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The prevalence of tooth loss and chewing problems and their association with dietary quality and health status in mobile food pantry users

Majors: Nutritional Sciences and WGSS

Background

- ❖ Food insecurity in the US
 - 10.5% of the population
 - Lack of access to the right types/amounts of food to maintain a healthy lifestyle
 - Affects mental and physical health
- ❖ Emergency food assistance
 - Aimed at alleviating short-term food insecurity
 - Has become a long-term source of food for many
 - Provided food is mostly non-perishable and often of poor nutritional quality
 - Mobile Food Pantries
 - Provide more produce than traditional pantries
 - More accessible for those with mobility concerns (i.e. elderly, disabled, lack of transport)
- ❖ Dental health is an important factor in overall health status. Studies have showed that people with dental problems can have decreased consumption of certain food groups, causing a decrease in diet quality.

Objective of this Study

1. To examine tooth loss and chewing problems in the surveyed population of mobile food pantry users
2. To discuss if these vulnerable populations are at a higher risk for poor diet quality and health status due to dental issues



Research Methods

- ❖ 83 participants recruited from mobile food pantries at Windham Heights and the First Congregational Church in Willimantic, CT in February of 2020.
- ❖ The participants were given a consent form and surveyed on general sociodemographic information, their average dietary intake, their food security status, if they were missing teeth, and if they had chewing problems. Trained staff measured the participants' height using a stadiometer, weight using a weighing scale, and waist circumference using a tape measure. These measurements were used to calculate their Body Mass Index. The participants' diet quality was assessed by comparing the participants' answers to the dietary questionnaire to give them a score based on the Healthy Eating Index-2015.
- ❖ Data Collected :
 - Sociodemographic information
 - Self-reported chronic disease diagnoses
 - Anthropometric measurements
 - NCI Dietary Screener Questionnaire
 - USDA Household Food Security Questionnaire
 - 3-day food record (n=40)
 - Questions on missing teeth, and if they had chewing problems.



The research protocol was approved by the University of Connecticut Institutional Review Board as protocol # H19-206

Results

After analyzing the data from the surveys, there were some significant findings. Notably:

- Participants had 13% more tooth loss and 8.3% more chewing problems when compared to US average adults
- 78% of participants 51-70 and all participants 70+ had either tooth loss or chewing problems (P<0.05)
- 80% of participants with tooth loss and chewing problems were not obese (P<0.05)
- Whole grain intake decreased by 37.5% in participants who reported tooth loss and chewing problems when compared to those without any dental issues (P<0.05)

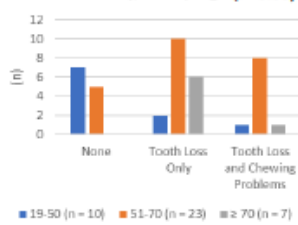
Conclusions & Implications

- ❖ These findings show that food pantry users with tooth loss and chewing problems have a slightly lower diet quality than those without dental issues.
- ❖ This suggests that more studies should be done on similar populations to better ascertain the effects of dental problems on diet quality and health status.
- ❖ Food pantry users are vulnerable due to the lack of food security and thus interventions must occur to decrease the likelihood of poor health outcomes in this population from issues like dental problems.

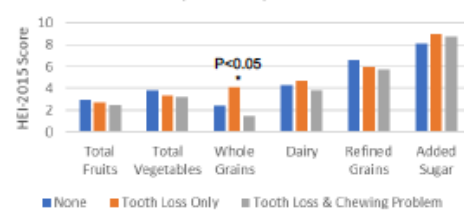
Tooth Loss and Chewing Problems: US Average vs Food Pantry Users (n=40) in Windham County, CT



Dental Issues of food pantry users (n=40) in Windham County, CT by Age (P<0.05)



Healthy Eating Index-2015 scores of food pantry users (n=40) in Windham County, CT by dental problem



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