The Use of Nutritional Labels by College Students in a Food-Court Setting

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Abstract. Objective: Between January and September 2006, the authors examined when, why, if, and how nutrition labels impact food purchase decisions of college students. Participants: Participants were 16 college-aged students at a large northeastern university. Methods: As part of a larger study undertaken at a large northeastern university on the effect of nutrition labels in restaurant settings on food purchases, the authors held a focus group to look more deeply at when and why nutrition labeling impacted college student food purchases. Results: Although results of the large study are still being discerned, the focus group results reveal that college women and men were interested in the provision of nutrition labels in the food court-like setting found at the university, and that those exposed to labels over the course of the study noticed these labels and often referred to them when making purchase decisions. Additional findings reveal that price and convenience also play a role in food purchases and that, of those items listed on each label, calories and fat were most important to the study population. Conclusions: Although more research is needed, this qualitative study finds that students want nutrition labels and would use them to make food purchasing decisions.

Keywords: college health, labels, nutrition

Obesity is the number one public health problem in the United States. This condition increases the risk for a variety of health problems including high blood pressure, high cholesterol, diabetes, heart disease, and stroke. Over the past 2 decades, obesity rates have nearly doubled; 20% of Americans are currently obese and 64% are overweight. With as many as 400,000 Americans dying in 2000 because of poor diet and physical inactivity, obesity is on track to overtake tobacco as the greatest cause of preventable death. The economic toll is also striking: 9.1% of medical expenditures went directly to obesity-related illness in 1998 and the public assumed an estimated $117 billion in direct and indirect obesity costs in 2000.

Although nutrition fact labels have appeared on packaged grocery goods since 1990 with the passage of the Nutrition Labeling and Education Act (NLEA), labels do not benefit people eating in restaurant and cafeteria settings. This is significant because currently 47% of Americans’ food budget goes to meals away from home, predominantly in venues like restaurants and cafeterias, where such labeling remains rare. At-home meals may become the minority of food consumed by 2010. This disconnect creates a situation in which people who may take responsibility for maintaining a sensible diet find themselves selecting their food in an environment that fails to present the necessary information for making such decisions.

However, measuring the impact of labeling food prepared away from home on consumers’ eating patterns presents multiple challenges. Few eating locations place nutrition fact labels on all foods. Operators don’t want to risk decreased sales by altering their labeling practices to measure customer response. Should such locations exist, a sizeable sample of people would need to frequent these testing venues for a majority of their meals over extended periods of time to allow for long-term observations. These obstacles constrain researchers’ options for testing, but possibilities do exist for an accurate experiment with nutrition fact labeling at away-from-home dining outlets.

Between January and September 2006, researchers at a large northeastern university collected data on the impact of nutrition fact labels among first- and second-year students enrolled in the university meal plan. This meal plan offers dining locations that mimic off-campus restaurants and fast
The authors found that 70% of participants assess their behavior and attitudes toward the 1990 NLEA likely to use labels over men at a ratio of 4:1. Students pay attention to nutrition labels, with women more likely to look at how much protein was in the product, whereas iron, fiber, and vitamin A were the least used components of the label.

Studies conducted by Byrd-Bredbenner and Huang et al further support the findings that college-aged and adolescent women tend to read labels at least sometimes, or 79% and 78%, respectively. They also found that college-aged men were less likely to use food labels and that they tended to look at protein and macronutrients when they did, whereas college-age women were more concerned with total calories. The overall results, however, did not suggest that label reading translated into healthier eating choices.

**METHODS**

**Participants**

Focus group participants were 16 students from a northeastern university involved in a larger nutrition labeling study (referred to on campus as the “Study on Nutrition and Food Choice”) involving 110 volunteers. The larger study, as well as this focus group exercise, received IRB approval through the University’s Committee on Human Research. All volunteers signed an informed consent form prior to involvement in the study. The experimental design allowed for the measurement of the impact of labeling and labeling plus education, on the food choices of 60 students compared to a randomly selected control group. The 16 students who partook in the focus group discussion were part of this larger effort involving 110 volunteers. Three of the participants were men; 13 were women. All of the focus group participants were of European descent with the exception of 1 Asian American female. Their ages ranged from 18 to 20 years; all began the study as first-year students and were registered as sophomore students at the time of the focus group discussion.

**Instrument**

We developed a list of questions intended to illustrate the degree to which labels were or were not used, volunteers’ general perception of the labels, and the degree to which labels were seen as a positive in the on-campus restaurant environment. These key questions were:

1. If you were exposed to the labels, did you notice them?
2. If so, what drew your attention to them?
3. Did the labels have an impact on your food purchase decisions?
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4. If you did not see the labels, would you have liked to see them?
5. Why or why not?

**Procedure**

The focus group met for 60 minutes on the evening of October 5th, 2006, midway into the fall semester and at the close of the quantitative data collection process. We provided free pizza to the participants, as well as a $10 gift card to the local mall. The facilitator, a sociologist experienced in facilitation techniques and quantitative data collection, emphasized the value of each person’s responses and stressed the importance of maintaining confidentiality about what they heard in the group. The facilitator also emphasized that the research team would maintain confidentiality of the data collected. Finally, and also in an effort to encourage open dialogue, it was stressed that there were no right or wrong answers.

**Data Recording and Analysis**

The session was audio taped to reduce the risk of recorder bias, although handwritten notes were simultaneously taken by a team member. Later, the tape was used to verify the handwritten notes. With the help of the audio tape, notes were later compiled into an anonymous form to protect student confidentiality before they were analyzed. The facilitator later used the notes to conduct preliminary analysis, identify themes, and categorize participant responses.

**RESULTS**

**Labels Were Noticed**

Feedback on the use and availability of nutrition labels is reported in the Appendix in the order of frequency of group members’ discussion. The participants identified a range of issues associated with nutrition labeling, with positive feedback concerning nutrition labels surfacing as the main theme among the participants, irrelevant of whether they were in the experimental or control group. Perhaps the most noteworthy finding was that all 6 students exposed to the labels throughout the spring and fall semesters noticed them and, equally importantly, noticed when they were available. This finding supports Marietta et al, who ascertained that 95% of the survey sampled found general food labels to be useful. As one student expressed after seeing the food labels, and particularly the label at the quesadilla counter and the total number of calories found per serving: “They [the labels] helped so much. I am never going to, like, eat a quesadilla again.”

One participant said that upon arrival at school as a first-year student, he found himself wishing for labels before the study period started. As he claimed: “I was kinda curious about [nutrition information] and I was like, oh, it would be nice if they had [labels], and then I saw them up and was like, wow, [sodium] is pretty high.” Later in the study, when the labels appeared and reappeared depending on whether it was the week for the control or experimental group to record food purchases, one student said that she was particularly struck when she found them to be missing: “I was like, oh no, they’ve disappeared.”

Researchers noted that some students not involved in the study but who were exposed to the labels by virtue of what dining facility they chose, noticed the labels and later, when they were taken down, their absence. One focus group participant commented on how a friend from across the hall, not involved in the study, had noticed the labels when they were up. According to the participant, this friend first talked about the labels when they were missing: “She [said] . . . did you notice those things, and I told her . . . they’re only going to be up like a week out of 6 months [and she said] ‘that sucks.’ She was really upset.”

When focus group participants were asked whether they had talked about the labels with their peers, one volunteer said that when eating daily with a particular friend (not involved in the study), they would regularly discuss the posted information, and the calorie and fat content in particular. (“We would talk about it [the food] and be like, ‘that’s disgusting.’”) Equally noteworthy was how she claimed they discussed the labeling information with other friends, saying, “We shared the word.”

**Changes in Purchase Behavior**

Four of the six students regularly exposed to the nutrition labels reported changes in their purchases as a result of the labels. One student, now aware of the calorie count for many of the foods she normally purchased, switched to what she understood to be healthier purchases. According to this student, the labeling information encouraged her to “learn to love the spinach salad” and to “remember never to go near the quesadillas or [sandwich] bar again.” Another student, although not specific in how her food purchases changed as a result of the labels, claimed nonetheless that the labels had an impact: “I guess seeing . . . the calorie count and the fat count and the protein count and everything in the dining halls really is effective. I actually looked at [the labels] in the dining hall and it . . . persuaded [me] to eat one food over another.”

Of perhaps equal interest were the responses of the two males exposed to the nutrition labels. According to them, they both noticed the labels but did not make purchase decisions on the basis of the information (“I just didn’t make huge decisions based on them”). One noted: “It’s not like I saw them and was like ‘Oh, I don’t care about them,’ it was like ‘Oh well.’” Instead, he noticed them but decided to “screw it.”

Of the 10 participants not exposed to the labels, the majority expressed an interest in having access to labeling information. One such student not exposed to the labels said that labels were “something I would have liked to see,” lamenting that: “I almost always look at labels, but you can’t do that in a dining hall.” Another participant, claiming to have made decisions on the basis of what she understood the ingredients to be, would have appreciated knowing fat content among other facts (“It would have been nice to know . . . how much fat was in what I was eating”).
What Students Noticed About the Labels

Calories, noted more frequently than fat or sodium among focus group participants, appeared to be the most noteworthy aspect of nutrition labeling. This helps support Smith et al.’s findings that calories, fat, and calories from fat were the nutrition fact components most frequently used. One student regularly exposed to the labels claimed that when deciding on the purchase of a sandwich from the sandwich bar, the labels would allow her to compare calories and help her in making her final decision. She described her internal decision making process in this way: “Well, yeah, they both have the same thing [spinach or lettuce], but this one has less calories.” One participant agreed: “Calories are what you look at when you look at a label.”

Several participants noted their interest in the overall ingredients: “Ideally, I would like to see ingredients . . . . It’s like my favorite thing to look at.” Another claimed she didn’t mind eating something with 2,000 calories, as long as they were “worthwhile” calories as illustrated on an ingredients list: “I’d rather eat a good 2,000 calories . . . like stuff that has protein and green vegetables.” In support of a complete ingredients list, one student said: “I went to Harris Mills [dining hall] with my friends . . . . and they set out a pizza and it looked perfectly ready to serve, and then they took out a can of something and started spraying, and it started looking all greasy, and I was like, ‘eech what is that?’” Ingredients were also mentioned by one student who didn’t have access to the labels: “I never did have the labels, but when I was making my choices I looked at what was in them and just thought about it.”

Throughout the study, nutrition labels were placed at about eye level, in plain view of the food they described. This appeared to have an impact on the degree to which they were noted and considered when making purchasing decisions. According to one participant who regularly looks at labels whenever possible, “If they’re too little, I don’t look at them. I don’t usually go down and . . . stare at and read the entire thing. But if it was . . . sitting right in front of your face, you would be so much more likely to [look].” This sentiment was echoed around the table, indicating that placement and size are key features in label use.

Other Factors When Considering Food Purchases: Price and Convenience

Despite the overall positive feedback about labeling, several other factors came into play regarding food purchases—namely, price and convenience. Like many university dining systems, this university’s is based on points. These points represent a dollar amount and are swiped off the dining card systems, this university’s is based on points. These points

Choosing certain foods on the basis of price rather than nutrition was echoed by another student: “Now I’m really low on points, and I see two things, and one’s more than the other, I might go for the other ‘cause I don’t want to run out of meals by Thanksgiving.”

Convenience was also discussed among study volunteers as a consideration beyond nutrition. As one student noted: “It’s also convenience. Because if the line for quesadillas is only one person long and the line for a salad is . . . out the door, and there’s class in 5 minutes, you’re gonna go with what’s quickest.”

COMMENT

Limitations

As previously noted, this focus group effort was a small part of a larger quantitative study involving 110 participants, undertaken at a large northeastern university to assess the degree to which nutrition labeling would or would not affect food purchase decisions. Therefore, one should be wary of making sweeping generalizations about nutrition labeling from this one focus group discussion. Another limitation is the degree to which specific topics discussed in the focus group could be affected by the participants’ level of comfort in talking in front of a group; this is particularly true for a subject that may be perceived as sensitive, especially to women. Furthermore, as the majority of the focus group participants were female, care should be taken when considering the generalizability to men, especially in light of research linking food purchase decisions to the ideology of manhood.

Last, although the on-campus food court setting in which we conducted this labeling study is similar to a fast food situation, it is also quite different. As the focus group volunteers noted, they were more likely to mentally preselect food before actually entering the area as they became more familiar with the daily food choices throughout the semester. As a result, they may have been less inclined to look at labels. On the other hand, because the on-campus food court is where first- and second-year students consume the vast majority of their daily food intake, and is therefore not considered a special dining treat, students may be more inclined to consider making more healthy choices.

Despite these shortcomings, this focus group revealed valuable insight worthy of follow-up, particularly the degree to which nutrition labeling in a restaurant setting may influence purchasing behavior, and the interest expressed by participants of having labels readily available and easy to spot. The important role that calorie count may play in making purchase decisions is also worthy of follow-up, as well as nutrition information versus the time and economic constraints many people feel when making food purchase choices.
NOTE
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REFERENCES

APPENDIX
Comments Regarding Nutrition Food Labeling in a Restaurant Setting, in Order of Frequency of Participants’ Endorsement

1. Nutrition labels noticed
2. Nutrition labels discussed among peers
3. Concern when labels were missing
4. Changed behavior due to labels
5. Noticed certain elements on labels
   a. Calories
   b. Fat
   c. Ingredients
   d. Sodium
6. Other elements that impact purchase choice
   a. Price
   b. Convenience
   c. Serving size
7. Placement of labels
8. Noticed labels but made no change


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