



Nutri-Vías: Creating Pathways for Diversified Nutrition Education

Dr Michelle Schelske Santos

NUTRI-VÍAS: CREATING PATHWAYS FOR DIVERSIFIED NUTRITION EDUCATION

Worldwide obesity has almost tripled over the past 50 years. This alarming statistic calls for new initiatives aimed at promoting better weight management, in order to prevent and treat obesity and associated diseases. **Dr Michelle Schelske Santos**, professor and former director of the Nutrition and Dietetics Program at the University of Puerto Rico, has been working on an academic initiative designed to enhance nutrition and dietetics education in Puerto Rico, forming professionals who are better equipped to deal with the obesity epidemic.

Need for Nutritionists & Dieticians

According to the World Health Organization, in 2016 over 1.9 billion adults were overweight and 650 million suffered from obesity. This means that around 40% of the total adult population on our planet was above their ideal weight, and was either at risk of or affected by a number of chronic health conditions, such as diabetes and cardiovascular disease.

The US is among the 20 countries with the highest obesity rates. In Puerto Rico, a Caribbean island that is part of US territory, over 65% of the adult population is either obese or overweight, putting them at risk of many diseases. A 2015 Report on Health revealed that cancer, cardiovascular disease, diabetes and Alzheimer's disease, four health conditions associated with a poor diet and altered metabolism, are the primary causes of death in Puerto Rico.

The high prevalence of excessive weight among the Puerto Rican population

is the consequence of numerous underlying factors, which may include a scarcity in affordable good quality foods, inadequate health insurance, a need for more effective nutrition education and poorly understood genetic differences.

In Puerto Rico and other areas with high obesity rates, the work of nutritionists and dieticians is thus of crucial importance, as it can help to educate the population about the importance of healthy eating, encourage better body weight management and prevent the onset of chronic illnesses. As obesity is largely a preventable condition, there has been an increase in initiatives and programs designed to improve nutrition and foster better health in recent years. Many of these initiatives are aimed at improving nutrition and dietetics education, to train qualified professionals that can assist people in either preventing obesity and related health problems or reducing their weight and acquiring healthier eating habits designed to effectively manage their conditions.



Tower at the Río Piedras Campus of University of Puerto Rico, close to the Nutrition and Dietetics Program.

A comprehensive nutrition and dietetics study program should cover topics rooted in a variety of disciplines, including genetics, genomics, microbiology, psychology, chemistry, and much more. The University of Puerto Rico covers these well; however, an inter-disciplinary or trans-disciplinary focus with nutrition

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is lacking, as well as funds to send students to mainland US universities for further training or specialised courses. To address these limitations, Dr Michelle Schelske Santos at the University of Puerto Rico is creating a new academic consortium called Nutri-Vías, which is designed to train students to become highly qualified nutritionists and dietitians.

Improving Nutrition & Dietetics Education

Nutri-Vías, the academic initiative devised by Dr Schelske Santos, will incorporate graduate curricula and over 1,200 hours of supervised practice experience, which should allow students in Puerto Rico to meet the criteria of nutrition and dietetics accreditation agencies for graduate degrees. The ultimate goal of this program, which should be ready in May 2020, is to strengthen the nation's professional workforce, preparing future generations of nutritionists and dietitians to serve a culturally diverse and more globalised society.

Nutri-Vías is supported by a Higher Education Challenge Grant from the National Institute of Food and Agriculture (NIFA). In addition to producing effective graduate curricula, the project will entail the creation of innovative and collaborative educational experiences that focus on enhancing students' cultural sensitivity and encouraging a future reduction in health disparities, as well as targeted and more successful nutrition interventions. The committee that will develop the Nutri-Vías curriculum and practical experiences includes faculty members from different universities, nutrition scientists or renowned health professionals.

When she was first getting started on the project, Dr Schelske Santos travelled to the Academy of Nutrition and Dietetics' annual Food & Nutrition Conference in Chicago. Here, she connected with leading educators who developed or teach programs that are endorsed by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). This allowed her to start recruiting members

of the Nutri-Vías curriculum and supervised practice committee.

Diversified Learning Experiences

Up until May 2020, the Nutri-Vías committee will develop new multi-disciplinary curricula and academic practices aimed at increasing the preparation of students on a variety of topics related to nutrition and dietetics. This academic content will cover areas such as genetics and genomics, psychology and behaviour modification, economics and food security, early-life and later-life nutrition, sports nutrition, and much more.

‘We are aiming to harness the expertise of faculty and researchers from each collaborative institution to broaden student exposure to unique and diversified learning experiences that will enrich their professional preparation,’ says Dr Schelske Santos. ‘This will be done by integrating multiple disciplines as well as providing multi-cultural opportunities for research and skills development in communication and problem solving.’



A further highlight of the Nutri-Vías project will be creating more opportunities for students to acquire multi-cultural sensitivity while learning about nutrition-related topics. To achieve this, the University of Puerto Rico will partner with two mentoring institutions in the US that offer successful ACEND-accredited graduate programs and have renowned resident scientists, healthcare professionals or nutrition programs. The university is also studying the feasibility of partnering with an institution or agency in the Dominican Republic, where students would be able to participate in humanitarian aid projects focusing on community nutrition.

Once completed, the curriculum developed by the Nutri-Vías committee will be implemented as part of the Nutrition and Dietetics Program at the University of Puerto Rico. The updated program should teach students to apply knowledge related to environmental and molecular factors (such as genes and proteins), as well as anatomy, physiology, biochemistry, microbiology, food science, social and psychological nutrition-related constructs, and much more. Throughout the program, the students will learn to consider culturally-specific aspects of nutrition in their professional practice.

Three Curricular Components

One of the focuses of the Nutri-Vías committee will be the development of three key curricular components or graduate education pathways for future dietitians, called Nutri-Banco, Nutri-Módulos, and Nutri Práctica.

Nutri-Banco will be an open source bank of multi-disciplinary, culturally-sensitive nutrition case studies for graduate-level education. These case studies will focus on a variety of Hispanic and Latino groups, but they will also be adapted to fit other populations and cultural backgrounds.

Nutri-Módulos, on the other hand, will be a set of nutrition and dietetics curricular modules that cover a wide range of topics from different disciplines, in a culturally-sensitive way. Finally, the Nutri-Práctica component involves interdisciplinary and culturally-relevant graduate-level supervised practical experiences and research rotations that will be based in Puerto Rico, the US and the Dominican Republic.

These three components will be aligned with the general vision of the Nutri-Vías project and will thus be aimed at teaching graduate students to apply different disciplines, critical thinking, and culturally-specific insight in their future nutrition

and dietetics practice. By collaborating with a university in the Dominican Republic, a sister island with a predominantly Hispanic population, Dr Schelske Santos hopes that the program will also provide students with the opportunity to work on community service projects, which will strengthen their professional preparation and work ethics further.

Paving the Way Towards Better Nutrition

The first Nutri-Vías curricular planning meetings will be held at the University of Puerto Rico's Río Piedras Campus, at the beginning of 2020. During these meetings, members of the Nutri-Vías curriculum and supervised practice committee will give presentations about their areas of expertise and start collaborating on the development of new curricular material and effective teaching practices.

Dr Schelske Santos hopes that the Nutri-Vías initiative will encourage greater collaboration in nutrition and dietetics education, paving the way for more comprehensive graduate courses and helping to form highly qualified professionals. She feels that forming highly-prepared nutritionists and dietitians could ultimately help to improve the wellbeing and health of Puerto Rican society as a whole.

'We expect to share our best with others in collaboration to maximise resources, outcomes and impacts,' Dr Schelske Santos says. 'Our goal is to prepare highly-qualified nutrition and dietetics professionals who can enter the workforce with confidence to address complex nutrition-related health issues and health disparities.'

The next step for the Nutri-Vías project will be to design a consortium leadership infrastructure based on best practices highlighted by other nutrition and dietetics institutions, collaborations, and academic networks. Subsequently, Dr Schelske Santos will initiate communication with experts at other universities and draft formal agreements that seal their collaboration on the project.

The unique characteristic of Nutri-Vías that she feels could also impact the training of new generations of dietitians and nutritionists in Puerto Rico is its focus on cultural sensitivity and culturally-specific aspects of nutrition. By teaching graduate students to be aware of health disparities and facets of nutrition that are specific to Hispanic populations, she hopes that they will be better equipped to deal with the severe health problems associated with excess weight that currently plague Puerto Rico, as well other parts of the US with predominantly Hispanic populations.

'Understanding ethnic and cultural influences on gene-diet interactions, and the psychosocial, economic and cultural impacts on eating behaviours to prevent and treat chronic disease are important topics to which this educational consortium hopes to contribute,' Schelske Santos adds.

Meet the researcher



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Dr Michelle Schelske Santos is Professor and Researcher for the Nutrition and Dietetics Program at the University of Puerto Rico. She holds a BS in Biology from Gordon College, as well as a Master's degree and PhD in Human Nutrition Sciences from Tufts University. Her primary research interests include nutrition, biochemistry, physiology, immunology and epidemiology. Dr Schelske Santos has carried out a vast number of studies and her work has been published in many renowned scientific journals, as well as in academic books. Over the course of her career, she has received numerous honours and awards, including the Excellence in Teaching Award from the University of Puerto Rico and the National Research Service Award from the National Institutes of Health.

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FURTHER READING

Academy of Nutrition and Dietetics Future Education Model Competencies and Performance Indicators for Graduate Studies, <https://www.eatrightpro.org/-/media/eatrightpro-files/acend/futureeducationmodel/competenciesperformanceindicatorsgraduatedegree>.



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