RELISE

MANAGER'S PERCEPTION ABOUT ENVIRONMENTAL SUSTAINABILITY IN MEAL PRODUCING ESTABLISHMENTS[1]

PERCEPÇÃO DO GESTOR SOBRE SUSTENTABILIDADE AMBIENTAL EM ESTABELECIMENTOS PRODUTORES DE REFEIÇÕES

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ABSTRACT

The United Nations (UN) published in 2015 the document Sustainable Development Goals (SDGs) for a sustainable agenda until 2030 to make the world more equitable and livable. Food Services (FS) are excellent ways to create a culture of sustainability, but the effective participation of managers and employees is necessary. The present study sought to assess the manager's perception of environmental sustainability in FS. This is a cross-sectional study with the participation of 12 restaurant managers located in the central region of the city of São Paulo. Data were obtained from face-to-face interviews with the help of a questionnaire prepared on the Google Forms® platform and tabulated in the Microsoft Excel 2010 program. In the present study, 100% of the participants believe that water and energy control are important while nine (75%) apply water control and seven (58.3%) perform energy control. For 11 (91.7%) it is possible to develop some sustainability plan. Environmental sustainability trainings are offered in seven (58.3%) of the restaurants. It is possible to say that all managers believe that a food service can be sustainable and that it is possible to develop sustainability projects in their establishments. The inclusion of environmental sustainability topics as training for employees can be observed.

Keywords: sustainable development, environmental sustainability, restaurants.

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INTRODUCTION

The current model of global economic growth, which began after the end of World War II primarily based on the depletion and destruction of non-renewable natural resources and unsustainable consumption, has led the planet to drastic climate changes, such as global warming, affecting the lives and economies of thousands of people (CASTRO et al., 2015).

Goods industrialization such as food and beverages, with technological and scientific advances in healthcare, has allowed people to live longer. In Brazil, according to the Brazilian Institute of Geography and Statistics (IBGE), in 2019, the life expectancy of Brazilian men was 73.1 years, while that of Brazilian women was 80.1 years (IBGE, 2020).

However, living longer does not necessarily mean living with quality of life, having decent work, or being financially stable and free from disease. In the face of the current environmental, economic, and social crisis on the planet, we increasingly see political and social movements rethinking and restructuring approaches to the issues of environmental and social sustainability and survival (GOMES; OTHERO, 2016).

According to the World Health Organization (WHO), about 23% of all deaths worldwide are related to environmental risks such as air pollution, water contamination, and exposure to chemicals. Around 7 million people die due to exposure to air pollution. Over the last 50 years, our diet has become 37% identical worldwide, with only five animal species providing 75% of energy consumption and just 12 plant crops sustaining it (BRAZIL, 2021).

Global economic development, sustained by environmental degradation and exploitation, has increased the destruction of ecosystems, the extinction of species, and rising social inequality across the world, thereby increasing the number of environmental refugees and migrations. In 2018, more than 17 million

people, known as environmental migrants, were forced to relocate due to climate-related issues (FÜHR, 2019).

This moment in history, in which humankind can alter the planet's natural dynamics, is known as the Anthropocene. A study on planetary boundaries - biophysical processes that regulate our planet - indicated that out of the nine planetary boundaries (climate change; biosphere integrity; depletion of the stratospheric ozone layer; ocean acidification; biogeochemical flows; land-use change; freshwater use; atmospheric aerosol concentration; and introduction of novel entities), four have already been surpassed: climate change, loss of biosphere integrity, land-use change, and biogeochemical flows. The imbalance of these boundaries significantly impacts the lives of the global population, especially poorer nations and peoples, increasing poverty and inequality among countries, and driving migration to regions with better living conditions (MARTINE; ALVES, 2015).

Creating means of production that maintain the environment's regenerative capacity and use natural resources without compromising or affecting the lives of current and future generations is the core of environmental sustainability. To achieve this, it is necessary to rethink the entire global and local production chain in terms of environmental, economic, and social aspects (STRASBURG; JAHNO, 2016).

Moreover, it is essential to adopt new means of sustainable production and ethical behaviors toward the environment and society. For this to happen, commitment of governmental and non-governmental structures is required. In 2015, the United Nations (UN) published a document called the Sustainable Development Goals (SDGs), comprising 17 global goals, 169 targets, and 231 indicators for a sustainable agenda up to 2030, integrating social, economic, and environmental aspects, to make the world more equal and livable - adoptable by both public and private sectors (UN, 2022).

Among the SDGs are the eradication of poverty, sustainable food and agriculture, quality health and education, gender equality and reduction of inequalities, rational use of drinking water, sanitation and clean energy, decent work and economic growth, industrial innovation and infrastructure, sustainable cities and communities, sustainable consumption and production, action against climate change, sustainable use of oceans and terrestrial ecosystems, and the strengthening of sustainable development (IBGE, 2022).

In this sense, Food Services (FS) are excellent means to foster a culture of internal sustainability, but this requires the effective participation of managers and internal and external collaborators. Within an FSE, every stage of meal production - from farming to food distribution - carries environmental, social, and economic consequences, ranging from water and energy consumption, solid and inorganic waste, food waste, fossil fuel use in machinery, deforestation, reduced biodiversity, and greenhouse gas emissions (HALMENSCHLAGER, 2017).

Each establishment can identify its real impact on the environment and based on this, define strategies for the use of clean technologies, marketing environmentally friendly products, implementing recycling and waste separation, participating in wastewater treatment, and adopting energy and water efficiency measures. A favorable environment for new ideas must be created, engaging all collaborators, and embedding environmental sustainability into its mission, vision, and goals (ABREU; SPINELLI; SOUZA PINTO, 2019).

From an economic perspective, FS focused on sustainability rely on their own indicators for managing production losses, seek to strengthen local trade and agriculture, focus on results to maintain business strategies and quality, comply with legislation, and choose suppliers with lower environmental impact. A study (KWOK et al., 2016) found that younger people show interest in restaurants considered sustainable, even if it means paying more or traveling farther (FABRIM; CONTO, 2020).

Considering the above, the present study seeks to answer whether FS located in downtown São Paulo are aware of and apply environmental sustainability concepts in their units, as well as the managers' perceptions of the subject.

METHODS

This is a cross-sectional study, with a convenience sample, restricted to the territory of the Subprefecture of Sé, in the central region of the city of São Paulo. The study was conducted from February to July 2022. The data collection instrument, consisting of 30 questions, was adapted from Nóbrega, Veiros, and Rocha (2019). As an inclusion criterion for the establishment in the study, the interview was conducted in person with the manager or person responsible for the establishment. This study is part of the research project "Evaluation of Sustainability Management in Food Service Establishments", approved by the Ethics Committee under protocol number CAAE 51523521.4.0000.0084.

RESULTS AND DISCUSSION

Fifteen restaurants, categorized as street-side establishments, were contacted, with three (20%) declining to participate in the study. Of the participating restaurants, nine (75%) had a dining area and three (25%) offered a counter-service. Of these restaurants, seven (58.3%) offered a wide variety of options, with over 30 variations on their menu or buffet. Table 1 shows the distribution of the number of establishments by the number of meals sold daily.

Table 1: Average number of meals sold daily. São Paulo, 2022.

Number of meals	**Number of restaurants (n)**	**%**
Up to 30 meals	05	41,7
31 to 60 meals	01	8,3
61 to 90 meals	02	16,7
91 to 120 meals	03	25,0
More than 120 meals	01	8,3
Total	**12**	**100**

Source: the authors (2022)

Among the managers, six (50.0%) identified themselves as owners, five (41.7%) as managers, and one (8.3%) as an administrative assistant. Regarding educational level, six (50%) managers reported having completed higher education, while five (41.6%) had completed secondary education. Two managers declared themselves to have postgraduate degrees (16.6%), and four had secondary education, with two (16.6%) reporting completion of it.

Of the participating restaurants, nine (75%) practice selective collection of solid waste, while three (25%) do not separate waste. The destination of this waste includes non-governmental organizations (NGOs), selective collection companies, cooperatives, and donations to waste pickers. In 2013, Barthichoto et al., studying thirty-two restaurants in downtown São Paulo, observed that no manager implemented any type of environmental management program or training aimed at this purpose. In the study by Castro et al. (2015) on sustainability in restaurants, among nineteen restaurants in the central region of São Paulo, only 31.6% carried out selective collection. It is evident that this is a topic gaining space and interest, partly due to recent discussions on the matter and changes in sustainable economic production (DARSIE et al., 2021). From May 2021 to May 2022, Brazil ranked second worldwide in Google Trends searches for the term “environmental sustainability” (GOOGLE, 2022).

Cooking oil is donated or collected in ten (83.3%) of the restaurants, while two (16.7%) reported having no surplus production. The destination of the oil includes NGOs, outsourced companies, and cooperatives. This result is of great importance to the environment, since the improper disposal of cooking oil residue has the potential to contaminate soil and water, leading to environmental, economic, and social imbalances, as oil impairs the oxygenation of plants, fish, and microorganisms, in addition to waterproofing the soil (ZUCATTO; WELLE; SILVA, 2013).

Three restaurants (25%) donate surplus food production (meals and snacks) to NGOs, other institutions, or homeless individuals. Law 14016/2020 addresses the donation of leftover food for the consumption of people in social vulnerability or at nutritional risk. In a study carried out in 2014 in São Paulo, of the 16 restaurants surveyed, two (12.5%) donated their surplus production to homeless people. During the COVID-19 pandemic, Law 14016/2020 was widely disseminated by the Brazilian government through media channels to combat waste and encourage food donations for human consumption.

The study identified that eight (66.7%) of the restaurants purchase food from small producers. Of these, four (33.3%) are among the restaurants offering more than 30 daily meal options on their menus. A comprehensive study published by the São Paulo City Hall in 2020 observed that 63.4% of small food production units (UPAs) are located in the southern region of the city (SÃO PAULO, 2020).

All managers believe that a food service can be sustainable and recognize that controlling water and energy consumption are important practices for environmental sustainability. Eight of them (66.7%) believe that their work is sustainable, and among these, five (71.72%) hold a university degree. In the daily routine of restaurants, nine (75%) reported monitoring water consumption, seven (58.3%) energy use, and eight (66.7%) waste management.

For 11 managers (91.7%), it is possible to develop a sustainability plan in their restaurant. This result is significant as it demonstrates managers' awareness and perception of the issue of environmental sustainability. Other studies support this finding: Pospischek et al. (2014) observed 62.5%, Castro (2015) 78.9%, and Góis (2019) 100% of restaurant managers acknowledging this.

It is noteworthy that for 10 managers (83.3%) the amount of organic waste and 11 (91.7%) solid waste (disposables, glass, plastics, aluminum) interfere with sustainability.

The surplus production discarded, and leftover food consumed in the food service establishments can be considered factors for generating organic waste. Customer satisfaction with the acceptance of preparations interferes with sustainability for 10 managers (83.3%), while two (16.7%) believed this would not be an issue. When asked about ways to prevent customer waste, opinions were evenly divided. Although this result is encouraging - since half of the restaurants seek ways to promote conscious consumption among customers - it may also indicate a need for greater effort from managers and staff to find ways of avoiding food waste. Some managers spontaneously mentioned practices to reduce waste, highlighting appropriate portion sizes, incentive programs for conscious consumption, and in-restaurant communication about waste. In a study conducted in Japan with 387 restaurant managers, only 45 (11.7%) reported implementing measures to minimize food loss and waste in order to comply with the United Nations Sustainable Development Goals (AKAMATSU et al., 2022).

Upon hiring, employees receive training in 11 restaurants (91.7%). Organizational training is an excellent way to introduce the culture and values of a restaurant to its employees and can influence work quality and performance, organizational climate, leadership and employee behavior, as well as the results and objectives of each unit (BASTOS, 2017).

Environmental sustainability training is provided for employees in seven (58.3%) of the restaurants. According to managers, this training is delivered through lectures with NGOs, internal lectures, courses, workshops, guidance by nutritionists, proper disposal of food and oils, and appropriate use of natural resources. Progress can be seen in the importance attributed to this issue, since in the study by Barthichoto et al. conducted in 2013 with 32 restaurants in

downtown São Paulo, none of the restaurants carried out environmental training with their staff. Training and educational actions in Food Services (FS) on environmental sustainability can place employees in a strategic role for internal and external changes, enhancing engagement with environmental preservation in their daily routines and extending their practices to citizenship (JACOBI, 2005).

CONCLUSION

All managers believe that food service can be environmentally sustainable and that it is possible to develop resources and projects to achieve this. Considering the reports from the locations, controlling water and energy consumption, separating solid waste, and properly disposing of oil are already a reality for most participating units. In part, it is suggested that these practices were adopted to reduce costs, but that selective waste collection reflects environmental awareness. This research, when compared to other studies on the same topic and in the same location, confirmed that management's perception and interest have become broad, although not everyone believes their practices are sustainable. Another variable that demonstrates interest in the issue is the growing availability of environmental sustainability training for employees, compared to these same studies.

Thinking that the ultimate purpose of a restaurant is simply to serve meals may become an outdated idea. These establishments can and should be a place of social and environmental change, positively impacting people, their region, and the planet.

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