BroncoFamily Table: How one university is rethinking how we serve students

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Which class you have taken do you think will be most helpful to you in the future?

What makes you laugh?

What have you learned today?

In the year 2050, what do you hope we will have discovered that will change the world for the better?

In a movie about your life, who would play you? Who would play your best friends? Your family?

What is your proudest moment so far?

If you could make money doing whatever you love to do, what would you want to do for a living?
Phase 1

Why
“One cannot think well, sleep well, or love well, if one has not dined well.”

-Virginia Woolf
<table>
<thead>
<tr>
<th>Study</th>
<th>Population</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eisenberg, Olsen, Neumark-Sztainer, Story, &amp; Bearinger, 2004</td>
<td>adolescents</td>
<td>↑ family meals associated with ↓ depressive sx (m, f)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>↓ suicidal ideation (m, f)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>↓ poor self-esteem (f)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>↓ suicide attempts (f)</td>
</tr>
<tr>
<td>Fulkerson, Kubik, Story, Lytle, &amp; Arcan, 2009</td>
<td>alternative high school students</td>
<td>↑ family meals associated with ↓ depressive sx</td>
</tr>
<tr>
<td>Skeer &amp; Ballard, 2013</td>
<td>adolescents</td>
<td>↑ family meals may be protective against mental health disorders</td>
</tr>
</tbody>
</table>

m = male, f = female
## Eating Competence

<table>
<thead>
<tr>
<th>Study</th>
<th>Population</th>
<th>Findings</th>
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<tbody>
<tr>
<td>Wang, et al., 2013</td>
<td>adolescents</td>
<td>↑ family meals associated with ↓ disordered eating practices</td>
</tr>
<tr>
<td>Neumark-Sztainer Eisenberg, Fulkerson, Story, 2008</td>
<td>adolescents</td>
<td>↑ family meals associated with ↓ disordered eating practices in females</td>
</tr>
<tr>
<td>Ackard &amp; Neumark-Sztainer, 2001</td>
<td>female university students</td>
<td>↑ childhood family meals associated with ↓ bulimic practices</td>
</tr>
</tbody>
</table>
## Diet Quality

<table>
<thead>
<tr>
<th>Study</th>
<th>Age Group</th>
<th>Effect</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neumark-Sztainer, 2006</td>
<td>adolescents</td>
<td>↑ family meals</td>
<td>↑ fruit, vegetable, grain, and calcium-rich food intake</td>
</tr>
<tr>
<td>Larson, et al., 2013</td>
<td>adolescents</td>
<td>↑ family meals</td>
<td>↓ sugar-sweetened beverage intake</td>
</tr>
<tr>
<td>Larson, Fulkerson, Story, &amp; Neumark-Sztainer, 2013</td>
<td>young adults</td>
<td>↑ shared meals</td>
<td>↑ fruit intake (m, f) &lt;br&gt; ↑ vegetable intake (f) &lt;br&gt; ↑ milk intake (f)</td>
</tr>
</tbody>
</table>

m = male, f = female
# Academic Performance

<table>
<thead>
<tr>
<th>Source</th>
<th>Participants</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harrison et al., 2015</td>
<td>adolescents</td>
<td>↑ family meals associated with ↑ GPA</td>
</tr>
<tr>
<td>Eisenberg, Olsen, Neumark-Sztainer, Story, &amp; Bearinger, 2004</td>
<td>adolescents</td>
<td>↑ family meals associated with ↑ GPA</td>
</tr>
<tr>
<td>Fulkerson et al., 2006</td>
<td>adolescents</td>
<td>↑ family meals associated with ↑ commitment to learning</td>
</tr>
<tr>
<td>KSU Communications and Marketing, 2013</td>
<td>first-year university students</td>
<td>↑ meals in dining hall associated with ↑ GPA</td>
</tr>
</tbody>
</table>

GPA = grade point average
17.5 million young adults enrolled in undergraduate college and university programs

National Center for Educational Statistics [NCES], 2016
Mental Health

60.5% felt very lonely

57.7% felt overwhelming anxiety

35.3% felt so depressed it was difficult to function
Eating Competence

“being positive, comfortable and flexible with eating as well as matter-of-fact and reliable about getting enough to eat of enjoyable and nourishing food”

Ellyn Satter Institute [ESI], 2016
Eating Competence

47.4% of university students are eating competent\textsuperscript{a}

29.9% university males using unhealthy wt control behaviors\textsuperscript{b}

54.4% university females using unhealthy wt control behaviors\textsuperscript{b}

\textsuperscript{a}Brown, Larsen, Nyland, & Eggett, 2013 \hspace{2cm} \textsuperscript{b}Neumark-Sztainer, Wall, Larson, Eisenberg, & Loth, 2011
Eating Competence

46% of meals young adults eat alone

26% young adult meals while watching television

36% young adult meals while multitasking

Laska, Graham, Moe, Lytle, & Fulkerson, 2011
4.9% of Boise State students eating 5 servings of fruits & vegetables per day

ACHA, 2017
Food Security

40% of Boise State students report sometimes or often the food they bought did not last and they did not have money to get more

What is a family-style meal?

Family-style meals involve the following for a group of diners:

1. Sitting at the same table as several diners in their cohort during the meal
2. Eating from a selected number of foods that have been predetermined
3. Accessing foods for the meal from communal serving dishes that are placed on or near the table
4. Individually choosing what and how much of the foods are eaten from the communal dishes

National Food Service Management Institute, 2006
Phase 2
Housing Training
Phase 3

The Study
Only fruit & vegetable intake was significantly different at baseline between control and intervention group.

20 yo mean age for both control & intervention
Patient Health Questionnaire 4 (PHQ-4)
UCLA Loneliness Scale 3

Loneliness Pre and Post

I p=0.177, C p=0.570
Eating Competence Pre and Post

I p=0.074, C p=0.724
EC Control Pre and Post

EC Intervention Pre and Post

ecSI 2.0

EC = eating competence
Fruit & Vegetable Intake Pre and Post

<table>
<thead>
<tr>
<th>Daily Fruit and Vegetable Intake</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 servings/day</td>
<td>0</td>
</tr>
<tr>
<td>1-2 servings/day</td>
<td>1</td>
</tr>
<tr>
<td>3-4 servings/day</td>
<td>2</td>
</tr>
<tr>
<td>≥ 5 servings/day</td>
<td>3</td>
</tr>
</tbody>
</table>

A p=0.104, C p=0.351

ACHA-NCHA fruit & vegetable intake
Academic Success Inventory for College Students (ASICS)
Academic Success Inventory for College Students (ASICS)
GPA Pre (Fall 2017 actual) and Post (Spring 2018 anticipated)

Self-report GPA

I p=0.094, C p=0.067
<table>
<thead>
<tr>
<th></th>
<th>Enjoyment</th>
<th>Taste</th>
<th>Nutrition</th>
<th>Conversation</th>
<th>Want on Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>4.94</td>
<td>4.81</td>
<td>4.81</td>
<td>4.94</td>
<td>4.88</td>
</tr>
<tr>
<td><strong>Week 1</strong></td>
<td>4.94</td>
<td>4.71</td>
<td>4.88</td>
<td>5.00</td>
<td>4.82</td>
</tr>
<tr>
<td><strong>Week 2</strong></td>
<td>4.88</td>
<td>4.47</td>
<td>4.88</td>
<td>4.88</td>
<td>4.82</td>
</tr>
<tr>
<td><strong>Week 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Week 4</strong></td>
<td>5.00</td>
<td>4.94</td>
<td>4.94</td>
<td>4.94</td>
<td>4.81</td>
</tr>
<tr>
<td><strong>All Weeks</strong></td>
<td>4.94</td>
<td>4.73</td>
<td>4.88</td>
<td>4.94</td>
<td>4.83</td>
</tr>
</tbody>
</table>
Limitations

Recruitment

Sample size

Measurement tools

Multifaceted Intervention
Conclusion

Establishes

- feasibility
- acceptability
- value

Further research is warranted.
Friendship, food, fun!
Phase 4
Integration into Culture
BRONCO FAMILY TABLE  Form friendships in your new home as you eat family dinner together. This event is free and open to anyone. Those with meal plans can use a meal swipe.

WEDNESDAYS | 5:30 PM | SOUTHFORK

broncofit.boisestate.edu
Building a Sustainable Program
9 January

Roasted Turkey Breast
Oven-roasted turkey breast

Portobello Sprout Sauté with Barley
Sauteed Brussels sprouts and Portobello mushrooms over harissa barley with a jalapeno green pea mash

Italian Roasted Vegetables
Oven-roasted fresh zucchini, onions and carrots seasoned with garlic and Italian seasoning

Maple-Roasted Squash
Butternut squash roasted with a touch of maple syrup

Dessert
Fruit and chocolate chip (contains dairy) or oatmeal cookie or fudge brownie
AMONG BOISE STATE STUDENTS:

- 62.6% felt very lonely
- 64.4% felt very overwhelming anxiety
- 40.3% felt so depressed it was difficult to function

WHAT IS EATING COMPETENCE? *being positive, comfortable and flexible with eating as well as matter-of-fact and reliable about getting enough to eat of enjoyable and nourishing food*

- 52.6% of university students are NOT eating competent

46% OF YOUNG ADULTS EAT ALONE

(Brown, Lersen, Nyland, Eggett, 2013)
(Ellen Satter Institute, 2018)
(Laska, Graham, Moe, Lytle & Fulker son, 2011)

BRONCO FAMILY TABLE

- communal balanced dishes
- conversation

LONELINESS DECREASED

IF ELEVATED, DEPRESSION & ANXIETY DECREASED

EATING COMPETENCE INCREASED

ASSOCIATED WITH:
- balanced diets
- positive attitudes about eating
- improved physical self acceptance
- increased physical activity
- enhanced sleep quality & duration
- decreased cardiovascular risk
- healthier parental feeding practices

all results statistically significant (Harris, et al., 2018)
(Eilyn Satter Institute 2018)

participant rating:
- 4.94 ENJOYMENT
- 4.83 WANT MORE
- 4.94 CONVERSATION

on a 1 (not a fan) to 5 (love it) likert scale
BRONCO FAMILY TABLE  Form friendships in your new home as you eat family dinner together. This event is free and open to anyone. Those with meal plans can use a meal swipe.

WEDNESDAYS | 5:30 PM | SOUTHFORK

broncofit.boisestate.edu
Discussion & Questions
“What if I told you that there was...something that would improve the quality of your daily life, your...chances of success in the world, [and] your...health...? Something that is inexpensive, simple to produce, and within the reach of pretty much everyone?”

-Miriam Weinstein

Weinstein, 2005; Forthun, 2015
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(208) 426-1477
References


American College Health Association. (2017). Boise State University Executive Summary Fall 2017 National Collegiate Health Assessment II.


