



Quantifying Herb and Spice Intake

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Background

Consumption of spices and herbs is associated with improved health outcomes. Evidence supports the protective effects of culinary spices and herbs against oxidative damage, inflammation, cancer, infection and neurodegeneration. Many of these protective effects are attributed to the high concentration of beneficial plant-derived compounds called polyphenols in spices and herbs. Short-term human intervention trials demonstrate significant acute benefits of spice and herb intake; however, few reports describe habitual intake of spices and herbs in relation to health outcomes. Since the health benefits of spices and herbs likely result from long-term, consistent intake in small amounts, measuring their consumption requires a dietary assessment tool that is detailed and precise. This study seeks to address the need for a tool that measures spice and herb consumption for the purpose of advancing research linking culinary spices and herbs to health outcomes.

Objective

This study is designed to determine the validity of an online dietary questionnaire that captures measures of spice and herb intake.

Methods

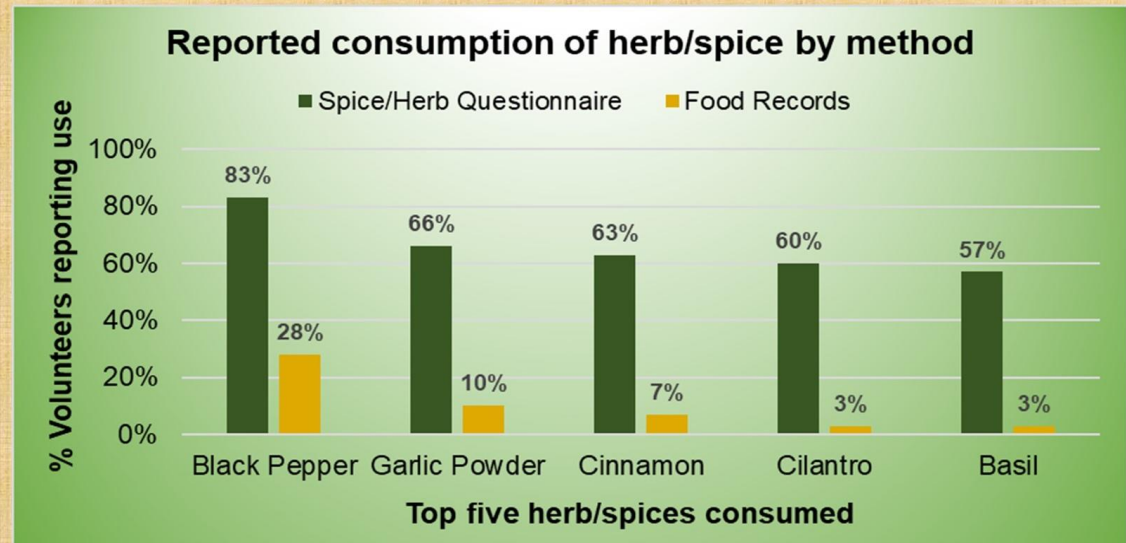
This active project is examining the accuracy of a new online dietary questionnaire for measuring spice and herb intake. The questionnaire is a Qualtrics-based survey that collects information on frequency and amount of consumption of 28 spices and herbs over the past month. Using ISU student, staff and faculty volunteers, spice and herb intake measurements from the questionnaire are being validated against those collected using a criterion dietary assessment method, online 7-day food records. Agreement between the two methods will be determined using Bland-Altman plots.

Results

Descriptive data from 35 volunteers answering the Herb/Spice questionnaire

Variable	Median (IQR)
Number of herbs/spices used per month	8.0 (4-12)
Frequency per month use of herb/spice	2.0 (0.5-3)
Grams per month use of herb/spice	0.75 (0.2-3.4)

Difference in herb/spice reporting rates by method



Analysis of variance indicates a significant effect of method on reported use (Y/N), frequency of use, and gram amount use, all $p < 0.001$.

Discussion

These preliminary findings suggest that collection of herb and spice consumption data require targeted query of individual herb/spice intakes. Volunteers in this study reported high rates of herb/spice intake on the questionnaire but rarely included this information on food records, even when directed to do so. Follow-up validity studies will require the criterion method to include direct probes of herb/spice intake, such as multiple 24-hour dietary recalls.