

Elevating Self-reflection and Food Choice Intention toward SMART Eating Using an Upgraded Smartphone Application



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Background and Rationale

- Photographic food diaries can raise personal awareness of poor eating habits.
- 'SMART Eating' interventions advocate reduced intake of fat, sugar and salt, and increased intake of fruits and vegetables.
- With the rapid advancement of technology meal tracking apps convenient the food journaling by raising the awareness of own diet to be healthy.
- Among several meal tracking apps in different countries, Sri Lanka finds a necessity of developing an app suited for it's unique dietary patterns.

Objective

Thus the study aimed to explore the use of a meal tracking app based on photo-based food journaling to encourage self-reflection on SMART eating in adults by using a newly developed meal-tracking app named SnaT (Snap and Track) in the Sri Lankan context.

Methodology and Analysis

- Study design - Sequential explanatory mixed-method.
- Study population - A convenient sample (snowball Sampling) of adults. (Age 20-40; Sample size - 42; 57.1%- Females; 76.2% Graduates)
- Data Collection Method - Data collected by a telephone survey on pre and post-use of the app.
- Study instruments - Interviewer-administered semi-structured questionnaire/ survey and a 3-day diet diary.
- Data Analysis Approach - t-test (95% CI)

Results

- The results indicated an increase in the consumption of healthy food including fruits ($p=0.00$), and vegetables ($p=0.01$).
- An increment in the consumption of a variety of fruit ($p=0.04$) and vegetables ($p=0.01$) was also observed.
- Unhealthy food such as salt ($p=0.00$), oil ($p=0.04$), and sugar and sweet food ($p=0.00$) consumption of the sample was reduced by proving a positive impact of the SnaT meal tracking app on SMART eating in adults.

Figure 1: Mean Food Consumption Pattern Before vs After Use of SnaT

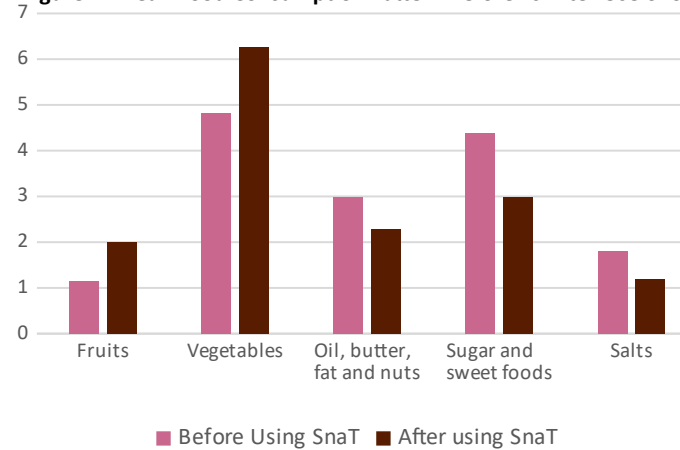
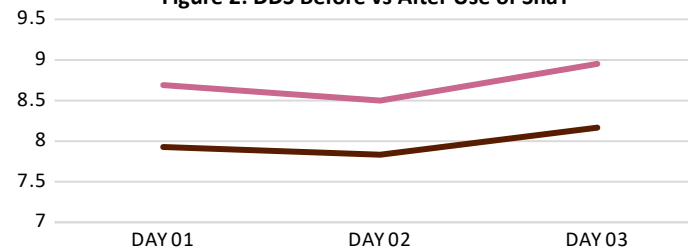


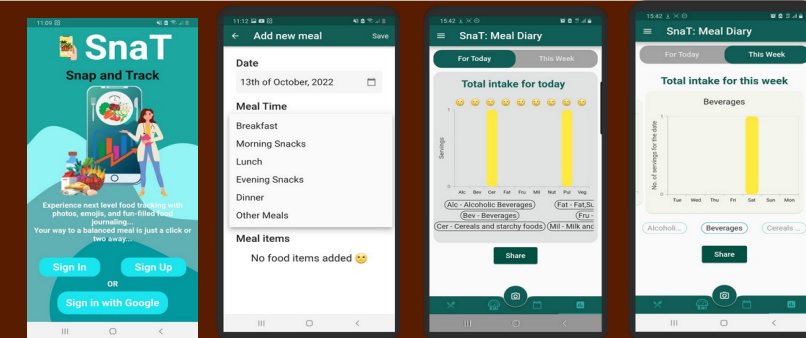
Figure 2: DDS Before vs After Use of SnaT



- SnaT was well received by the users (86%)
- Enhancing self-awareness on the diet was identified as the major benefit for the use of the app (81%).

About SnaT

- SnaT meal tracking app was developed with the concept of photo-based food journaling.
- It directs users to follow a balanced diet during the day based on the FBDG Sri Lanka.
- It includes a food database rich in nearly 300 food items that are commonly consumed in Sri Lanka and authentic portion sizes are used (Ex: Coconut spoon).
- Users can track their meals in accordance with daily and weekly summaries.



Implications

- SnaT was able to encourage SMART eating.
- However, it is necessary to redesign SnaT to suit the needs of different communities such as the elderly, athletes, and pregnant women by while adding features such as, digital nudging, auto meal capturing, tracking mindful eating, and remote nutrition counselling.

References: Kaur, J. et al. (2020) 'Effectiveness of information technology-enabled "SMART Eating" health promotion intervention: A cluster randomized controlled trial', PLoS ONE, 15(1), pp. 1–22. doi: 10.1371/journal.pone.0225892.