



Research report

Awareness of the Fruits and Veggies—More Matters campaign, knowledge of the fruit and vegetable recommendation, and fruit and vegetable intake of adults in the 2007 Food Attitudes and Behaviors (FAB) Survey[☆]

Temitope O. Erinoshio^{a,*}, Richard P. Moser^b, April Y. Oh^d, Linda C. Nebeling^b, Amy L. Yaroch^c

^a Department of Nutrition/Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill, 1700 Martin Luther King Jr. Blvd., 2nd Floor, CB 7426, Chapel Hill, NC 27599-7426, USA

^b National Cancer Institute, 6130 Executive Blvd., 4th Floor, Bethesda, MD 20852, USA

^c Gretchen Swanson Center for Nutrition, 505 Durham Research Plaza, Omaha, NE 68105, USA

^d Clinical Monitoring Research Program, SAIC-Frederick, Inc., National Cancer Institute-Frederick, Frederick, MD 21702, USA

ARTICLE INFO

Article history:

Received 25 October 2011

Received in revised form 29 February 2012

Accepted 13 April 2012

Available online 21 April 2012

Keywords:

Fruits and Veggies—More Matters

5 A Day for Better Health

Fruit and vegetable intake

Nutrition knowledge

Fruit and vegetable recommendation

ABSTRACT

Increased consumption of fruits and vegetables is recommended to reduce chronic disease risk. Few studies have examined awareness of the current fruit and vegetable campaign in the United States, Fruits and Veggies—More Matters. This study assessed awareness of the Fruits and Veggies—More Matters campaign and knowledge of the 7–13 serving recommendation for fruit and vegetable consumption among adults, and determined whether these were associated with fruit and vegetable intake. Cross-sectional data from 3021 adults in the United States' National Cancer Institute's 2007 Food Attitudes and Behaviors Survey were analyzed. Few participants were aware of the Fruits and Veggies—More Matters campaign (2%) and the 7–13 recommendation (6%) for adults. More participants were aware of the former 5 A Day campaign (29%) and recommendation (30%). Thirty-nine percent reported consuming ≥ 5 servings of fruits and vegetables daily. Participants were more likely to consume ≥ 5 servings of fruits and vegetables/day if they were aware of the 5 A Day/Fruits and Veggies—More Matters campaign, and reported that the recommendation for adults was ≥ 5 servings/day. Findings suggest the need to increase awareness of the Fruits and Veggies—More Matters campaign, and the 7–13 recommendation among adults to support high fruit and vegetable intake.

© 2012 Elsevier Ltd. All rights reserved.

Introduction

The United States (U.S.) Dietary Guidelines encourage adults to consume high amounts of fruits and vegetables to reduce the risk of chronic diseases (U.S. Department of Health and Human Services [USDHHS], 2010). In 1991, the Produce for Better Health Foundation, and the U.S. National Cancer Institute initiated the “5 A Day for Better Health” (5 A Day) campaign to encourage adults to consume at least 5 servings of fruits and vegetables daily (Centers for Disease Control and Prevention [CDC], 2009). Despite the campaign, studies report that most U.S. adults continue to not meet the 5 A Day recommendation (Grimm, Blanck, Scanlon, Moore, & Grummer-Strawn, 2010; Kimmons, Gillespie, Seymour, Serdula, &

Blanck, 2009). One possible explanation for the low fruit and vegetable intake is that many adults are probably not aware of the recommendation to consume at least 5 daily servings of fruits and vegetables (Krebs-Smith et al., 1995; Watters, Satia, & Galanko, 2007). Studies show that adults are more likely to consume high amounts of fruits and vegetable if they know the daily intake recommendation for fruits and vegetables (Wardle, Parmenter, & Waller, 2000; Watters et al., 2007; Wolf et al., 2008).

In March 2007, 5 A Day was replaced with the Fruits and Veggies—More Matters campaign to reflect the 2005 *Dietary Guidelines for Americans*. The Fruits and Veggies—More Matters campaign encourages adults to consume at least 7–13 servings (3½–6½ cups) of fruits and vegetables daily (CDC, 2009; USDHHS, 2005, 2010). While several studies have examined awareness of the 5 A Day recommendation in relation to fruit and vegetable consumption (Krebs-Smith et al., 1995; Langenberg et al., 2000; Thompson et al., 2011; Watters et al., 2007), few studies are published that describe awareness of the Fruits and Veggies—More Matters campaign and the current recommendation to consume 7 or more servings of FV daily (Wolf et al., 2008). The purpose of this study was to assess awareness of the Fruits and Veggies—More

[☆] *Statement of funding:* This project has been funded in part with federal funds from the National Cancer Institute, National Institutes of Health, under Contract No. HHSN261200800001E. The content of this publication does not necessarily reflect the views of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the United States Government.

* Corresponding author.

E-mail address: tope_erinoshio@unc.edu (T.O. Erinoshio).

Matters campaign, and knowledge of the 7–13 serving recommendation for fruit and vegetable consumption, and to determine whether these were associated with fruit and vegetable intake among adults in the U.S. National Cancer Institute's (NCI) Food Attitudes and Behaviors (FAB) Survey.

Methods

Study sample

The FAB survey (National Cancer Institute [NCI], 2012) was administered to adults ages ≥ 18 years across the U.S. between September and December 2007. Participants were selected from the Synovate Consumer Opinion Panel (Synovate, 2009) using stratified random sampling. The Synovate Consumer Opinion Panel consists of 450,000 households that represent over 1 million U.S. respondents who are invited to join the panel through direct mailing of recruitment surveys (NCI, 2012). The FAB survey was mailed to 5803 potential participants selected from the Consumer Opinion Panel, with an oversampling of African-Americans; 3418 surveys were returned, yielding a response rate of 57%; Twenty-one incomplete surveys were excluded, for a final sample of 3397 participants of whom 2187 were Non-Hispanic white, 834 were African-American, 291 were "other" race/ethnicities (i.e., Hispanic, Asian, American Indian/Alaskan Native, etc.), and 85 adults who did not report their race/ethnicity. Participants received a thank you letter and \$5 for completing the survey. For this study, we excluded "other" race/ethnicities ($n = 291$) because of the relatively small sample size, and persons who did not report their race/ethnicity ($n = 85$), resulting in a final sample of 3021 adults.

Measures

Awareness of the current fruit and vegetable campaign was assessed using a single item that asked participants to indicate the name of the current national campaign for fruit and vegetable consumption. Response categories were "don't know, Fruits and Veggies—Way to Health, Fruits and Veggies—More Matters, 3 A Day for Healthy Bones, and 5 A Day for Better Health". Participants who responded Fruits and veggies—More Matters were coded as "correct responders".

Knowledge of the current recommendation to consume 7–13 servings of fruits and vegetables daily was assessed via a question asking participants to indicate the number of servings of fruits and vegetables that the government recommends that adults consume each day. For this question, participants were able to check a box containing a closed-ended response of "I am not really sure" or write-in an open-ended response in "servings per day". Responses were coded as "correct responders" if they fell within the recommended range of 7–13 servings of fruits and vegetables per day.

Intake of fruits and vegetables was assessed via an eight-item fruit and vegetable screener that was modified from the NCI's Fruit and Vegetable screener (NCI, Risk Factors Monitoring and Methods Branch, 2007; Thompson et al., 2002) and validated using multiple 24-h dietary recalls (adjusted correlation coefficients ranged from 0.39 to 0.57 for fruit, vegetable, and fruit and vegetable combined (Yaroch et al., 2008; Yaroch et al., in prep). The screener assessed fruit and vegetable intake during the past month. Two items asked about frequency of consuming fruit, and 100% fruit juice, while the other items asked about frequency of consuming vegetables (i.e., green leafy vegetables/salads, fried potatoes, non-fried potatoes, cooked dried beans, other vegetables, and tomato sauce). Response categories included ten frequency categories ranging from never to ≥ 5 times/day, and four portion size categories. Responses provided were converted into Pyramid servings as defined by the

1992 dietary guidance (NCI, Risk Factors Monitoring and Methods Branch, 2007; U.S. Department of Agriculture, 1992). One pyramid serving was defined as 3/4 cup of juice, 1 cup leafy greens, 1^{1/2} cup french fries, and 1/2 cup of fruit, other potatoes, other vegetables, and tomato sauce. Total fruit and vegetable intake of participants was calculated as the sum of all items on the screener, excluding fried potatoes, consistent with the Fruits and Veggies—More Matters guidance.

Demographic characteristics of participants were also assessed, including sex, age, race/ethnicity, highest level of education completed, geographic region of U.S. residence, body mass index (calculated from self-reported weight and height), and the presence or absence of a child under 18 years old in participants' households.

Statistical analysis

Statistical analysis was conducted using the Statistical Analysis Software package (SAS) version 9.2 (SAS Institute, Cary, NC). All analyses were post-stratified so that the weighted sample distribution in terms of sex, race/ethnicity, age, education, and income matched that of the general population according to the 2000 U.S. Census. The weighting adjusts for over- or under-representation of categories within these demographic variables. Descriptive statistics were calculated to describe demographic characteristics of the sample, awareness of the Fruits and Veggies—More Matters campaign, and knowledge of the 7–13 serving fruit and vegetable recommendation. Chi-square tests of independence were calculated to determine whether awareness of the campaign, and knowledge of the fruit and vegetable recommendation differed by demographic characteristics of participants. Binary logistic regression was computed, and odds ratios (OR) and 95% confidence intervals (95% CI) were generated, to determine whether awareness of the fruit and vegetable campaign, and knowledge of the fruit and vegetable recommendation were associated with fruit and vegetable intake, controlling for demographic characteristics. Statistical significance was evaluated at the $P < 0.05$ (two-tailed) level.

Results

Sixty-one percent of participants were female, 40% were 35–54 years old, 72% were Non-Hispanic white, and 27% had completed a college education. Fifty-two percent resided in the South, 21% in the West, 21% in the Midwest, and 7% in the Northeast. One-third of participants were overweight (body mass index = 25.0–29.9 kg/m²), and another third were obese (body mass index ≥ 30.0 kg/m²). About half (48%) of participants had a child below 18 years old in their household (Table 1).

Two percent of participants correctly responded that the name of the current national fruit and vegetable campaign was Fruits and Veggies—More Matters. A higher proportion (29%) responded that the name of the campaign was 5 A Day for Better Health. The majority (60%) of participants, however, responded that they did not know the name of the current campaign. Six percent of participants correctly responded that the current fruit and vegetable recommendation was that adults consume 7–13 servings of fruits and vegetables per day (participants' responses ranged from 1 serving to 12 servings per day). More participants (30%) responded that the recommendation was to consume at least 5 servings of fruits and vegetables daily. Fifty-percent of participants, however, responded that they did not know the current fruit and vegetable recommendation (Table 1).

In all subsequent analyses, because few participants responded Fruits and Veggies—More Matters, and more participants were aware of the former 5 A Day recommendation, we combined the 5 A Day and Fruits and Veggies—More Matters responses, and

Download English Version:

<https://daneshyari.com/en/article/940152>

Download Persian Version:

<https://daneshyari.com/article/940152>

[Daneshyari.com](https://daneshyari.com)