

Effect of Nutrition Classes at Urban Peak on Dietary Patterns of Unhoused Youth



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Introduction

- Youth homelessness is a major issue in the United States, with 4.3% prevalence in youth ages 13-17 and 9.7% prevalence in youth ages 18-25¹
- Unhoused youth face significant nutritional challenges, ranging from food deprivation to obesity²
- Nutritional deficiencies correlated to higher incidences of mental health disorders and manifestations of symptoms
- Studies have examined nutritional deficiencies and implications on health of unhoused youth³⁻⁴, however the effect of nutritional education on dietary patterns of unhoused youth has not been fully evaluated
- Objective:** Implement nutrition classes at Urban Peak, a homeless shelter for youth ages 15-24, and evaluate impact of nutritional education on dietary patterns of this population

Methods

- Partnership established between CU School of Medicine and Urban Peak as "Service Learning" site
- Project will rotate through eight lesson plans: Introduction to Nutrition, Reading a Nutrition Label, Fruits and Vegetables, Dairy and Protein, Caffeine and Sugar Drinks, Fast Food Options, Health Implications of Over/Under-eating and Food Budgeting/Colorado SNAP benefits; based on CDC/USDA guidelines
 - This MSA project will cover the first four lessons
- Lessons administered in hybrid lecture/discussion model
- Prior to lesson, participants received "Pre-Survey" of 5 free-response questions to assess knowledge base
- Immediately following lesson, participants received "Post-Survey" of 5 free-response questions to assess knowledge gained
- In order to further analyze dietary patterns of youth, one-month follow-up "Post-Survey" will be given
- Data analysis conducted with survey responses quantitatively and qualitatively
 - Quantitative: Scored at least 50% comprehension/retention of teaching points and percentage of questions unanswered
 - Qualitative: Codes → Thematic analysis
- Regulatory Requirements Statement:
 - Based on discussions with faculty, project deemed as Quality Improvement and IRB approval not required

Results

Lesson	# of student facilitators	# of participants	# of surveys completed	# of surveys with ≥ 50% retention of key teaching points	% of items left unanswered
Introduction to Nutrition	3	4	4	3	Pre-Survey = 15% Post-Survey = 20%
Reading a Nutrition Label	3	4	3	3	Pre-Survey = 0% Post-Survey = 15%
Fruits and Vegetables	3	7	7	4	Pre-Survey = 20% Post-Survey = 40%
Dairy and Protein	2	6	6	3	Pre-Survey = 13.3% Post-Survey = 30%

Table 1. Summary table detailing number of student facilitators, participants, surveys completed and % of items unanswered from total number of questions associated with each lesson plan.

Themes Identified:

Baseline Nutritional Understanding

- 2nd pre-survey: "Why is it important to read the nutritional label?"
- Response: "It is important to know what is running your body, so it can be optimal"
- 4th pre-survey: "What vitamins, minerals, and nutrients are in fruits/vegetables?"
- Response: "Vitamin A, B, C, and D, carbohydrates, proteins, sodium, fats"

Accessibility of Food

- 1st pre-survey: "What is your eating schedule like?"
- Response: "Lunch and dinner (*what is available*)"
- 4th pre-survey: "How often do you drink milk?"
- Response: "Whenever it is provided, what is provided"

Numerical Analysis:

Lesson #1 Introduction to Nutrition: 3 student facilitators, 4 participants, 3/4 surveys completed with ≥ 50% retention of key teaching points, with 15% of pre-survey questions and 30% of post-survey questions unanswered.

Lesson #2 Reading a Nutrition Label: 3 student facilitators, 4 participants, 3/3 surveys completed with ≥ 50% retention of key teaching points, with 0% of pre-survey questions and 15% of post-survey questions unanswered.

Lesson #3 Fruits and Vegetables: 3 student facilitators, 7 participants, 4/7 surveys completed with ≥ 50% retention of key teaching points, with 20% of pre-survey questions and 40% of post-survey questions unanswered.

Lesson #4 Dairy and Protein: 2 student facilitators, 6 participants, 3/6 surveys completed with ≥ 50% retention of key teaching points, with 13.3% of pre-survey questions and 30% of post-survey questions unanswered.

One-month follow-up post-survey*:

- When we returned to Urban Peak to administer the one-month follow-up post-surveys, there was a complete turnover of the youths living at the center. With no means of contacting the youth who had participated in the previous lessons, we were unable to administer the post-survey.

Discussion

- After completing first four lesson plans, it is clear that the youth at Urban Peak have significant baseline knowledge of nutrition from responses in pre-surveys
- Still uncertain of the effect that these classes have on long-term nutritional patterns of youth
 - Difficult to retain same participants for every lesson
 - New participants → lack of knowledge in earlier lessons/associated content
 - Consider more organized system for data gathering (eg. virtual surveys, recording participants' e-mails/numbers)
- Accessibility to high quality nutrition serves as major issue despite nutritional education
 - Ultimate goal is youth will remain cognizant of diet and opt for "healthier" options
- Utilization of surveys has inherent limitations
 - Open-ended → Multiple choice/scaling
 - Increase facilitator:student ratio, more attention given per student

Conclusion

- Partnership established between CU School of Medicine and Urban Peak as a "Service Learning" site to accommodate for curriculum change
- Four lessons successfully implemented: Introduction to Nutrition, Reading a Nutrition Label, Fruits and Vegetables, and Dairy and Protein
- Several barriers identified with data collection and analysis
 - One-month follow-up post surveys to analyze long-term effects of lessons unable to be administered due to rapid turnover of youth
 - Accessibility of food remains most important barrier, significantly limiting choices in diet
- Youth were receptive to teaching as demonstrated by retention of knowledge on post-surveys, emphasizing importance of mentorship and guidance moving forward
- Future Directions: Expansion from nutritional classes to general mentorship and teaching of other sensitive topics for youth, including drug use and sexual health

References

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Disclosure

- I have no financial ties or other relevant interests/conflicts to disclose.