# Oil-rich Gulf youth not so fond of Mediterranean diet: Dietary habits cause of high prevalence of obesity and diabetes

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Young people in the United Arab Emirates (UAE), particularly young women, have shown a low appetite for Mediterranean diet (MD), going

mainly for refined grains and sweets rather than fruit and vegetables.

The finding is part of research led by a group of scientists from the University of Sharjah in the United Arab Emirates (UAE) in which they attempt to understand young people's perspectives of healthy and sustainable diets.

The research aims "to investigate the validity and reliability of a questionnaire examining the knowledge, attitudes, practices, and willingness to change regarding sustainable diets among young adults," the scientists write in the *Journal of Human Nutrition and Diabetics*.

The conclusions, the scientists claim, "could be used to identify the gaps and opportunities for the development of evidence-based interventions aiming to enhance the uptake of sustainable diets among young adults."

Prof. Farah Naja, a co-author, believes the findings and analysis can have broader implications beyond the UAE where the study was conducted, adding that the study's method and questionnaire could serve "as a valuable tool for recognizing gaps and opportunities in the promotion of sustainable dietary choices among young adults."

"Furthermore, this tool has the potential to inform the development of evidence-based interventions tailored to encourage sustainable eating practices in this demographic."

The study's lead author Dr. Mona Sharef Hashim, a lecturer at University of Sharjah's College of Health Sciences, links dietary habits to GHG (greenhouse gases) emissions, emphasizing that one of the research's main targets was to assess U.N.'s 2015 sustainable development goals and their emphasis on sustainable diet.

"All guidelines were revised in light of the effect of food consumption

on the environment. Compelling evidence shows that whole foods, fruits and vegetables, and legumes require less water and energy and are associated with lower GHG emissions. Therefore, what seemed to decrease obesity and its associated diseases such as diabetes was also found to be sustainable and environmentally friendly," Dr. Hashim says.

"Providing the tool to examine the knowledge, attitudes, and practices of the youth towards sustainable diets, this study allows the identification of the gaps and opportunities that need to be addressed to develop evidence-based interventions and programs that enhance the uptake of sustainable diets among young adults in the UAE and other Arabic speaking countries," Dr. Hashim adds.

In an earlier study published in the *European Journal of Nutrition*, of which Prof Naja is the lead author, low adherence to the Mediterranean Diet was found be particularly noted among women of childbearing age with "low adherence to the MD, mainly due to suboptimal intakes of whole grains, legumes, seafood, and olive oil."

Prof. Naja says the evidence gathered from the research shows high intake of up to 33.8% of what is generally presumed to be harmful foods like liquid sweets and refined cereals among the youth in the UAE.

However, the score for healthy foods like grains, fish and seafood, and legumes was extremely low and estimated at 6.8%, 3.8%, and 2.9% consecutively, according to Prof. Naja.

The low dietary intake of healthy foods in women "incurred relatively high EFPs, including water use, energy use, and GHG emissions," the authors add in their concluding remarks.

Oil-rich Gulf countries like Kuwait, Bahrain, Saudi Arabia and the United Arab Emirates are in the list of top ten countries worldwide in

term of obesity, which mostly attributed to unhealth dietary practices.

Obesity is prevalent in up to 14% of male children and adolescents and up to 18% in females. The percentage is much higher among adults, with obesity prevalence ranging from 2%–55% in females and from 1%–30% in males.

Unhealthy dietary habits leading to high prevalence of obesity are likewise reported to be among the factors for the high prevalence of type 2 diabetes mellitus (T2DM). According to the International Diabetes Federation, the diabetes prevalence rates in the oil-rich Gulf countries are among the highest in the world as they surpass 20% in a population of about 52 million.

Obesity and diabetes are currently two major health concerns in these countries, and Prof. Naja says the study which investigates dietary practices in the UAE should have implications across the Arab Gulf states as the country is culturally and socially an integral part of the larger region.

She believes that the study's method and questionnaire could serve "as a valuable tool for recognizing gaps and opportunities in the promotion of sustainable dietary choices among young adults."

"Amid the rally to promote the consumption of sustainable diets, and its association with health and environmental sustainability, it was critical to examine the position of the youth vis-à-vis sustainable diets," says Dr. Hashim.

She adds, "Today's youth generation is the largest in history, and dietary behaviors embraced during this life cycle are most likely to continue through adult life. Hence, we aim that young adults will become the influencers of younger generations to ensure that sustainable dietary

behaviors pass into future generations."

Dr. Mona claims the "study [to be] a pioneer in putting forward a tool that could be used for the assessment of knowledge attitudes, practices, and willingness to change in the context of sustainable diets among young adults."

"The developed tool will serve to put the individual at the center of all the international and national efforts aiming to promote the production and consumption of sustainable diets."

Dr. Mona maintains that young people were found to have poor knowledge and negative attitude about "sustainable diets … indicating lower motivation levels to change dietary behaviors rather than lack of knowledge or negative attitudes."

The authors' research has also examined the association of adherence to the Mediterranean Diet with a number of variables including environmental footprints (EFPs) among women of childbearing age in the UAE.

The authors find inverse association between adherence to the Mediterranean Diet and EFPs, which they believe can "lay grounds for the development of interventions and public health programs" to urge health authorities to promote the Mediterranean "as a healthy and sustainable dietary recommendation."

"Furthermore, this tool has the potential to inform the development of evidence-based interventions tailored to encourage sustainable eating practices in this demographic."

To examine the Mediterranean Diet, the authors employed the composite Mediterranean (c-MED) index. They used Life Cycle Analyses to

calculate metrics for the EFPs including water use, energy use, and GHG emissions.

The research's target was to assess the validity and reliability of variables designed to measure knowledge, attitudes, behaviors, and willingness to change regarding sustainable diets among young UAE adults.

"The questionnaire was structured into four sections, covering areas such as knowledge, attitudes, practices, and willingness to make dietary changes to promote sustainability," says Prof. Naja. "A subset of the participants completed the questionnaire for a second time, one month later."

To analyze the data, the authors employ various statistical techniques, including factor analysis Cronbach-α, interitem correlations, and intra-class correlation coefficients.

"We strived for the data and analysis to be as comprehensive and robust as possible to be able to capture the nuances of young adults' sustainable dietary perspectives," says Prof. Naja.

Prof. Naja touts the study as "the first … reliable and valid tool to examine the knowledge, attitudes, practices, and willingness to change regarding sustainable diets among youth in the UAE."

It has become critical, she says, to better understand the perspectives of young adults regarding health sustainable diets "in the light of the global commitment to promoting sustainable dietary choices and the pivotal role of young adults in the adoption of these choices."

Prof. Naja hopes the findings of the study "will provide a tool for the scientific community to help examine the gaps and opportunities that need to be addressed to develop evidence-based interventions and

programs that enhance the uptake of sustainable diets among young adults."

The authors are currently working to relay their findings to the food industry which is rallying behind sustainable diets. They claim that the industry is still in the dark about whether the public are apt to uptake sustainable diet options.

"As such, the MD may represent a promising dietary strategy to improve health outcomes and reduce the environmental impact. Public health programs addressing the low adherence to the MD among women of childbearing age in the UAE are warranted," the study reveals.

"By laying out the evidence needed for healthy and sustainable diets among women of childbearing age, the findings of this study may be used to support the UAE's commitment to promote the health of its population and that of the environment," the study concludes.

**More information:** Mona Hashim et al, Sustainable diets among youth: Validity and reliability of a questionnaire assessing knowledge, attitudes, practices, and willingness to change, *Journal of Human Nutrition and Dietetics* (2023). DOI: 10.1111/jhn.13190

Farah Naja et al, Adherence to the Mediterranean diet and its association with environmental footprints among women of childbearing age in the United Arab Emirates, *European Journal of Nutrition* (2022). DOI: 10.1007/s00394-022-02835-w

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