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Parents Report Competing Priorities Influence Snack Choice in Youth Sports: In-Depth Group Interview Findings

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Abstract

Objective—To describe: 1) parental perceptions of team snacks; 2) factors that motivate snack choice; and 3) perceptions of healthy snacking guidelines in youth sports.

Methods—Six in-depth group interviews were conducted among parents (n=22) of children ages 4–12 in two Los Angeles County baseball little leagues. Interviews were audio-recorded, transcribed, and analyzed using thematic analysis.

Results—Parents perceived fruit as the “ideal snack;” this ideal was balanced with competing priorities, including children’s preferences, cost, time, and social norms around snacks as rewards and team bonding. While parents were supportive of promoting healthy snacks, they believed snacking guidelines should not be mandated.

Conclusions and Implications—Using team leaders as role models and developing messages that align with parents’ motivations when choosing snacks could promote healthier snacking in youth sports. Future studies to explore drivers of snacking with a broader sample and how to effectively promote healthy snacks are warranted.

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Keywords

snacks; in-depth group interviews; social norms; youth sports; parents; qualitative research

Introduction

Recent National Health and Nutrition Examination Survey (NHANES) data (2011–2014) indicate that snacks contribute approximately 459 kcal/day for children aged 2–18.¹ This represents an additional 199 kcal/day provided by snacks compared to intakes in 1977–78.¹ Furthermore, NHANES data indicate an increase from 1.1 snacks per day in 1977–78 to 2.4 snacks per day in 2011–14 among 2–18 year olds.^{1,2} Notably, from 1977 to 2014, intakes of salty snacks (such as crackers and chips), sports/energy drinks and fruit/vegetable juice have increased, while grain-based dessert foods have remained a top contributor to snacking calories across survey years.^{1–3}

While snacking has increased in frequency and caloric contribution in recent years, studies of snack-related nutrient contributions among children show mixed impacts on diet quality.² Analyses of snacking patterns among 2–18 year olds suggest that several snacking patterns common in U.S. children are associated with higher intakes of nutrients of public health concern (such as fiber, vitamins A and C, folate, potassium, calcium, and magnesium); however, most common snacking patterns are associated with higher intakes of saturated fat, added sugars, and sodium.⁴ Several studies indicate an inverse or null association between snacking and obesity in children.^{3,5,6} A recent study suggests that snack consumption is a risk factor for poor diet among adolescents; snacking was found to contribute to overweight status when energy-dense foods were consumed,⁷ warranting the need to address nutrient quality of snack choices.

While studies have assessed the availability of snack foods and beverages in a variety of settings, such as neighborhood retail stores, restaurants, schools, and retail food stores near schools,^{8,9} literature related to children's snacking in common social settings, such as in youth sports, is limited.^{10–13} However, in one prior report, an environmental scan of the food environment in youth baseball in North Carolina suggested that positive health gains associated with physical activity from youth sport participation may be thwarted by unhealthy eating habits.¹³ A qualitative study assessing parental attitudes towards snacking in youth sports indicated that while parents expressed an awareness of the unhealthy foods consumed by their child in the youth sports environment, few expressed concern or motivation to change the situation, citing time pressures of parent involvement as a deterrent to planning meals and snacks.¹⁰ Willingham and colleagues¹⁴ investigated barriers, such as time constraints and lack of knowledge, contributing to suboptimal nutrient content of “team snacks” distributed by parents on a rotating basis to young soccer players after games. They analyzed the nutrient contribution of team snacks, which contained, on average, 333 ± 157 calories, 63 ± 26 g carbohydrate, 6 ± 3.5 g protein, 9 ± 4.6 g fat, 35 ± 14 g sugar, 200 ± 156 mg sodium, and 4 ± 2.1 g fiber.¹⁴ Similarly, D’Aria and colleagues¹⁵ observed team snacks provided to children under six years of age playing soccer, comparing them to the USDA Smart Snacks in Schools nutrition standards for elementary schools.¹⁵ Findings indicated

that grain-based desserts were the most popular snack category (31.3% of snacks foods) and that sugar-sweetened beverages were the most common drinks provided (60.4% of beverages). Less than half of observed snacks met the USDA guidelines.¹⁵

Most recently, O'Connor and colleagues¹⁶ investigated co-occurrence of activities (sedentary vs. physical activities) and dietary intake (healthy and unhealthy) among children and their mothers. The researchers found that children were significantly more likely (OR=1.85), compared to their mothers, to consume unhealthy foods during 2-hour periods of observation that included physical activity, but not during 2-hour periods of sedentary activity. This suggests that child participants were more likely to consume unhealthy foods during times that they were also physically active.¹⁶

In recent years, national health and nutrition policies have increasingly acknowledged the importance of environmental and social factors on food intake. The *Dietary Guidelines for Americans 2015–2020* include a social ecological model to convey multiple layers of influence on human food choice.¹⁷ Similarly, *Healthy People 2020* includes an emphasis on “determinants of health,” including policy, social factors, health services, individual behavior, and biology and genetics.¹⁸ This focus on spheres of influence has stimulated programmatic/policy efforts to improve healthy food access. Although availability and ease of access are important contributors to improved nutrition outcomes, a growing body of literature substantiates the impact of social norms on food behavior, particularly related to youth snacking, which is quite applicable to the youth sports setting.^{19–22}

The purpose of this study was to identify factors that contribute to parental snack selections when assigned to provide snacks to team members in youth sports, with the aim of elucidating means of promoting healthy snacking among child athletes. The objectives of the current study were to: 1) describe parental perceptions of team snacks in youth sports; 2) describe factors that motivate snack choice; and 3) describe perceptions of guidelines to promote healthy snacking in youth sports.

Methods

Sample

Participants were recruited from two little leagues (out of 25) in Southern Los Angeles County, CA due to time and budget constraints of the research. Two districts in Southern Los Angeles County, CA (of three districts: Torrance/Carson (8 little leagues), Long Beach (7 little leagues), and Palos Verdes/Manhattan Beach (10 little leagues)) were used for recruiting participants. All parents/guardians with children enrolled in tee-ball of major/minor divisions were eligible to participate; these divisions were chosen to allow for comparison of the perspectives of parents of younger children (4–7 years of age) vs. those of older children (10–12 years of age). Team leaders of potential leagues for the study received preliminary recruitment details; a follow-up email containing a recruitment script was sent to interested leagues and passed along to parents via email. Three in-depth group interviews (GIs) were conducted with parents of athletes ages 4–7 years (n=10 parents); three group interviews were conducted for parents of athletes ages 10–12 years (n=12 parents). All study participants spoke English. The California State University Long Beach Institutional Review

Board approved the study protocol. All participants provided written informed consent before data collection; participants were assured that responses would remain anonymous.

Procedure

A group interview guide was designed to assess parental perceptions of team snacks (defined as snacks provided by parents on a rotation to children at the end of games) in youth sports using a qualitative case study design.²³ In depth group interviews allowed parents to interact with each other regarding perceived acceptability of snacks and snacking guidelines. Questions used by similar studies assessing parent perceptions of children's food and snacking choices guided development of questions related to perceptions of team snacks and parents' decisions about foods to include in team snacks.^{24,25} Two questions were developed independently by researchers to assess perceptions of guidelines around snacking. Three nutrition researchers (two with public health backgrounds and one with a sports nutrition background) provided feedback to enhance face and content validity of interview questions.

Group interviews, lasting approximately 60 minutes and consisting of an average of four participants, occurred on-site in a private room at baseball fields, during practice or following games. Prior to each GI, participants were asked to complete a demographic survey. Group interviews were moderated by the principal investigator (who has extensive experience conducting qualitative research) or a trained research assistant. A note taker attended GI sessions. Interviews were audio-recorded with consent of participants and transcribed verbatim by a trained research assistant. A coding scheme was developed and amended as transcripts were reviewed. No new codes were apparent after the fourth group interview; researchers agreed that saturation was achieved when no additional codes were evident in the fifth and sixth group interviews.

Data Analysis

NVivo (version 11, 2015, QSR International Pty. Ltd., Doncaster, Australia)²⁶ was used to code transcripts. Six steps of thematic analysis as outlined by Braun and Clark were used.²⁷ These steps include familiarization with data, generating initial codes, searching for themes, reviewing themes, developing a codebook, and producing the report, with movement back and forth between steps as needed. Three researchers reviewed the transcripts, developed the codebook (including codes and definitions), and met to resolve differences. Then each researcher independently applied the codes to the transcripts. Multiple meetings were held to resolve discrepancies in coding until a consensus was achieved. During these meetings, the coders carefully examined how potential individual biases might influence meanings imbued into coded text. Finally, responses of parents in the two age categories were evaluated for potential differences in perspectives.

Results

Study Sample

The sample consisted of 22 parent participants (see Table 1 for demographic characteristics), many of whom held leadership positions in team sports. When asked to indicate the reason for involving their children in youth sports, parents reported four primary reasons: improved

physical well-being for the child, past family experience with sports, a desire for their child's socialization, and the character-building potential of sports.

The following sections describe emergent themes, according to study objectives. Parent perceptions of the snacking environment are reviewed first, followed by factors that motivate parents' snack choices, and, lastly, parent feedback related to snacking guidelines. Quotes to illustrate each theme are provided in Table 2.

Perceptions of Snacks

Five themes related to parent perceptions of snacks were evident: 1) acceptability, 2) amount, 3) junk food, 4) team bonding, and 5) snacks as a reward. Parent perceptions of team snacks varied between age groups in terms of acceptability, the amount of food given, and the idea of junk food. Perceptions of less healthy snacks (such as candy, sports drinks, and chocolate covered granola bars) differed across age groups, with parents of older children expressing greater acceptance of these items in comparison to parents in the younger groups. Parents of older children commonly provided four to five snack items; parents of younger children felt this amount was excessive. In both age groups, fruit (such as an apple, orange, or banana), protein items (such as peanut butter or protein bars), granola bars, yogurt, and cheese and crackers were deemed ideal, while soda and sugary foods were believed to be unacceptable. Parents across age groups agreed that snack items enhanced the team bonding experience and could be a reward or treat for sports participation.

Drivers of Snack Choices

Six themes related to drivers of snack choices were identified: 1) cost/convenience, 2) children's preferences, 3) social norms, 4) parent vs. child's role in selecting snacks, 5) balance, and 6) meal timing. Parents expressed differing views on their own versus their child's role in selecting snacks. The majority of parents gave their child control of what went into team snacks. Some parents collaborated with their child either by providing choices from which to choose or allowing input into purchases, while other parents did not give any choice. Snack selections were limited by price and the amount of preparation time needed. "Healthy food" such as fruit was viewed as expensive to purchase on a large scale and more difficult to prepare and hold until game time.

Children's preferences and social norms also affected snack choices. Parents believed children preferred "sweet or unhealthy" instead of "healthy" food when given the option; parents in all groups mentioned aligning snacks with their child's preferences. Parents indicated that typical snacks from other parents influenced what they brought when it was their turn to provide snacks, and that the first parent to provide snacks at the beginning of the season generally sets the standard for the season's snacks. Parents in most GIs voiced struggling to balance healthy and unhealthy options. For instance, parents would try to include one or two "healthy" items (such as a fruit) with a perceived unhealthy item such as chips, crackers, and/or a fruit drink. Parents of younger children (but not older children) referred to less healthy items as "junk food;" parents of older children were more accepting of less healthy snacks and felt less pressure to balance. Parents across age groups also considered the timing of meals when providing snacks. For example, parents attempted to

pack healthier snacks at early morning games, while evening snacks were often lighter because parents did not want to spoil dinner. Interestingly, the vast majority of parents did not suggest snacks as a way to enhance performance or energy of their children.

Thoughts Related to Snacking Guidelines

Three themes were evident related to parental perceptions of snacking guidelines: 1) facilitators to implementing guidelines, 2) difficulty balancing norms and preferences, and 3) barriers to accepting guidelines. While parents indicated they would be open to promoting healthier snacks (through improved snack bar options, lists of suggested snacks, etc.), they preferred balancing promotion of “ideal snacks” with maintaining foods children prefer and enjoy. To enhance receptivity to guidelines, parents preferred that a nutrition professional or team leader communicate snacking guidelines to parents. The majority of older and some younger parents voiced resistance to snacking guidelines, indicating they perceived guidelines would limit their options for bringing snacks. Common reservations voiced by parents related to snacking guidelines included impacts on cost, convenience, and a potential lack of support from all parents. Parents preferred suggested rather than mandatory guidelines.

Variations by Child's Age

Study findings also suggest that perceptions of snacks and snacking guidelines in youth sports differed between parents based on their child's age. Parents of younger children more frequently reported a desire to improve the nutritional quality of snack foods, while parents of older children expressed more acceptance of current snacking norms, including a variety of healthy and unhealthy snack food options. Parents of older children also expressed greater reservations about the implementation of guidelines for team snacks, while parents of younger children expressed greater support for snacking guidelines.

Discussion

Efforts to balance multiple priorities, such as children's preferences, social norms, and convenience, appeared to play a role in selecting team snacks among study participants. These findings are consistent with findings from Irby and colleagues,¹³ as parents of boys in youth baseball (ages 8–11y) also reported time constraints and concession offerings as key drivers of snacking in the context of youth sports. While parent responses to in-depth group interview questions in the current study focused on many priorities related to snack selection, health was not a prominent theme. Although health professionals desire to see improved consumption patterns in multiple contexts, using health-related messages may not be the best means of achieving change. Recent studies have investigated social and environmental approaches to promoting healthier food choices. Robinson, Fleming, and Higgs (2014) investigated the potential of social norm-based messages to prompt healthy food selection and consumption.²⁸ Use of a social norm-based message (e.g., telling university student research participants that typical students eat over three servings of vegetables each day) was compared with a health-based message (e.g., encouraging students to consume at least three servings of vegetables a day to improve heart health and to reduce cancer risk), at both snack time and lunch time. Among low-consumers of vegetables,

exposure to the social-norm message resulted in greater selection and consumption of vegetables at lunch and in more fruits and vegetables and less energy dense snacks selected and eaten for snack.²⁸

Olstad and colleagues²⁹ investigated the potential of two “nudge” tactics (i.e., taste testing and signage) and an economic incentive to alter snack bar purchases at a community pool. No changes were observed in the full sample. However, among the 41% of purchases that were directly observed, a 30% increase in sales of healthy items was observed when the signage and taste testing intervention was implemented; the increase was maintained when the economic incentive was added to the intervention. Impacts of nudge tactics were greater among overweight/obese individuals, and males were less responsive to the nudge tactics but more responsive to nudge plus economic incentive, compared to females. Qualitative findings of Olstad et al.’s study align with many of the findings of the current study. Olstad and colleagues found that children who visited the snack bar with their peers often purchased identical items. Observations of food-related conversations between parents and children also provided evidence that food selections were greatly influenced by children’s preferences at the pool setting.²⁹

Variations in perceptions of snacking by child’s age were apparent in focus group findings. A potential explanation could be that parents of older children have spent more time in youth sports and have been conditioned to accept social snacking norms in the youth sports context. In contrast, parents of younger children are less conditioned into team snacking norms due to less time in youth sports, and may have a greater sense of control over the food intakes of their children. Studies show that early acceptance of nutrient dense food may promote healthy eating habits later on in life,^{30–33} and that early, positive, repeated experiences eating healthy foods and observing others consuming healthy foods are important for development of food preferences and habits.³⁴ Thus, working with parents of younger children to see themselves as gatekeepers to social influences around food and to change norms before they are deeply ingrained may be a promising strategy.³⁴

Convenience sampling in two little leagues out of twenty five in Southern Los Angeles County and limited representation of African American and Asian populations reduce generalizability to other locations and audiences. While the demographic characteristics of the two leagues were similar, given the diversity of the region, the findings may not represent all parents and athletes in Los Angeles County. However, comparable studies indicate similar findings related to drivers of snack choice in youth sports, such as social norms, cost/convenience, balance, and meal timing.^{10,13} In addition, social bias may have influenced parents with interest in snacking in youth sports to participate in interviews.

Implications for Research and Practice

Findings from this study support research that seeks to improve the snacking environment in youth sports in ways that align with parent values. Using messages that resonate with values of parents, such as saving time and promoting team bonding, may be more attractive than messages with a focus on improving nutrient quality of snacks, particularly since parents in the current study shared that concerns for health were often overshadowed by competing

priorities. For example, simplifying snacking norms by asking parents to bring one to two food items (and providing a list of suggested food items), while having each child bring his or her own water, may help to reduce burdens of cost, inconvenience, and lack of support from other parents.¹⁰

Future studies may seek to mitigate barriers to healthy snacking in youth sports, such as cost, taste preferences, and social norms. Using team leaders as role models for healthful snacking could also be a tool to mediate social norms.¹³ Given the small sample participating in this study, additional research is warranted to confirm findings and to further understand how parents from a greater variety of demographic groups approach snacking in sports in Los Angeles and throughout the country. These findings, however, have helped develop a framework for understanding how parents may approach selection of team snacks, and provide insight into potential avenues for influencing snack quality in ways parents find relevant.

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Practice Points

- Messages that resonate with parental values (e.g., saving time and promoting team bonding) may be more attractive than messages around nutrient quality of snacks. (139 characters, placed with lines 241–243)
- Future studies may seek to mitigate barriers to healthy snacking in youth sports, such as cost, taste preferences, and social norms. (112 characters, placed with lines 248–249)

Table 1

Demographic Characteristics of Parents of Children Aged 5 to 12 Years Participating in In-Depth Interviews Investigating Perceptions of Snacking in Youth Sports (n=22)

	Total (n [%])
Division of child	
T-ball/Rookie (ages 4–7)	10 (45%)
Minor/Major (ages 10–12)	12 (55%)
Number of children	
1	6 (27%)
2	11 (50%)
3	5 (23%)
Relationship to child athlete	
Mother	15 (68%)
Father	7 (32%)
Age (y)	
25–25	3 (14%)
36–45	12 (54%)
46–55	7 (32%)
Race/origin *	
White	11 (50%)
Black	1 (5%)
Hispanic	11 (50%)
Indian	0 (0%)
Asian	3 (14%)
Hawaiian	2 (9%)
Other	0 (0%)
Role in youth sports *	
Coach/manager	3 (14%)
Team Parent	9 (41%)
Board Member	3 (14%)
Other	5 (23%)
None	5 (23%)
Marital status	
Single	1 (5%)
Married/Domestic Partnership	21 (95%)
Household income	
< \$50,000	1 (5%)
\$50,000 – \$99,999	6 (27%)
\$100,000	15 (68%)

* Some participants indicated more than one response to this question.

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Table 2

Themes and Example Quotes Related to Perceptions of Snacks, Drivers of Snack Choices, and Thoughts Related to Snacking Guidelines in Youth Sports Among Parents (n=22)

Perceptions of Snacks	Example Quotes
Acceptability	<p>"I think of granola bars or fruit; that's always a good thing; I'm into cheese and crackers..."^a</p> <p>"...Soda is definitely not a good choice of snack and I think I'm ok with candy..."^b</p> <p>"...the ideal would be water or Gatorade, I think either one would serve the purpose, but I think a fruit or an apple or banana would be best..."^b</p>
Amount of Food Given	<p>"It's usually like four or five items...it doesn't really need to be that many..."^a</p> <p>"I think it's appropriate now...I don't see too much excess..."^b</p>
Junk Food	"I notice the soccer team we had there was a lot of fruit and when we were there it was like everywhere, whereas baseball it seems like there's more junk (food)." ^a
Team Bonding	<p>"...yeah and they all enjoy getting it, too. Like, who's giving out snack today? ..." ^a</p> <p>"My daughter really enjoys handing it out like she's excited to hand it out." ^a</p> <p>"I honestly think (team snack is) part of the reason they play, they get to come back here and they have so much fun with their friends out there." ^b</p>
Reward	<p>"(A snack is) ...like a reward for what they've done today." ^a</p> <p>"(A snack is a) ... reward you know win or lose they look forward (to it)" ^b</p>
Drivers of Snack Choices	
Cost/Convenience	<p>"A lot of times some of the healthier options, they don't sell it in bulk and we have to spend more money trying to buy a bag of apples costs more than buying 25 count of chips so it's a little bit easier." ^b</p> <p>"My major constraint is time, if I remember ahead of time...then I'll make it a better choice. But if it's last minute then I feel desperate and I'll do the Capri Sun and the, you know, peanut butter cracker..." ^a</p>
Children's Preferences	<p>"If you bring carrots and celery and stuff like that, they probably turn their nose to it because they're just so used to eating that kind of food (junk food)." ^a</p> <p>"I can throw an orange in there and a string cheese but that's probably never going to make it into that kid's body." ^b</p>
Social Norms	<p>"My first experience here I saw all these parents getting slushes and sodas for their kids...and I caved in." ^a</p> <p>"Pretty much year after year we've kind of stayed status quo. It's working, it's what everybody likes..." ^b</p>
Parent vs. Child Role	<p>"We go down the aisle and I'll ask them if they want it. The first three items they say 'yes' to, that's what we get." ^a</p> <p>"...yeah mine don't even go grocery shopping with me I do it so they're not even actually involved in it." ^a</p> <p>"I take my kid to the store and I say pick team snack." ^b</p> <p>"They don't like the granola bars but I don't care ... we're getting granola bars." ^b</p>
Meal Timing	<p>"...kids maybe hadn't had breakfast, so I tried to do something sweet and something healthy." ^a</p> <p>"They go on to eat again at home when it's an evening game. So you know it's a good thing that it's a little smaller." ^b</p>
Balance	"So I feel people in my generation are trying really hard, but it's like 50/50, like they'll bring like the healthy snacks in the bag but then they'll treat the kids with ice cream afterwards." ^a
Thoughts Related to Guidelines	
Facilitators	<p>"...it takes a parent or coach or someone to step in and say, 'OK, guys, there's got to be some ground rules with the snacks...' " ^a</p> <p>"...if there was a guideline it would look as if there was a conscious effort to do the right thing... I think all the parents are trying to do and that is create good habits..." ^a</p> <p>"I think if the information is handed to us maybe on the first day by the coach as well as whatever fees we have to pay, here's the guidelines... Yeah maybe during registration, hand us a little flyer saying 'Use our recommended snacks.'" ^a</p> <p>"If you get the involvement of the parents, they're more willing to do it rather than if you just go out there and tell them something." ^b</p>

Perceptions of Snacks	Example Quotes
Difficulty Balancing Norms and Preferences	<p>"I think you have to try to put more (healthful guidelines) and at the same time you cannot impose because we have budget restrictions so they might have to go to something cheaper..."^b</p> <p>"As far as maybe being the leader to try to get the parents to tell them or ask them what to bring or to have them bring something healthy I don't know, I don't think I would want to be put into that position unless I was like a team mom or something to that affect. If my husband was coaching the team or we as a couple were coaching the team and I was to put together a snack list I could go about doing it that way"^a</p>
Barriers	<p>"I don't think there's really a place. You know, people are volunteering, it costs them you know \$25-\$29 every time they buy 12 snacks from the snack bar for their kids; it's not cheap. So I'm certainly not going to agree to (guidelines), I wouldn't appreciate having somebody say, here's your guidelines, none of this."^b</p> <p>"I mean I'm not gonna lie I can be as stubborn as my kids if you tell me I've gotta do something I'm gonna be like, Why?" and I'm gonna put my foot down..."^b</p> <p>"They shouldn't tell us what we can give our kids and what we can't. We're the parents."^a</p> <p>"...the way that it ends up breaking is when a parent or two break it."^a</p>

^a Indicates the parent had a child in the 4–7 year old division.

^b Indicates the parent had a child in the 10–12 year old division.