To Pack a Lunch: The Differences of People Who Consume Homemade Lunches Versus Eating-out

Danika Dirba and Xiaodaong Ma, Ph.D.

University of Houston-Clear Lake

Introduction

- Obesity is associated with many preventable health problems and diseases; problems such as high blood pressure, diabetes, heart disease and even some forms of cancer (Ogden, Carroll, Kit, & Flegal, 2014).
- Medical costs in 2008 were around $147 billion dollars and the average cost for the individual is around $1,429 (Finkelstein, Trogdon, Cohen, & Dietz, 2009). What people eat and drink is just as important as physical activity levels.
- Modern nutrition is a challenge—proper portions are difficult to measure out based on nutrition facts given on packaged foods. Additionally portion sizes in fast food establishments and restaurants can make it difficult to not overeat. There are many different barriers to proper nutrition such as lack of time and ones' emotional state that can lead to hasty decisions. Those who pack homemade lunches could potentially have more effectively managed portion sizes, less nutrition barriers, and make healthier choices. This study examines different health choices of individuals who consume homemade lunches versus those who eat out or consume prepackaged meals.

Hypotheses

- This study hypothesizes that those who consume homemade meals for lunch the majority of the days per week will make "healthier" choices for the past three months than those who consume non homemade meals for lunch.
- Homemade meals are one that are prepared by the participant or a loved one. A non-homemade meal is considered eating-out, or a prepackaged, restaurant, or cafeteria meal.

Those who consume homemade lunches will:

- Being more physically active
- Consuming more serving of fruits and vegetables
- Consuming less saturated fats and free sugars
- Have a lower current BMI

Methods

Participants

Homemade lunch group N=30
- 24 females and 6 males
- 13 Full time workers, 13 students that work, 4 students.
- Average age: 29.9 years
  - Range: 22-52 years, SD: 7.62

Eat-out group N=40
- 32 females and 8 males
- 11 Full time workers, 21 students that work, 8 students.
- Average age: 29.8 years
  - Range: 22-55 years, SD: 7.32

Participants were categorized into groups based on how often they consumed a homemade lunch or how often they ate restaurant meals, prepackaged food, or cafeteria food in the past three months. If participants consumed a homemade meal at least three times a week, they were place in the homemade category. Participants that ate out or consumed prepackage food for at least three times a week in the past three months were place in the eat-out category.

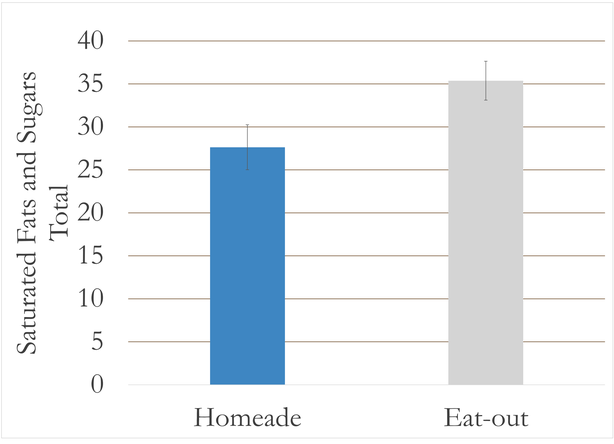
All eligible participants completed:
- Five-Item Vegetable-Fruit Questionnaire(VFQ)Developed by Cook et al (2015)
  - "How many servings of fruits have you consumed per day in the past three months?"
- Dietary Fat and free Sugar – Short Questionnaire (DFS) developed by Francis and Stevenson (2012). Different food items containing saturated fat, (i.e. hamburger) sugar, (soda) or both (cakes) were listed and participants selected how often they have consumed them in the last 3 months.
- IPAQ (International Physical Activity Questionnaire) asked about current activity level for the last week to calculate their activity level.
- Diet Weight History Questionnaire (DWHQ) Developed by Writt, Katterman, and Lowe (2012) asked about current weight and height.

Results

Table 1

Dependent Variable	Group	Means	SD	F	*P*
Activity Level	Homemade	1.900	.202	0.009	.93
	Eat-out	1.875	.175		
Number of servings of fruit	Homemade	1.517	.213	0.184	.67
	Eat-out	1.638	.185		
Number of servings of vegetables	Homemade	2.417	.272	0.55	.46
	Eat-out	2.150	.235		
Saturated fats and sugar totals	**Homemade**	**27.633**	**2.610**	**5.03***	**.028**
	Eat-out	**35.375**	**2.261**		
Current BMI	Homemade	25.986	1.262	0.977	.33
	Eat-out	27.636	1.093		

Figure 1: Saturated fats and sugar scores by group



The main effect of saturated fat and sugar consumption was significant ($F(1, 64) = .5.03$, $p < 0.03$ was observed. Participants in the homemade group (M=27.633, SD=2.613) reported significantly less saturated fat and sugar consumption than those in the eat-out group (M=35.375, SD=2.261). See Figure 1 and Table 1.

Statistical Analysis

- 70 Participants completed the study
- Sample was predominantly lean (n=33) and sedentary (n=36)

	Homemade	Eat-out
Lean	16	17
Overweight	6	11
Obese	8	12

	Homemade	Eat-out
Sedentary	15	21
Low Active	8	8
Active	2	6
Very Active	5	5

- Results supported hypothesis number 4, saturated fats and sugar consumption. Participants who were categorized in the eat-out group consumed significantly more saturated fats and sugars than those in the homemade group. See Figure 1 and Table 1.
- The homemade lunch and the eat-out groups did not differ in regard to physical activity levels and the main effect was not significant, $F(1, 64) = .009$, n.s.
- The homemade lunch and the eat-out groups did not differ in regard to how many servings of fruits they consumed as the main effect of fruit consumption was not significant, $F(1, 64) = .184$, n.s.
- The main effect of vegetable consumptions was not significant, $F(1, 64) = .55$, n.s. The homemade lunch and the eat-out groups did not differ in regard to how many servings of vegetables they consumed.
- The main effect of current BMI was not significant, $F(1, 64) = .977$, n.s. The homemade lunch and the eat-out groups did not differ in regard to their current BMI status.

Conclusions and Discussion

- There were no difference found between the two groups in regards to activity level, fruit and vegetable consumption, and BMI. There were difference found in regards to saturated fat and sugar consumption between the two groups. The eat-out group was found to consume more saturated fats and sugars than the homemade group.
- Those who pack homemade lunches may pack healthier lunches than those who eat-out or consume pre-packaged foods.
- This study focused on past behaviors and future research would benefit from using apps or other calorie logging software to collect dietary data.

References

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