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Poster Session: Community, Population and Global Health

Fruit and Vegetable Intakes Are Up, But Not Significantly, In College-Aged Young Adults During The COVID-19 Pandemic

Author(s): K. Parker, K. Honrath, Y. Rhee; North Dakota State University

Learning Outcome: Upon completion, participants will be able to identify the need for continued encouragement and strategies for fruit and vegetable consumption in young adults.

Background: Fruit and vegetable intake is lower than recommended by the Dietary Guidelines for Americans across the population. Nutrition studies during the COVID-19 pandemic suggest that eating habits may have changed. This study examined whether the fruit and vegetable intake of young adults, aged 18 to 35, changed from year 1 to year 2 of the pandemic.

Methods: College-aged young adults were recruited via email listserv, and fruit and vegetable intakes were measured using a food-frequency questionnaire in Spring 2020 (n = 185) and Fall 2021 (n = 128). Average daily fruit and vegetable intakes were calculated using standard serving sizes. Independent samples t-test measured the difference in average daily fruit and vegetable consumption between years.

Results: Students in both years reported consuming less than the recommended 5 to 9 servings of fruits and vegetables daily. The average daily fruit intake increased slightly from 1.28 (SD = 1.60) to 1.45 (SD = 1.78) servings (p = 0.35). The average daily vegetable intake improved marginally from 1.80 (SD = 1.45) to 1.99 (SD = 1.99) servings (p = 0.33). However, these increases were non-significant.

Conclusion: The COVID-19 pandemic may have contributed to a slight increase in fruit and vegetable intake in college-aged young adults. Even so, because intake is still lower than recommended, more education is needed in this age group to encourage fruit and vegetable consumption. Including preparation methods may be a useful strategy for encouraging intake.

Funding source: None

How Does the Daily Dietary Intake of Children and Adults Who Consume Readyto-eat Cereal Breakfasts Compare to Those That Eat Non-Cereal Breakfasts or Skip Breakfast?

Author(s): Y. Zhu, N. Jain, J. Normington, N. Holschuh, J. Smith; General Mills

Learning Outcome: Upon completion, participant will be able to understand differences in daily dietary intake by the type of breakfast meals consumed in the US population.

Background: Ready-to-eat cereal (RTEC) is a popular breakfast food that has been associated with positive dietary outcomes, but less is known on how RTEC breakfasts compares to other types of breakfasts in the US.

Methods: Using data from the 2017-2018 National Health and Nutrition Examination Survey, 2259 children 2 to 18 years and 4776 adults 19 years and older were classified as RTEC breakfast eaters (RTEC Breakfast), non-RTE cereal breakfast eaters (Other Breakfast) and breakfast skippers (No Breakfast). Daily intake of nutrients and food groups, as well as diet quality, measured as the Healthy Eating Index 2015, were estimated using an unadjusted linear model with post-hoc tests for pairwise differences. To account for multiple comparisons, p < 0.001 was considered statistically significant.

Results: There was no difference in added sugar or sodium intake across the three breakfast groups in both children and adults. Saturated fat intake was not different in children; for adults, the No Breakfast group had a lower intake than the other two groups. Intake of the following nutrients and food groups were significantly different with higher intake in the RTEC Breakfast group for children and adults, compared to the Other Breakfast and No Breakfast groups: vitamins A, B₁₂, B₆, and D, folate, niacin, riboflavin, thiamin, calcium, iron, zinc, whole grains, and total dairy. The RTEC Breakfast group also had the highest diet quality in both children and adults.

Conclusion: Consumption of RTEC breakfast is associated with improved intake of nutrients and food groups with higher diet quality.

Funding source: The study was supported by Bell Institute of Health and Nutrition, General Mills, Inc.

Impacts of COVID-19 on Infant Feeding Practices in Idaho: A Pilot Study

Author(s): K. Pfannmuller, A. Weeden, C. Byington; Idaho State University

Learning Outcome: Upon completion, participant will be able to describe two factors influencing infant feeding choices during the COVID-19 pandemic.

Background: As mothers make the decision to breastfeed or formula feed, there are many considerations that affect the likelihood of breastfeeding selection and continuation. This study aimed to identify how the COVID-19 pandemic impacted the decision to breastfeed.

Methods: Women (n=29) who gave birth during 2020 were recruited to complete a 31-question online survey. Questions focused on infant feeding decisions, COVID-19 knowledge, and maternal social support. Participants were divided into pre-pandemic birth (January-March 2020) and during pandemic birth (April-December 2020). Descriptive and qualitative statistics assessed the data.

Results: Nine mothers reported a pre-pandemic birth and 20 a pandemic birth. Exclusive breastfeeding was reported in six (66.7%) of pre-pandemic infants and 15 (75%) pandemic born infants. Factors positively influencing breastfeeding included stay-at-home orders (55.6%) and concerns for infant safety/maternal antibody production (60%). Isolation and reduced contact with health providers did not have a negative impact on breastfeeding rates in this study. Issues with latching, tongue ties, and supply issues were noted by mothers as breastfeeding challenges as was isolation and lack of contact with other new moms.

Conclusions: Additional time allotted with an infant before returning to work can have a positive influence on the breastfeeding decision and duration, though traditional challenges remain. This research suggests dietitians can support new mothers by providing practical support from a professional stand point and by advocating for better maternal laws that allow increased maternal-infant bonding time before returning to work.

Funding source: No funding source was received.

Improving Dietary Patterns to Combat Malnutrition in Rural Rwanda Using Small-Scale Nutrition-Sensitive Agriculture: A Mixed-Methods Community Level Study

Author: B. Sly; Colorado State University

Learning Outcome: Describe how collaborative community-based nutrition-sensitive agricultural interventions have the potential to increase household diet diversity, which may encourage sustained change in dietary patterns for nutritional adequacy.

Background: In Rwanda, rates of malnutrition have stagnated, particularly in rural areas where most residents engage in agriculture for income and subsistence farming, resulting in a primarily starch-based low variety diet. Nutrition-sensitive agricultural interventions using kitchen gardens, have been effective in addressing low diet diversity in similar populations.

Methods: The objective of this study was to develop and evaluate a kitchen garden and nutrition education intervention aimed at sustainably increasing diet diversity and food security at the household-level. A community-level study that included a sixteen-week nutrition-sensitive agricultural intervention was conducted in a rural Rwandan community. Stratified purposeful sampling techniques were used to select participants in collaboration with the community. Household diet diversity scores and household hunger scores were calculated at baseline, post-intervention and at a one-year follow-up.

Results: Household diet diversity scores increased over time from pre-intervention (x=2.59 food groups [1.3]), to six months post-intervention (x=4.85 [1.6]) and one-year post-intervention (x=5.55 [1.3]) showing consistent increases over time. The magnitude of the change was similar in all stratified groups. There were no significant changes in household hunger scores.

Conclusions: Collaborative community-based nutrition-sensitive agricultural interventions in rural poor Rwandan populations can increase household diet diversity, which may encourage sustained change in dietary patterns for nutritional adequacy. Using kitchen gardens as the conduit for change, households can increase their consumption of home-grown vegetables, as well as other nutrient-dense foods. More research concerning the systems that affect food availability and agricultural markets is needed to better understand approaches to enhance food security.

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