

Innovative Online Nutrition Education Curricula for Integration into Undergraduate Medical Education

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BACKGROUND

The amount of nutrition education that medical students receive continues to be far less than the minimum of twenty-five hours recommended by the National Academy of Sciences.

Many physicians and other healthcare professionals report that they lack the knowledge base regarding the role of nutrition in health and the skill development that would prepare them to provide patient-centered nutrition counseling.

OBJECTIVE

To address the gap in nutrition education integration in medical school curricula we developed nutrition education curricula using the ScholarRx Bricks innovative digital learning system which allows for the online integration of nutrition topics across the medical school curriculum.

INNOVATIVE DESIGN

Faculty members from six medical schools in Michigan (MMNEC) collaborated to develop nutrition education curricula.

We applied for and received grant support from Scholar Rx to create nutrition education bricks (online modules).

We developed 3 open access 'bricks' spanning the nutrition topics: (1) food labels, (2) social determinants of health, and (3) eating patterns and healthy eating.

NUTRITION EDUCATION BRICK TOPICS

Clinical nutrition focused topics:

1. Not covered well in the current curricula at our medical school institutions
2. Achievable goals

Topics not too broad:

1. Could be completed within 15-20 minutes
2. Could provide a foundation for subsequent nutrition education

EVALUATION PLAN: METHODS AND MEASURES

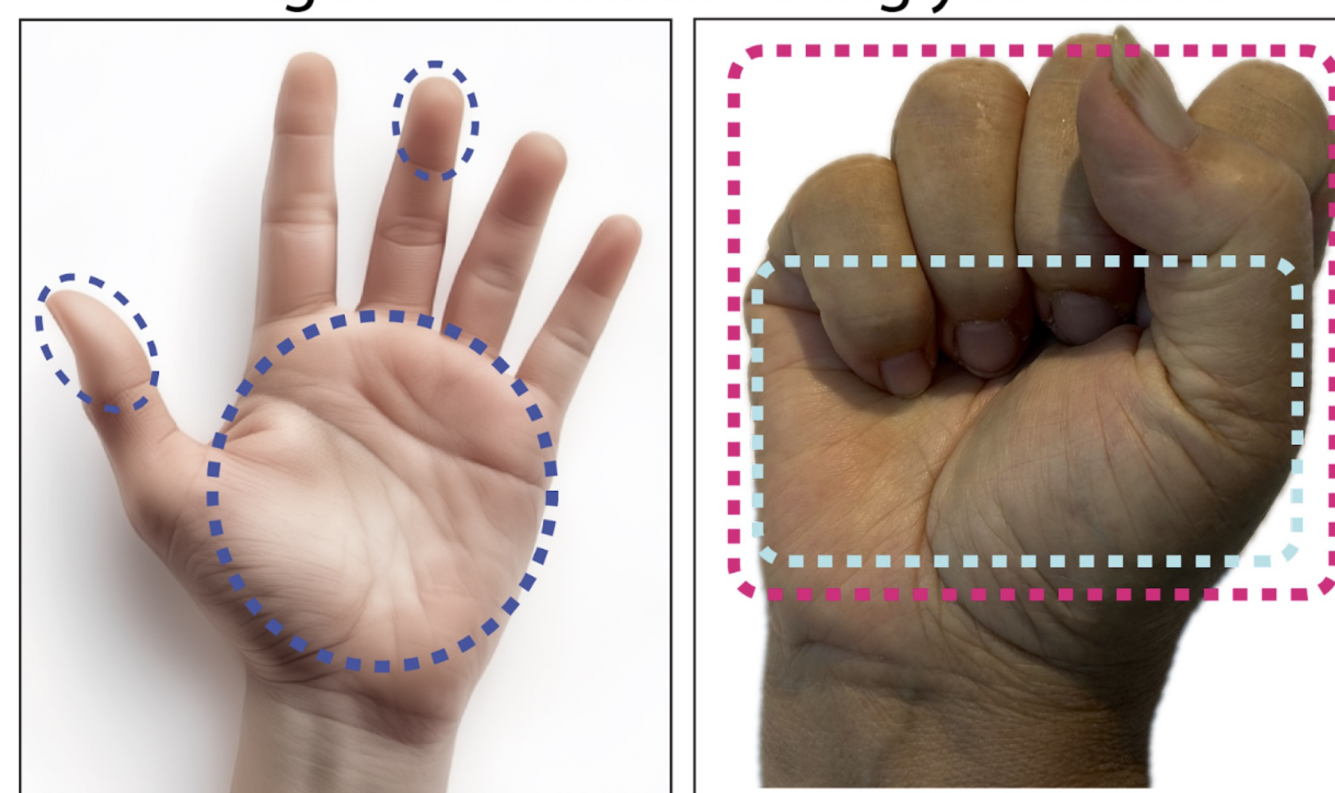
We plan to implement evaluation measures focused on the achievement of the nutrition learning objectives, skills, and students' confidence, and comfort in advising patients about nutrition. We also plan to implement a virtual objective structured clinical examination (OSCE) assessment.

INNOVATIONS STRENGTHS AND LIMITATIONS

Strengths of using the digital active learning system allowed us to easily create short focused nutrition education curricula. Limitations using the digital platform involved formatting issues with the active learning components that did not accommodate calculations or line breaks easily.

Understanding Food Labels and Portion Sizes

Serving size estimates using your hands!



Essential skills for patient nutrition education

Learning Objectives:

1. Identify the serving size and compare it to the total calorie content on the label.
2. Describe the required macro- and micro- nutrient components of a food label.
3. Describe standard portion sizes using one's hand.
4. Calculate calories given total macronutrients.
5. Describe the limitations of a food label with regard to rounding weights, health claims, and daily value percentages.

Social Determinants of Health: Food Access



Food Secure

Does not report a reduction in quantity, quality, variety, or desirability of diet

Low Food Security

Reports reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake

Very Low Food Security

Reports multiple indications of disrupted eating patterns and reduced food intake

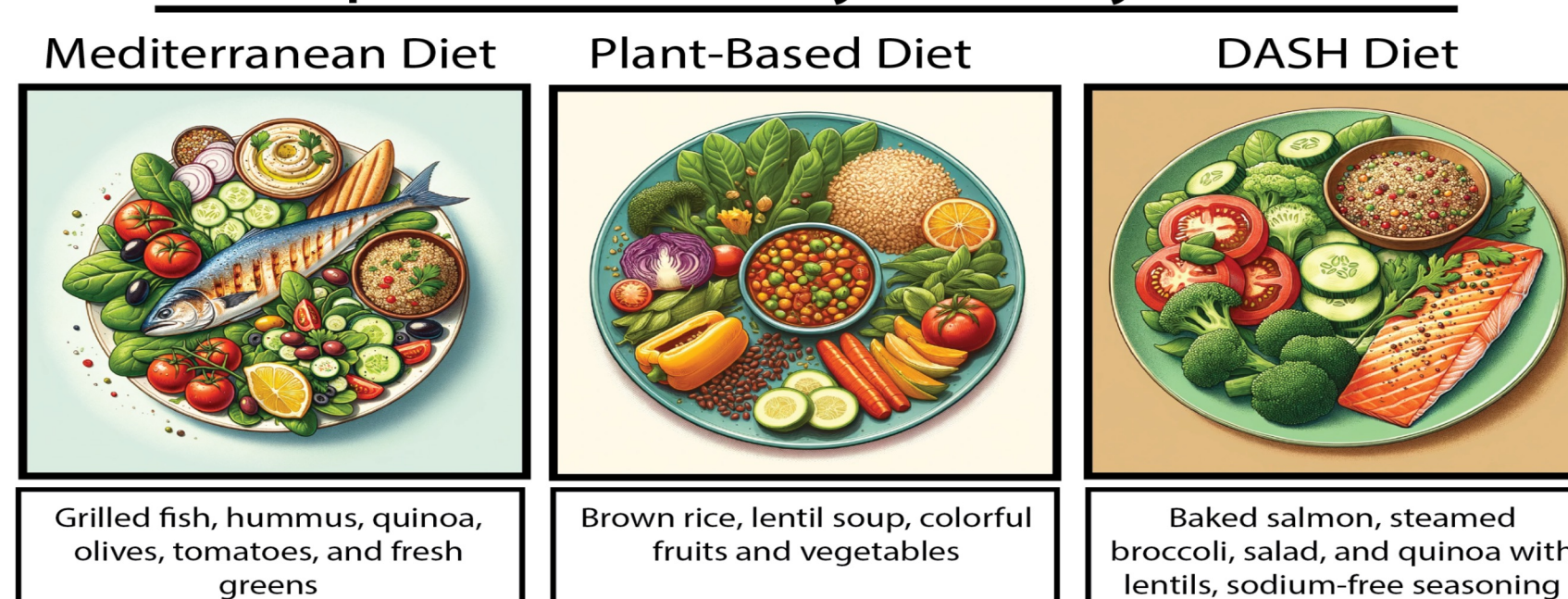
Assessing food security as a social determinant of health which is essential for promoting equitable health outcomes

Learning Objectives:

1. Describe the role of food security status in the adoption of healthy eating practices.
2. Recognize that bias and stereotypes impact which patients have been historically screened for food security risks.
3. Use the two questions on a validated screening tool to assess individuals or households for food security status.
4. Describe the purpose of screening for food security and briefly explain how that information is used for follow-up and intervention.

Dietary Patterns and Healthy Eating

Examples of Healthy Dietary Patterns



Essential knowledge and skills for patient-centered nutrition counseling

Learning Objectives:

1. Discuss the concept of dietary patterns, including types of foods, portion sizes, and meal frequency, and how these patterns influence nutrient intake, health outcomes, and disease risk.
2. List and describe the key components of healthy dietary patterns such as the Mediterranean diet, plant-based diet, and DASH, and explain how these patterns contribute to reduced risks of chronic diseases.
3. Demonstrate how the MyPlate tool can be integrated with different dietary patterns to promote healthy eating. Discuss patient-centered nutrition counseling, and define the 5 A's framework and the OARS approach to motivational interviewing.
4. Identify and propose solutions for common barriers to healthy eating, such as budget constraints.

Collaborators Michigan Medical Nutrition Education Consortium (MMNEC)



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FEASIBILITY AND TRANSFERABILITY

The use of a digital learning system platform such as Scholar Rx allowed us to develop nutrition education curricular materials in an active learning framework that is available in an open-access online repository. This allows for the opportunity of nutrition education curricula to be rapidly deployed and customized to suit the unique curriculum needs and goals of other medical schools.

CONCLUSION

The open access online ScholarRx Bricks are accessible and can help institutions address the gap in nutrition education identified in medical school curricula.

Using this online format can help students understand the relevance of learning about nutrition and support the integration of nutrition counseling skills in their future clinical practice.

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Grant support from Scholar Rx to create open access nutrition education bricks (online modules)

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