

School Nutrition Directors' Perspectives on Flavored Milk in Schools

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Please note that this study was published before the SY2014-15 implementation of the Smart Snacks Nutrition Standards for Competitive Food in Schools, as required by the Healthy, Hunger-Free Kids Act of 2010. As such, certain research relating to food in schools may not be relevant today.

ABSTRACT

The offering of flavored milk in schools is a controversial topic. U.S. Department of Agriculture regulations now require that flavored milk in schools is fat-free. The perceptions, beliefs, and attitudes of 21 school nutrition directors (SNDs) about the offering and student acceptance of lower-calorie, flavored milk were explored using a focus group, interviews, and written survey. Survey responses and transcripts were analyzed using the constant comparative method. Four broad categories emerged: how SNDs respond to milk and policy changes, the importance of milk in school, the school cafeteria as a learning environment, and SNDs' role as advocates for good nutrition. School children's consumption of milk to ensure adequacy of key nutrients was perceived as important. Lowering calories in flavored milk was perceived as a better solution than eliminating milk. This study provides further evidence supporting the importance of engaging SNDs in policy making, evaluation, and nutrition education.

Introduction: The Changing School Environment and the Role of School Nutrition Directors

Almost 32 million children participated in the National School Lunch Program during the 2010-11 school year (U.S. Department of Agriculture [USDA], 2013). School meal programs are important sources of nutrition for children. However, as the prevalence of childhood obesity increases the school nutrition environment is seen as a contributor to this public health problem (Ogden, Carroll, Curtin, Lamb, & Flegal, 2010).

In January of 2012, the U.S. Department of Agriculture (USDA) issued a final rule making significant changes to the nutrition standards for foods served in schools (Nutrition Standards in the National School Lunch and Breakfast Program, 2012). This rule adopted many of the recommendations made by the Institute of Medicine (IOM) to improve the overall healthfulness of school meals. These recommendations include lowering the calories, saturated fat, and sodium at breakfast and lunch, serving more whole grains, and increasing portions of fruits and vegetables with a greater emphasis on variety (Institute of Medicine [IOM], 2007, 2009). USDA subsequently issued a policy memo in December 2012 offering greater flexibility for the serving of grains and proteins (USDA, 2012).

To meet the USDA calorie and fat limits, milk must be unflavored and fat-free or low-fat (1%), or, if flavored, must be fat-free. One study found that most elementary students (79%) choose flavored milk (Condon, Crepinsek, & Fox, 2009). Concern over excess intake of added sugars has led some school districts across the country to place restrictions or bans on the sale of flavored milk (Patterson & Sidel, 2009). Data suggest that during the first year of flavored milk restrictions, fewer children take milk, and those who do take milk as a part of lunch consume less than children who

have access to flavored milk (Patterson & Saidel, 2009; Read, Henderson, & Schwartz, 2011; Van Horn, Johnson, Flickinger, Vafiadis, & Yin-Piazza, 2010).

The Alliance for a Healthier Generation (AHG), a partnership between the American Heart Association and the William J. Clinton Foundation to combat childhood obesity, established nutrition guidelines for school beverages. Prior to USDA's issuance of the new school meal standards, U.S. dairy processors reformulated flavored milk with the goal of lowering the calories in flavored milk to meet the AHG guidelines of = 150 calories per eight ounce serving. It was estimated that the flavored milk available in schools during the 2011–2012 school year contained an average of 131 calories per eight ounces (Milk Processor Education Program, 2012).

School nutrition directors (SNDs) acknowledge their important role in making healthful foods available to students, while reporting less involvement in other aspects of school wellness efforts (Stinson & Lofton, 2009). Most believe it is important to prepare nutritionally balanced meals and perceive that the school lunches served are healthful when designed to meet current federal standards (Price & Telljohann, 1994).

Little is known about SNDs' involvement with product reformulation, nor about their perceptions, beliefs, and attitudes regarding the milk reformulation process as it relates to school nutrition. The SND's support is integral to successful implementation of policy changes within the overall school food environment (Gillis et al., 2009). The responsibility for planning menus, choosing food products, and oversight of school nutrition managers ultimately lies with SNDs. Although surveys of SNDs have been conducted to explore attitudes and perceptions, survey results have not captured the depth and nuances of perception, especially those related to milk options (Price & Telljohann, 1994).

The purpose of this study was to obtain an understanding of SNDs' perceptions, beliefs, and attitudes towards the offering and student acceptance of lower-calorie flavored milk in school.

Understanding School Nutrition Directors' Perceptions and Attitudes Towards Flavored Milk: Methods

A qualitative approach was chosen to capture unique insight into and details about perceptions and beliefs. Purposeful sampling was used between February and July 2010 to identify 42 school districts that offered lower-calorie, flavored milk (= 150 calories per eight ounce serving) for the first time in the 2008–09 or 2009–10 school year. The final study sample included 21 SNDs who signed an informed consent. The University of Vermont's Institutional Review Board approved the study.

Most of the 21 SNDs in this convenience sample (19 women and two men) worked in school-sponsored meal programs (81%), while four SNDs worked for contract food-service providers. While not a representative sample of school districts across the country, the 21 SNDs were from all census regions of the country (Northeast, South, Midwest, and West) and evenly distributed among urban, suburban, and rural school districts. They managed programs serving a range of 1,315–14,300 children. The socio-economic status of the districts, as measured by the percentage of students eligible for free and reduced-price meals, ranged from 8% to a high of 88%, where schools operated under Provision 2 regulations (all students were served free breakfast and lunch).

All 21 SNDs returned a written survey, developed to gain preliminary insight into why school districts made changes to their milk offerings and determine initial impressions about student acceptance (Table 1).

Table 1. *Sample SND Survey Questions*

1. In your opinion, how have students responded to the new milk?	
Students did not notice the change.	Don't like it and are drinking
Like it and are drinking the same.	less.
	Don't like it; are back to

<input type="checkbox"/> Like it and are drinking more. <input type="checkbox"/> _____		<input type="checkbox"/> drinking the same. <input type="checkbox"/> Unsure	
2. What were the reasons for the changing milks? Check all that apply.			
<input type="checkbox"/> Mandated by state <input type="checkbox"/> Mandated by district <input type="checkbox"/> My decision <input type="checkbox"/> Change made by milk provider without our input/ knowledge <input type="checkbox"/> Cost		<input type="checkbox"/> Alliance for Healthier Generation commitment <input type="checkbox"/> Institute of Medicine report <input type="checkbox"/> Change suggested by milk provider <input type="checkbox"/> _____	
3. How are the elementary and middle school flavored milks packaged?			
<input type="checkbox"/> Paper cartons		<input type="checkbox"/> Plastic bottles	
			If both, please clarify:
4. What factors do you think affect milk consumption in your school district over time?			

A focus group was held at the Annual School Nutrition Association Conference and was attended by nine of the 21 SNDs (Figure 1). The session was audiotaped by the moderator while a second researcher acted as an observer and note taker. Due to budgetary restrictions, a number of SNDs were not allowed out-of-state travel, thus were unable to attend the focus group. SNDs from four school districts in regions of the country that were not represented at the focus group were later invited to participate in an in-person interview with the focus group moderator to maximize the variation of the sample. Additionally, observational visits were made at seven elementary school cafeterias at lunch time, either after the in-person interview or in conjunction with related field work (Figure 1).

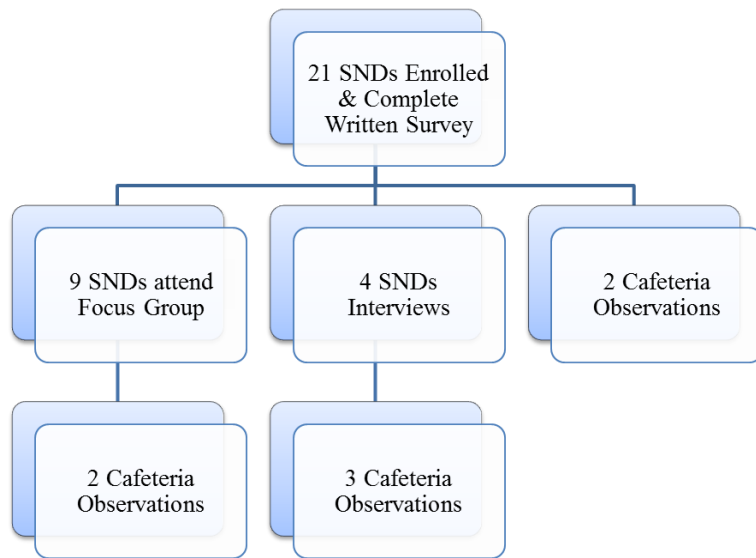


Figure 1. Data Collection Summary from SNDs.

These visits served to triangulate the data. Survey responses, transcripts, and field notes were coded by the moderator/interviewer for initial categories in response to each of the major questions. The constant comparative method, as described by Strauss and Corbin (1990), was used to identify emerging themes. Coding for a sample of transcripts was cross-checked by a team of eight qualitative researchers with diverse training and background resulting in high concordance of themes.

Survey Results and Themes

Survey responses to questions about student acceptance were positive. Most of the SNDs ($n = 13$) believed their students did not notice any changes in the milk when it was reformulated to lower the calories, and a few ($n = 3$) thought their students liked the new flavored milks and were drinking more. For most of the SNDs ($n = 14$), milk reformulation happened without their input or knowledge, while three of the SNDs made the decision to change to lower-calorie, flavored milk. Even though SNDs stated overwhelmingly that children preferred milk in plastic bottles, most of the directors ($n = 16$) use paper milk cartons in their elementary schools because of the lower cost. Offering choices and making a variety of milk selections (plain and flavored) available to children was seen as important.

Major themes began to emerge from the focus group responses and the first two in-person interviews. These themes continued to resonate after the final two interviews, suggesting a full range of views was captured (Corbin & Strauss, 2008). Four broad categories emerged from analysis of the data: how SNDs respond to change, the importance of milk in school, the perception of the school cafeteria as a learning environment, and SNDs' role as advocates for good nutrition.

How SNDs Respond to Change

Many of the SNDs were actively involved in making changes to their school meal programs. Over the years, they made incremental improvements to their menus with the restriction or elimination of competitive foods (foods sold outside of the reimbursable meal) and fried foods, and an increase in the offering of whole grains and fresh fruits. Some of these changes were driven by state policies that may be more restrictive than federal policies. A few SNDs changed to lower-calorie milk as a function of either a state mandate, working towards the AHG guidelines, or as a result of the IOM report.

While policy changes requiring restrictions on, or elimination of, certain foods "take some pressure away from us," (SND Interview) there was a general perception that these policies or regulations applied almost exclusively to the school cafeteria, with candy sales and fast food fundraiser nights

continuing on-campus and during after-school hours. There was a sense of unfairness that the school nutrition program was being blamed for childhood obesity, contributing to a general feeling of being marginalized. As one SND at the focus group stated, "It's only the school nutrition environment that has to be good."

While a few of the SNDs made the decision to change to lower-calorie, flavored milk, for most SNDs the milk reformulation happened without their input or knowledge. This lack of communication about impending changes to flavored milk was frustrating, even if the reduction of calories was perceived as a positive change.

SNDs View Milk as Important in School

"If we went further (lowering sugar or sodium), if the kids don't eat it, that's not going to help either...The bottom line is we want the kids to drink the milk" (SND focus group). Serving nutritious meals as "a really healthy package" was very important to SNDs. While the perceived nutrient benefits of milk outweighed concerns about childhood obesity, a number of SNDs in both the focus group and interviews believed that many flavored milks contain too much sugar. "We need to get the sugar down" (SND focus group). Strawberry milk was removed from some schools because of its higher added-sugar content compared to chocolate milk.

The role of milk, flavored or unflavored, in providing a key source of calcium and Vitamin D in children's diets was overwhelmingly seen as being more important than the public's perception of or worry about extra calories. If flavored milk were to be removed from schools, there was concern that teenage girls would stop drinking milk altogether. SNDs perceived that school may be the only place where children consume milk. "As a parent, I would love it if my son were drinking chocolate milk for lunch, because the alternative is that he could be drinking Gatorade or juice, which is really high in sugar" (SND Interview).

The School Cafeteria is a Learning Environment

Focus group and interview results indicated that SNDs saw themselves as having a role in teaching children about healthy eating and nutrition, especially when they perceive less nutrition education happening in the classroom. SNDs believe children learn how to build a nutritious meal when a variety of foods, including milk, are offered. "Our meal patterns are a good pattern to follow at home" (SND focus group).

However, there was general consensus that parents have the primary role in teaching children about healthful eating. Although SNDs felt it is the parent's role to feed their children well, they recognized the significant impact school nutrition programs may have on not just one child, but thousands. "We're an education environment and sometimes the education comes from us, to the children, to the family" (SND focus group). "Helping make a difference, even if it's a small difference, that's pretty cool" (SND Interview).

SNDs as Advocates for School Nutrition

SNDs believed their role went beyond feeding children, but also educating them and their families about nutrition and the meals being served. The term "disconnect" was frequently used to describe the home versus school environment related to flavored milk. "You feel like you're in a tug of war" (SND Interview).

It was not unusual for the flavored milk served in school to have fewer calories, less fat, and less added sugars compared to the retail products served at home. When flavored milk was reformulated to a lower-calorie product, some SNDs communicated a positive message to the school community and parents about the change; others let it go unnoticed.

Discussion

As nutrition standards for school meals are changing, school cafeterias are being identified as an environment that may contribute to the prevention of childhood obesity (Story, Nannery, & Schwartz, 2009; Waters et al., 2011). School meals have attracted attention as some advocates call for only

unflavored milk. The social norms and food culture(s) of each community and school district environment may influence the perceptions of the types of foods children will eat at school.

This group of SNDs perceived that elementary school children attending their schools were from families that frequently relied on heat-and-serve meals at home and offered little exposure to homemade meals or low-fat milk. The inclusion of lower-calorie, flavored milk at school was perceived as contributing to a menu that children would eat and was healthier than what otherwise might be served at home.

While most of the SNDs believed flavored milk was making an important contribution to children's nutrient needs, there was dialogue about the added sugars. The media attention given to the topic of flavored milk in schools prompted one SND to consider removing flavored milk from her elementary schools. The overall agreement about the pending policy changes and the role flavored milk plays in meeting important nutrient needs was of interest, despite some views suggesting that school meals are not healthful and that flavored milk should be banned (Wu, 2011).

Study limitations include the small number of SNDs, who were not representative across the country and thus the results may not be generalizable to all SNDs nationwide. A more diverse sample of SNDs would support greater confidence in the findings, although theoretical saturation was reached with this sample (Corbin & Strauss, 2008). The focus group was held in conjunction with the School Nutrition Association's annual conference, so the participating SNDs may be more engaged with school nutrition and policy, and may have expressed stronger opinions than SNDs who do not attend the conference. Also, a number of SNDs who typically would have attended this annual meeting and our focus group were unable to attend due to budgetary and out-of-state travel restrictions which may have skewed the responses, for example with representation from school districts representing higher SES communities. Due to limited resources, it was not feasible to conduct interviews with the entire sample of SNDs unable to attend the focus group. However, the SNDs selected for in-person interviews maximized variation and helped to triangulate the data, adding to the trustworthiness of our findings.

Conclusions

SNDs perceive themselves as child nutrition advocates and support policies that promote healthful school meals. Wise public health nutrition policy should be science-based, strike a balance between extreme positions, and strive for realistic nutrition goals that may be achieved with the public's support. Thus, while not willing to align themselves with those who advocate for the elimination of flavored milk from schools on one end of the public opinion spectrum, this sample of SNDs did not want to offer the higher fat and higher sugar, flavored milk often seen in the retail market.

The SNDs sampled were supportive of offering lower-calorie, flavored milk options to ensure that children would drink milk in schools. This study emphasizes the importance of engaging SNDs in the policy-making and evaluation processes related to school nutrition. Nutrition educators and researchers working with schools to address childhood obesity are encouraged to build relationships with SNDs and incorporate the cafeteria environment into programs connecting the cafeteria to the classroom.

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