A Simple Worksite Wellness Intervention to Lay a Foundation for Future Efforts

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INTRODUCTION

Recent evidence has shown that systematically integrating health protection and health promotion interventions makes their aims more achievable.[1] Improving the health of workers is especially important now, since the American workforce is aging and older workers are more likely to suffer from chronic health conditions.[2,3] Health has been found to have a profound impact on the workplace, with improved health being connected to increased worker productivity and lowered costs.[1]

Improving the dietary intake of workers has potential to help prevent or manage a host of chronic conditions including obesity, heart disease, hypertension, stroke and some forms of cancer.[4] A recent literature review found that diet-related worksite health promotion interventions that are well targeted and effectively implemented may improve labor productivity by 1 to 2%.[5] The Centers for Disease Control and Prevention encourages policy and environmental changes for chronic disease prevention and health promotion.[6]

Although dietary habits are notoriously difficult to change, providing opportunities to make a healthy choice and offering simple tips and encouragement to make small changes in one's habits can have positive outcomes.[7] This project was in line with the efforts and goals of the Healthier Workforce Center for Excellence, in that it will develop a new and creative research-oriented prevention/intervention project that could contribute to further studies. This project was also in line with some of the strategies and priorities of the Iowa Cancer Plan, including building partnerships to enhance cancer prevention activities and increase the percentage of Iowans who follow healthy eating patterns.[8]

The specific aim of this project was to:

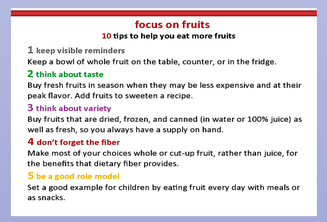
1) Increase awareness, knowledge and behaviors related to healthy eating among employees by providing healthy food options and nutrition education at 10 required safety trainings.

MATERIALS & METHODS

Overall Description of Study Design

The overall design was a post-intervention survey. Slices of various kinds of fruit and nutrition cards along with an optional survey were provided to 9 trainings or meetings over the course of 3 months.

All employees who came to the trainings or meetings were eligible. An information sheet about the study was provided. To include a nutrition education component, 5 cards with nutrition facts and practical information like healthy substitution suggestions were provided for participants to take.



focus on fruits

10 tips to help you eat more fruits

1 keep visible reminders
Keep a bowl of whole fruit on the table, counter, or in the fridge.

2 think about taste
Buy fresh fruits in season when they may be less expensive and at their peak flavor. Add fruits to sweeten a recipe.

3 think about variety
Buy fruits that are dried, frozen, and canned (in water or 100% juice) as well as fresh, so you always have a supply on hand.

4 don't forget the fiber
Make most of your choices whole or cut-up fruit, rather than juice, for the benefits that dietary fiber provides.

5 be a good role model
Set a good example for children by eating fruit every day with meals or as snacks.

MATERIALS & METHODS, CONTINUED

The study was guided by constructs of social cognitive theory; specifically, the notion of creating environmental opportunities for the desired behavior, the provision of practical information to potentially facilitate attitude and behavior changes, and an easy opportunity to "practice" a behavior.[10] Fruit was chosen since most people are deficient in consuming the recommended number of fruit servings per day.[11] Fruit that was provided included strawberries, kiwis, pineapple, and/or cantaloupe. The fruit was placed near the entrance of the room the training or meeting was held.

Data Collection and Measures

The survey given to participants consisted of the following questions:

1. I liked the snacks provided at today's training.
Strongly Disagree Disagree Agree Strongly Agree
2. I would like more snacks like this to be made available at future trainings and events.
Strongly Disagree Disagree Agree Strongly Agree
3. I would like more health information at future trainings and events.
Strongly Disagree Disagree Agree Strongly Agree
4. If you picked up a card, how likely are you to use the information on it?
Very Unlikely Unlikely Likely Very Likely
5. What health topics are you most concerned about?
6. What could Rockwell Collins do to make it easier for you to make healthy choices?
7. Age (circle your age group):
18-21 22-25 26-30 31-40 41-50 51-60 61-70 71+
8. Gender: ____

Data Analysis

Data from this study was largely quantitative, with some qualitative data collected through open-ended items on the survey.

RESULTS

Participant Characteristics

151 participants completed surveys.

Age	Number of Responses	Percent of responses
18-21	0	0.00%
22-25	1	0.66%
26-30	20	13.25%
31-40	28	18.54%
41-50	48	31.79%
51-60	43	28.48%
61-70	10	6.62%
71+	0	0.00%
No response	1	0.66%
Gender	**Number of Responses**	**Percent of responses**
F	72	47.68%
M	63	41.72%
No response	16	10.60%

Table 1. Participant gender and age.

RESULTS, CONTINUED

Analysis of Questions 1 Through 4

For questions 1 through 3, a code of 1 meant strongly disagree, 2 disagree, 3 agree, and 4 strongly agree. For question 4, a code of 1 meant very unlikely, 2 unlikely, 3 likely, and 4 very likely. The averages, medians and standard deviations for the questions are below.

	Question 1	Question 2	Question 3	Question 4
Average	3.65	3.67	3.18	3.12
Median	4	4	3	3
STD DEV	0.53	0.54	0.70	0.60

Table 2. Averages, medians and standard deviations for questions 1 through 4.

98.66% strongly agreed or agreed with question 1, 98.00% with question 2, and 89.93% with question 3. 90.07% answered they were likely or very likely to use the information on the cards if they took one.

Analysis of Questions 5 And 6

Questions 5 and 6 were open ended. 79 participants responded to question 5, "What health topics are you most concerned about?". The most common responses were:

Category	Count
Healthy Eating	29
Weight	27
Exercise	14
Heart	12
Cancer	6
Diabetes	6

89 participants responded to question 6, "What could Rockwell Collins do to make it easier for you to make healthy choices?". The most common responses were:

Category	Count
Cafeteria food	34
Food (generally – location not specified)	27
Vending food	15
Exercise	13

The majority of the responses overwhelmingly had to do with food, often specified as either food in the cafeteria and/or vending machines. Many responses involving food specified either removing unhealthy options or providing low cost or free healthy options.

Age and Gender Differences

Age groups were combined to form two age groups: 22 to 40 and 41 to 70. Responses to question 1, 2 and 3 were not significantly different between these two groups. Responses to question 4 were statistically significant (p-value < 0.05). 22 to 40 year olds gave an average of 2.79 to question 4 while 41 to 70 year olds' average was 3.25.

With regard to gender, differences in responses to questions 2 and 3 were not significant. Responses to questions 1 and 4 were significant (p-value < 0.05). For question 1, women responded with an average of 3.73, compared to 3.53 for men. For question 4, women gave an average of 3.23, compared to 2.98 for men.

CONCLUSIONS

This project was:

- simple to implement
- inexpensive,
- collected feedback for future health promotion efforts.

The survey yielded largely positive responses and collected valuable data on what health topics the employees are interested in. This data could be used to influence larger policy and environmental-level changes, especially to food choices the company offers.

This project came about as a result of a partnership between the University of Iowa, Iowa Cancer Consortium, and the worksite. The relationship built between the principal investigator (PI) and the occupational nurse Ms. Mishler was essential for this project to occur. By working collaboratively with Ms. Mishler and the Wellness Champions, the PI got buy-in from employees and was able to illustrate an easy way to integrate evaluation into health promotion efforts.

Limitations

The project involved a survey that was taken immediately after the intervention and there was no follow-up. Additionally, there was no control group. 8 of the 9 meetings or trainings that the PI attended were during the first shift; only 1 of the 9 was during the second shift. For future efforts, more information should be collected from second and third shift employees.

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