Assessing Dietary Quality in Older Veterans: A Comparison of Dietary Intake Tools

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INTRODUCTION:

- There is limited information on the dietary patterns of older urban-dwelling adults, who may struggle with access to proper nutritious food and produce.
- Dietary intake methodology is used to assess dietary habits of older individuals in low-access areas, and results can be used to target interventions that remove barriers to accessing a healthy diet.
- Current standard dietary recalls are conducted online and are quite lengthy, which can be challenging for older adults.
- When compounded with a disability, limited health literacy, and limited technology knowledge, older adults may have difficulty completing these assessments.
- The purpose of this project was to assess whether a shorter questionnaire could accurately reflect dietary intake, and to document challenges to using an online 24-hr recall measure in older adults participating in Gerofit, a health promotion program for Veterans >65 years old.

METHODS:

- Participants (n=7) completed 2 dietary recalls using the online ASA-24 system developed by NCI (https://epi.grants.cancer.gov/asa24/) and one shorter diet questionnaire in randomized order.
- Dietary recalls were used to calculate dietary quality using the Healthy Eating Index (HEI).
  1) During the assisted ASA24, a researcher read questions aloud, typed and searched food items, and provided explanations when necessary.
  2) For the unassisted ASA24, the researcher was available for computer and completion help if the participant struggled for longer than 5 minutes independently, which was recorded.
  3) The Short Healthy Eating Index (sHEI) asks participants to report the average consumption per day of different food groups, such as fruits, vegetables, legumes, whole grains, and beverage consumption. The sHEI also provides examples of serving sizes, using baseball sizes, computer mouses, and other known examples. Participants were given instructions but completed the survey independently.
- Participants provided feedback on the various methods, and results from the dietary analyses were compared across conditions.
- Means were calculated for total calories, fruits and vegetables, HEI, and completion time.

Figure 1: HEI Scores and Individual Components among Veterans across each dietary assessment condition

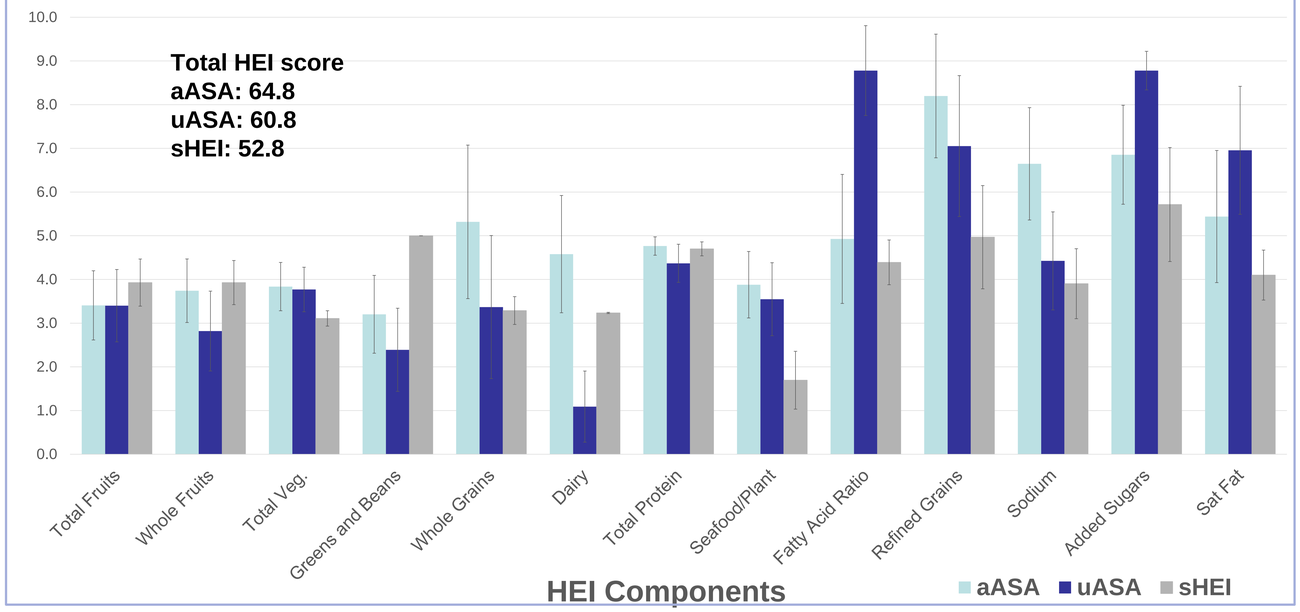
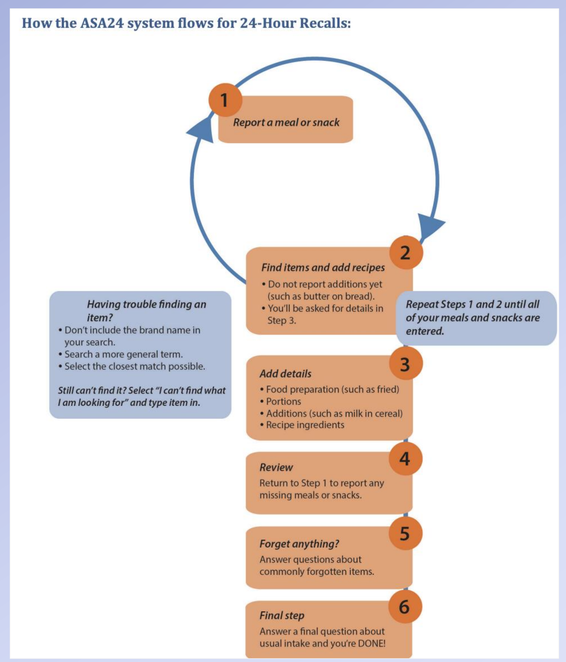
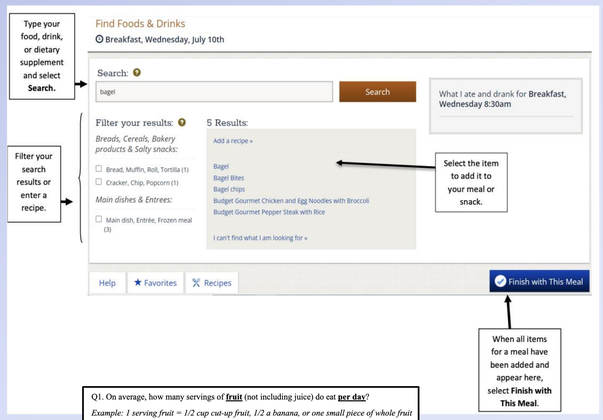
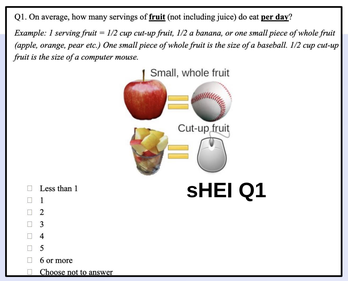


Figure 2: Overview of ASA24 System, ASA 24 Instructions and Example sHEI Question







Although ASA was developed to be a standardized tool for participants to complete independently, participants struggled searching for items that were very specific or a name brand that was not in the system. We hypothesized that they would like the screener better because it was shorter, but the HEI values were much lower than the recalls.

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Table 1: Mean daily dietary intake and completion time of assisted vs unassisted ASA24.

	aASA	uASA
Total Kcal (Energy)	2386.8	2091.8
Total Fruits (cups)	1.8	1.8
Total Vegetables (cups)	2.5	2.3
Time to Completion (mins)*	29.7	52.8

**According to the ASA24 website, most respondents complete their 24-hour recall in 17-24 mins (avg 24).*

Table 2: Participant Feedback for Completion of Each Condition

Regarding uASA:
- struggled with typing and finding foods, needed assistance at times but got better towards the end; more computer help than anything; "format was confusing - meals then details"
- would do again if asked, but "this was harder than other two"
- "tedious, much longer, realizes it most likely gives more info"

Regarding aASA:
- definitely easier because "he did not have to do computer stuff, even though he uses one regularly, but navigation was a lot harder and today was probably more accurate too [compared to uASA] thanks to that"
- "willing to do again, no problems"

Regarding sHEI:
- "listing seem somewhat confusing and redundant"
- "found it hard to avg as things change week to week"
- very straightforward and faster

CONCLUSIONS:

Overall, participants had trouble completing ASA24 independently. However, with some training and support, veterans may be able to complete ASA24 recalls regularly to assess dietary habits. The sHEI, which was developed as a quicker alternative to a 24-hr recall provides less detail than the ASA24. Other measures need to be explored and developed to assess dietary habits and create nutritional and educational interventions in elderly populations.