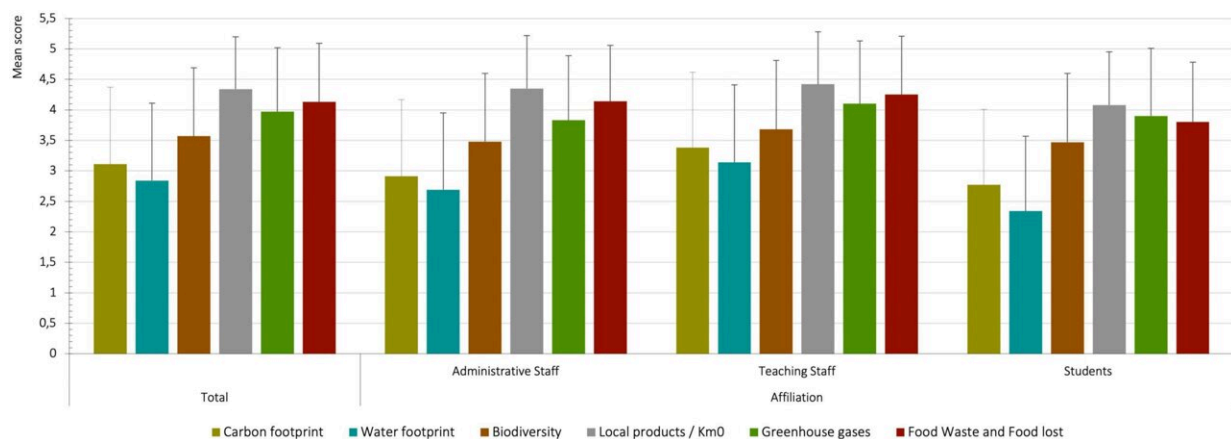


Research examines food sustainability in a university context

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Level of knowledge of concepts related to sustainability. Credit: *Frontiers in Nutrition* (2022). DOI: 10.3389/fnut.2022.970923

Every year, about a third of all food produced in the world—about 1.3 billion tons—is wasted in consumers' homes and retail businesses, according to the United Nations (UN). The food sector also accounts for around 30% of the world's total energy consumption and 22% of greenhouse gas emissions.

The most serious environmental impacts occur during the food production phase—agriculture and processing—but households also have an influence through dietary habits and choices, which affect the environment through food-related energy consumption and waste

generation.

Managing the environmental and socio-economic impact of the industrial production model, reducing the overexploitation of natural resources and promoting a more sustainable and environmentally friendly food system—healthy, safe and socially fair—are the challenges to be faced in the 21st century.

Since 2015, one of the priorities of the United Nations Sustainable Development Goals (SDGs)—specifically goal 12—is to promote sustainable lifestyles and increase the efficiency of natural resources in order to achieve responsible production and consumption and thus prevent environmental degradation.

In this context of global challenges, universities are institutions with a great potential to promote sustainability and healthy habits among their members, to encourage the training of professionals committed to these principles. What are our concerns about the food we eat?

The aim of a study that has just been published in the journal *Frontiers in Nutrition* was to find out what the UB community's perception of food sustainability is and what knowledge they have about it.

It has been developed by a multidisciplinary team led by the researchers M. Carmen Vidal-Carou, professor of Nutrition and Bromatology at the Faculty of Pharmacy and Food Sciences and director of the Torribera Campus, and Montserrat Puig-Llobet, professor at the Faculty of Medicine and Health Sciences and vice-rector for Equal Opportunities and Gender at the University of Barcelona.

A total of 1,220 participants, including teaching and research staff, administrative and service staff and students took part in the study, of whom 67% were women and 47% were aged between 51 and 65. Of

these, 33% were from the health sciences fields. In the case of students, their participation in the study was low: they represent only 18% of all participants, although they are the largest group at the UB.

The study reveals that the food issues of most concern to the university community are, in descending order: [food waste](#); hygiene; plastic packaging; fat, salt and sugar content; environmental impact; viral contamination; chronic non-communicable diseases; pesticides; socio-economic conditions; animal welfare; chemical contaminants; and body weight.

Food and environment for a more sustainable future

The food sector has a direct impact on the environment. Regarding this problem, 71% of respondents—77% of the teaching and research staff and 52% of the students—have often heard of this issue, but 5% say they have hardly ever heard of it. In relation to the SDGs and the 2030 Agenda, 67% say they are informed—78% of the teaching and research staff and 35% of the students—and this percentage drops to 58% in the case of the European Green Pact.

The areas with the highest levels of knowledge are gradually becoming apparent in the areas of zero-kilometer food, food waste, greenhouse gases, biodiversity, carbon footprint and water footprint.

According to those interviewed, a sustainable diet takes particular account of aspects such as seasonality, low impact, zero waste, sustainable packaging, organic products, plant-based foods and cultural acceptance. Fruit and vegetables, olive oil, pulses, nuts and whole grains should be part of a sustainable and [healthy diet](#), with red meat, refined grains, alcoholic beverages, salty snacks and sweetened beverages at the bottom of the list.

Is a healthy diet also sustainable?

10% of the participants fully identify a healthy diet with a sustainable diet, 73% consider that they are sometimes similar concepts, and 3% respond that they have nothing to do with each other.

At the time of purchase, 59% of participants—mainly men and students—say that they take food sustainability into account; for 32%, this consideration is only moderate.

Is it difficult to follow a sustainable diet? Only 9% of respondents say that they always follow a sustainable diet, while the vast majority—77%—say that they do so sometimes. In this regard, the study reveals that the main factors that make it difficult are food prices, lack of information and the accessibility to seasonal foods.

How do results vary between groups?

If the results are analyzed according to the groups to which the participants belong, it is observed that "teachers show a higher level of knowledge regarding the different topics associated with sustainability—such as the SDGs or the Green Pact—especially in comparison with students," reports M. Clara de Moraes Prata Gaspar.

"Furthermore, some factors related to sustainability have a greater influence on the food choices of teachers and administrative staff than students."

"Regarding the perception of a sustainable diet, administrative staff and teachers indicate similar conceptions that differ from students, who place greater importance on locally produced food, biodegradable and compostable packaging and monetary cost," the researcher notes.

Women and TRS lead the fight against food waste

People who admit that they occasionally throw food away at home are in the majority (almost 50% of participants), followed by those who say they hardly ever do so (around 40%). How to prevent food from going to waste? Making use of leftovers, planning shopping and meals, buying less food and learning new cooking techniques to preserve food better are the most commonly used strategies in the domestic environment.

"In general, in most questions we observed that women of all groups show more knowledge and awareness of issues related to food sustainability. For example, we see that women and TRS members are more likely to use strategies related to food management at home when trying to avoid food waste," says researcher Ricard Celorio-Sardà.

Enhancing individual and collective strategies

The results indicate that the level of knowledge about the technical aspects of food sustainability is moderate or even low among students. Although food sustainability issues are of high concern, especially among women and students, the concept of food sustainability is not yet a key element in food choices. As far as perceptions are concerned, the study reveals a less than holistic view of the concept of food sustainability, which in most cases ignores the social and economic dimensions.

"For years, the UB has been working to remain aligned with the SDGs in all its actions and in all its areas of activity," says Oriol Comas-Basté.

"However, the results of this study show that it is necessary to continue making efforts to develop initiatives that consider sustainability in a holistic way, considering, above all, the social and economic dimensions,

in which we have detected a lower level of knowledge and awareness in the UB community. Furthermore, it is important that these strategies are not only limited to increasing theoretical knowledge in this area, but also help to translate it into individual and collective actions in favor of more sustainable practices," concludes the researcher.

More information: M. Clara de Moraes Prata Gaspar et al, Knowledge and perceptions of food sustainability in a Spanish university population, *Frontiers in Nutrition* (2022). [DOI: 10.3389/fnut.2022.970923](https://doi.org/10.3389/fnut.2022.970923)

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