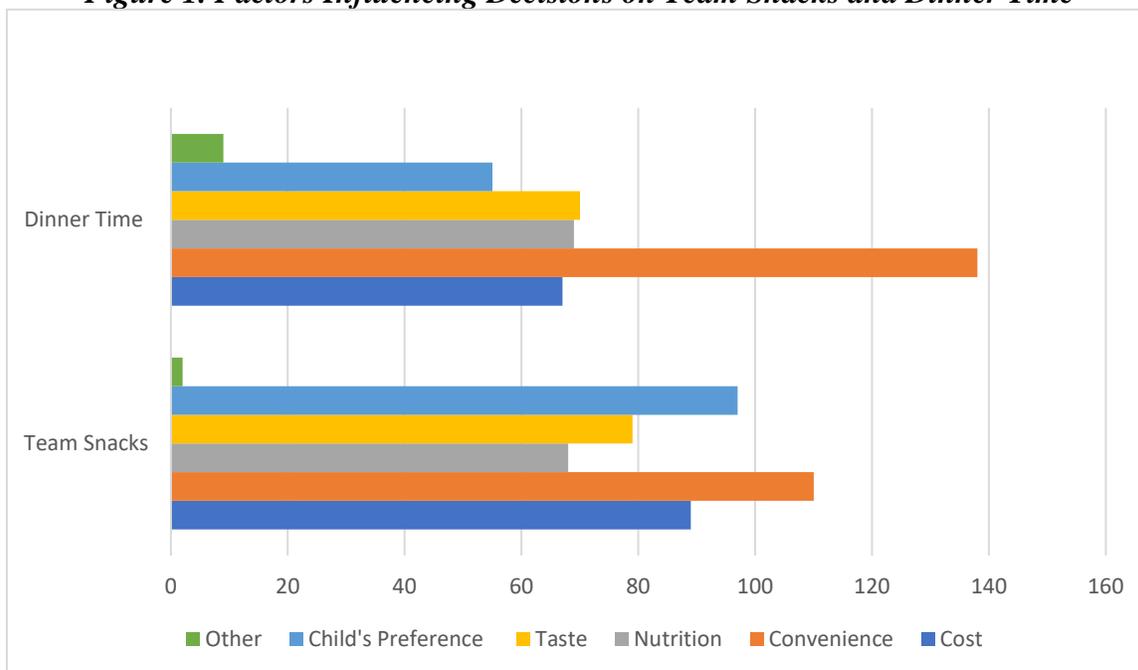
Table 2. Reported Team Snack and Beverage Choices

Snacks (n = 163)	n	%
Crackers	67	41.1%
Chips	61	37.4%
Fruit	28	17.2%
Cookies, Cupcakes, Snack cakes, Rice crispy treats	22	13.5%
Granola bars	11	6.7%
Pretzels, Cheese puffs, Popcorn, Snack mix	9	5.5%
Fruit snacks/gummies	7	4.3%
Dairy (Cheese sticks, yogurt)	2	1.2%
Pizza	1	0.6%
Beverages (n = 162)	n	%
Juice	99	61.1%
Water	38	23.5%
Sports Drinks	30	18.5%
Fruit Drinks and Lemonade	4	2.5%
Flavored Water	4	2.5%
Milk	1	0.6%

Note. Survey responses to “When it is your turn to provide snacks for your child’s sport recreation team, please list the snack (food and drink) choices you most often make.” These values exceed 100% of participants because many participants listed more than one snack or beverage in their survey responses.

In terms of team snacks, 69.7% of parents reported that it is important that snacks are provided at recreation league sporting activities, and 84.8% of parents reported that it is important for team snacks to be healthy.

Convenience was the most frequently indicated factor that influenced team snack choices, followed by child’s preference, cost, taste, and nutrition (see Figure 1). There were no significant differences in the percentage of parents who identified each factor (cost, convenience, nutrition, taste, or child’s preference) as important when choosing team snacks by child age or child gender. There was a significant difference in the percentage of parents who said cost was an important consideration when making team snack choices by the number of children in the household. Cost was important to 62.9% of parents with one child, 53.6% of parents with two children, 54.3% of parents with three children, and 12.5% of parents with four or more children ($p = .008$). There were no significant differences observed in the percentage of parents who identified convenience, nutrition, taste, or child’s preference as important when choosing team snacks by the number of children in the household.

Figure 1. Factors Influencing Decisions on Team Snacks and Dinner Time

Note. Survey responses to “On game and/or practice nights, what influences your decision on what to eat for dinner?” (top) and “What most influences your decision about what snacks (food and drink) to bring for your child’s sport recreation team?” (bottom). X-axis reflects the number of survey respondents who indicated each factor influenced their decision.

Convenience was also the most frequently reported factor that influenced mealtime on game and practice days, followed by taste, nutrition, cost, and child’s preference (see Figure 1). There were no significant differences in the percentage of parents who identified any of the five factors as important when making mealtime choices by child age or child gender. There were significant differences in the percentage of parents who reported cost and taste as important considerations for mealtime by the number of children in the household. Cost was important to a higher percentage of parents with one child compared to parents with two, three, and four or more children (57.1%, 34.5%, 31.4%, and 18.8%, respectively; $p = .029$). Taste was also important to a higher percentage of parents with one child compared to parents with two, three, and four or more children (45.7%, 41.7%, 37.1%, and 6.3%, respectively; $p = .042$). There were no significant differences in the percentage of parents who reported convenience, nutrition, or child’s preference as important for mealtime by number of children in the household.

Of the 178 parents who participated in the survey, 49.7% indicated their family’s eating habits changed as a result of recreational youth sports activities. A higher percentage of soccer parents said their family’s eating habits changed as a result of youth sports compared to football and flag football parents (61.2%, 45.8%, and 28%, respectively; $p < .001$).

Of the 178 parents who participated in the survey, 60.8% said their family often or always eats dinner outside of the home on game and practice nights. A higher percentage of flag football

parents said their family often or always eats out on game and practice nights compared to soccer and football parents (88%, 51.9%, and 41.6%, respectively; $p < .001$).

Discussion

The results of our study add to the existing literature suggesting that recreation league youth sports may result in an increased frequency of poor dietary behaviors, highlighted by the provision of unhealthy team snacks and the disruption of mealtimes.

American children consistently exceed the Dietary Guidelines for American's recommendation to limit added sugars to <10% of total calories, and juice-based and fruit beverages are major contributors (Bailey et al., 2018). U.S. children also exceed recommendations for sodium, and savory snacks are among the top ten contributors of dietary sodium among school-aged children (Quader et al., 2017). Crackers, chips, and juice were the most popular team snack and beverage choices in our sample, suggesting that team snacks could be a contributing source of nutrients that are already excessive in many children's diets.

While the majority of parents felt it was important for team snacks to be healthy, this was not reflected in the types of snacks reported. Water was only offered by 23.5% of parents, suggesting there is work to be done in promoting water as the ideal beverage in recreation league youth sports. Fruit was only offered by 17.2% of parents. The infrequent offering of healthy team snacks is not unique to the parents in our sample, nor are the factors that parents cited as influencing their team snack choices. Convenience, child's preference, and cost have been named as influential factors of team snack choices in other studies (Bennion et al., 2020; Rafferty et al., 2018; Spruance et al., 2019; Thomas et al., 2012; Yoshinaga et al., 2020). Parents of little league baseball players reported giving their child control over what was selected for the team snack, with limits around cost and preparation time (Rafferty et al., 2018). Convenience and child's preference were also among the top three factors that influenced team snack choices among parents of youth basketball players (Yoshinaga et al., 2020). Our results suggest that it is more important for team snacks to fit within the parents' time and financial resources and align with child preferences than it is for the snack to be healthy. To accommodate priorities around convenience and cost, other authors have made practical suggestions to limit the number of foods to one or two items and have each child bring their own water (Rafferty et al., 2018; Thomas et al., 2012). This approach may effectively decrease the burden of providing team snacks and increase the healthfulness of team snacks.

Our finding that nutrition was the least frequently reported factor to influence team snacks suggests that parents might perceive team snacks as "treats," as has been documented in other studies (Irby et al., 2014; Rafferty et al., 2018; Spruance et al., 2019; Thomas et al., 2012; Yoshinaga et al., 2020). Many of those same studies found that social norms discourage those who wish to see healthier options from straying from the "treats" that are expected (Irby et al., 2014; Rafferty et al., 2018; Spruance et al., 2019; Thomas et al., 2012).

Nearly half of parents said their family's eating habits were changed as a result of recreation league youth sports, and more than half of parents said their family often or always eats out for dinner on game and practice nights. Convenience, the most frequently reported factor influencing dinner decisions on practice and game nights, could explain the large percentage of families who reported regularly eating out on such nights. It is likely that the number of families in our study who eat foods prepared outside the home on practice and game nights is even higher than 60.8%, as our survey addressed where dinner is eaten rather than where it is prepared. Frequent consumption of restaurant-prepared meals is associated with increased energy intake, decreased intake of fruits and vegetables, and lower overall diet quality, whereas more frequent home cooking is associated with overall higher diet quality (An, 2016; Barnes et al., 2016; Wolfson et al., 2020). A significantly greater risk for overweight and obesity was observed for adolescents and their parents when dinner was purchased from a restaurant on a weekly basis (Fulkerson et al., 2011). While the children in our sample were school-aged, this association highlights how mealtime behaviors could impact families as children age into adolescence.

Our results related to team snacks and mealtime raise the concern that recreation league youth sport participation could increase the likelihood of poor dietary behaviors and their health-related outcomes in participants and their families.

Limitations

This study was a cross-sectional, descriptive study that utilized a convenience sample and was conducted in a limited geographic area. The resulting sample had limited racial diversity. So, our results may not extend to recreation leagues in other geographic locations or serving more diverse populations. Additionally, ten parents who participated in face validation were included in the full sample.

Implications

Team snacks may be an overlooked source of some nutrients that are already excessive in many children's diets. Professionals who work with this age group and their parents, including extension agents, can tailor education to encourage healthy team snacks within recreation league youth sports. Interventions that aim to reduce the frequency or increase the healthfulness of meals eaten outside the home may also be valuable for families with children participating in recreation league youth sports. It may be important to consider differences in mealtime behaviors by sport type when working with this population.

Children's participation in recreational league sports should not alter eating habits in a way that increases the risk for poor diet-related health outcomes. Our work highlights the opportunity to encourage health among youth sports participants and their families.

References

- An, R. (2016). Fast-food and full-service restaurant consumption and daily energy and nutrient intakes in US adults. *European Journal of Clinical Nutrition*, 70(1), 97–103.
<https://doi.org/10.1038/ejcn.2015.104>
- The ASPEN Institute. (2019). *2019 state of play: Trends and developments in youth sports* (p. 3). The Aspen Institute Project Play. https://www.aspeninstitute.org/wp-content/uploads/2019/10/2019_SOP_National_Final.pdf
- Bailey, R., Fulgoni, V., Cowan, A., & Gaine, P. (2018). Sources of added sugars in young children, adolescents, and adults with low and high intakes of added sugars. *Nutrients*, 10(1), Article 102. <https://doi.org/10.3390/nu10010102>
- Barnes, T. L., French, S. A., Mitchell, N. R., & Wolfson, J. (2016). Fast-food consumption, diet quality and body weight: Cross-sectional and prospective associations in a community sample of working adults. *Public Health Nutrition*, 19(5), 885–892.
<https://doi.org/10.1017/S1368980015001871>
- Bennion, N., Spruance, L. A., & Maddock, J. E. (2020). Do youth consume more calories than they expended in youth sports leagues? An observational study of physical activity, snacks, and beverages. *American Journal of Health Behavior*, 44(2), 180–187.
<https://doi.org/10.5993/AJHB.44.2.6>
- Chircop, A., Shearer, C., Pitter, R., Sim, M., Rehman, L., Flannery, M., & Kirk, S. (2013). Privileging physical activity over healthy eating: ‘Time’ to Choose? *Health Promotion International*, 30(3), 418–426. <https://doi.org/10.1093/heapro/dat056>
- Fulkerson, J. A., Farbaksh, K., Lytle, L., Hearst, M. O., Dengel, D. R., Pasch, K. E., & Kubik, M. Y. (2011). Away-from-home family dinner sources and associations with weight status, body composition, and related biomarkers of chronic disease among adolescents and their parents. *Journal of the American Dietetic Association*, 111(12), 1892–1897.
<https://doi.org/10.1016/j.jada.2011.09.035>
- Irby, M. B., Drury-Brown, M., & Skelton, J. A. (2014). The food environment of youth baseball. *Childhood Obesity*, 10(3), 260–265. <https://doi.org/10.1089/chi.2013.0161>
- Larson, N., Fulkerson, J. A., Berge, J. M., Eisenberg, M. E., & Neumark-Sztainer, D. (2020). Do parents perceive that organized activities interfere with family meals? Associations between parent perceptions and aspects of the household eating environment. *Journal of the Academy of Nutrition and Dietetics*, 120(3), 414–423.
<https://doi.org/10.1016/j.jand.2019.11.008>
- Quader, Z. S., Gillespie, C., Sliwa, S. A., Ahuja, J. K. C., Burd, J. P., Moshfegh, A., Pehrsson, P. R., Gunn, J. P., Mugavero, K., & Cogswell, M. E. (2017). Sodium intake among US school-aged children: National Health and Nutrition Examination Survey, 2011–2012. *Journal of the Academy of Nutrition and Dietetics*, 117(1), 39–47.e5.
<https://doi.org/10.1016/j.jand.2016.09.010>

- Rafferty, A., Gray, V. B., Nguyen, J., Nguyen-Rodriguez, S., Barrack, M., & Lin, S. (2018). Parents report competing priorities influence snack choice in youth sports. *Journal of Nutrition Education and Behavior*, 50(10), 1032–1039. <https://doi.org/10.1016/j.jneb.2018.04.275>
- Spruance, L. A., Vaterlaus, J. M., Haines, A., & Walker, J. (2019). “Please bring a healthy snack”: An exploratory study on parent experiences with post-game snacks and beverages in youth sports. *Journal of Park and Recreation Administration*, 38(2). <https://doi.org/10.18666/JPRA-2019-9985>
- Thomas, M., Nelson, T. F., Harwood, E., & Neumark-Sztainer, D. (2012). Exploring parent perceptions of the food environment in youth sport. *Journal of Nutrition Education and Behavior*, 44(4), 365–371. <https://doi.org/10.1016/j.jneb.2011.11.005>
- Wolfson, J. A., Leung, C. W., & Richardson, C. R. (2020). More frequent cooking at home is associated with higher Healthy Eating Index-2015 score. *Public Health Nutrition*, 23(13), 2384–2394. <https://doi.org/10.1017/S1368980019003549>
- Yoshinaga, A., Gray, V. B., Barrack, M., Blaine, R. E., & Smallwood, K. (2020). Team snacks in youth basketball: Which factors influence parent selection. *Family and Consumer Sciences Research Journal*, 48(3), 276–288. <https://doi.org/10.1111/fcsr.12353>

Morgan Ashley is a registered dietitian nutritionist and a Ph.D. candidate in the Department of Nutrition at the University of North Carolina Greensboro. Direct correspondence about this article to Morgan Ashley at mtashley@uncg.edu.

Andrew Ramsey is a dietetic intern in the Department of Nutrition at the University of North Carolina Greensboro.

Dr. Lauren Haldeman is professor and chair of the Department of Nutrition at the University of North Carolina Greensboro

Dr. Tony Weaver is the associate dean in the School of Communications and professor of Sport Management at Elon University.