


# Acting against obesity: a cross-cultural analysis of prevention models in Spain, Argentina and Brazil

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## ABSTRACT

This article analyses and compares preventive models for obesity in Spain, Argentina and Brazil through an examination of the respective measures adopted to counter it in those countries. Based on a qualitative study of the main actions carried out since 2004, the aim is to delineate the conceptual framework and reflect on the reasons for their relative effectiveness. The results show that in contexts where prevalence has increased rapidly, sociocultural causes acquire greater explanatory power as opposed to biological and/or behavioral factors. These models premise worsening diets and sedentary lifestyles as being the main culprits, and assume that contemporary societies generate obesogenic and toxic environments. The international health bodies have developed specific strategies to control and prevent obesity based on this diagnosis, and these have been supported by member states such as Spain, Argentina and Brazil. Although the measures reflect certain particularities, they conform to a common pattern organized from platforms promoting so-called “healthy lifestyles” and articulated mainly around the twin axes of a balanced diet and regular physical exercise. The discussion suggests that the excessive emphasis on individual responsibility and the underplaying of the role of food as a complex practice, as well as changing structural factors and the differential distribution of this disease, might largely explain the limited impact of these strategies.

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**Keywords:** Food ; obesity ; health policies ; preventive model ; social inequality ; cross-cultural analysis

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## Introduction

Health policies to prevent and control obesity have been implemented across the world in the last couple of decades since the World Health Organization declared it the non-communicable global epidemic of the 21st century (WHO 2000). The organization points out that its prevalence almost tripled from 1975 to 2016, highlighting that one in eight adults is now obese. No less worrying than the obesity rates among the adult population are the comparably growing numbers of overweight or obese children and adolescents (WHO 2019). While the rise of this condition has been most significant in north American countries, it is a growing cause for concern in south American countries such as Argentina and Brazil (Jiwani et al. 2019) – and also European ones such as Spain (Hernández et al. 2019). There is a broad consensus in the biomedical literature on classifying obesity as a chronic non-communicable disease (CNCD), associating it with diabetes, cardiovascular disorders and different types of cancer, and seeing it as the result of bio-

logical, behavioral and cultural factors (Swinburn, Egger, and Raza 1999). Similarly, there is a global consensus on the use of the Body Mass Index (BMI) in adults as a diagnostic tool for the pathological nature of excess body weight.

However, given the difficulties associated with its treatment (Bray and Tartaglia 2000) and its growing prevalence worldwide (Dinsa et al. 2012; Ng et al. 2014), environmental factors have come to the fore, playing a strategic role in the definition of the problem and the interventions proposed. Its rise is seen as a global phenomenon caused by the profound technological, demographic and socioeconomic transformations that have taken place on a planetary scale. It is considered to be a direct consequence of hypercaloric diets due to increased consumption of ultra-processed food and of insufficient energy expenditure as the ultimate expression of both the current agroindustrial food system and the mechanization of daily life (Popkin and Gordon-Larsen 2004). This has led health authorities to describe contemporary societies as “obesogenic” or environmentally “toxic” (Brownell and Horgen 2003). Without denying the relevance of these processes, identifying which of all these factors bear the greatest responsibility for the increasing prevalence of obesity, as well as determining its consequences, remains elusive (McAllister et al. 2009). This has not prevented the implementation of strategies of a very similar nature and content in many countries.

The aim of this comparative analysis is to delineate the conceptual framework of the preventive models implemented in recent years in Spain, Argentina and Brazil and to reflect on the reasons for their relative effectiveness. Its starting point is 2004, as that is when the WHO *Global Strategy on Diet, Physical Activity and Health (DPAS)* (WHO/DPAS-2004) first appeared. Also considered is the Pan-American Health Organization’s (PAHO) *Regional Strategy and Plan of Action for an Integrated Approach to the Prevention and Control of Chronic Diseases, including Diet, Physical Activity and Health* (2007), which urges all member states to develop policies on non-communicable diseases, including obesity.

Despite the disparate socioeconomic and political contexts represented by the three countries, there are shared elements that have facilitated comparison. The sustained rise in the prevalence of obesity coincides, paradoxically, with the increased application of diagnostic and clinical treatment protocols, with the running of numerous preventive campaigns, with the spread of lipophobia and social stigmatization of fatness – and also in a context where their respective populations have a better understanding of the relationship between food and health (Gracia-Arnaiz 2017). If the prevalence continues to increase, we need to ask why. On the other hand, most of the public policies have been formulated and implemented concomitantly with the experience of the recent economic crises, which have, at different times and with specific consequences, affected the most socially vulnerable sections of the population. Starting from the observation that the measures adopted have so far failed to curb and/or reverse the prevalence of obesity, we wonder if this is related to the conceptual structure of the preventive models itself, which, while emphasizing the importance of environment, has placed excessive emphasis on individual responsibility, overlooking food as a complex practice, superficially highlighting certain structural factors and relegating the unequal social distribution of obesity to the status of a secondary consideration.

## Materials and methods

Forming part of a broader study,<sup>1</sup> this article qualitatively analyses the main documents published by the governments of Spain, Argentina and Brazil detailing their policies for tackling obesity. Although the strategies developed by the WHO and its regional offices for Europe and Latin America have also been considered (a total of 17 documents sourced from their websites), the focus has mainly been on state actions under the Strategy for Nutrition, Physical Activity and Prevention of Obesity (Spain) (NAOS 2005), the National Programme for Healthy Eating and Prevention of Obesity (Argentina) (Ministry of Health 2016a) and the Intersectoral Strategy for the Control and Prevention of Obesity (Brazil) (CAISAN 2014). The texts have been carefully collated and selected by accessing the health ministry websites with criteria of theoretical relevance in mind, classifying them according to subject, year of publication and implementation, their specific objectives and proposals for action. The systematization of the data and the analysis took place during 2017–19 based on a total of 46 documents that met the requirements for inclusion (Table 1) and were distributed thus: 22 (Spain), 13 (Argentina) and 11 (Brazil).

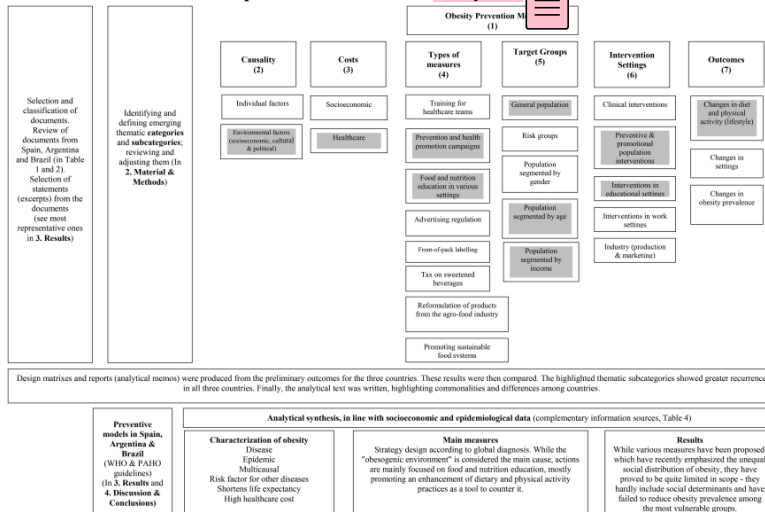
Table 1. Criteria for inclusion and exclusion of the documents acquired.

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> <li>• Global Action Plan for the Prevention and Control of CNCD</li> <li>• Recommendations on Diet and Physical Activity</li> <li>• Global and national strategies on Diet, Physical Activity and Health</li> <li>• National food and nutrition action plans and programmes</li> <li>• Consensus documents on obesity</li> <li>• Action statements on prevention of obesity</li> <li>• Provisions, regulations, resolutions and laws related to obesity prevention</li> <li>• Obesity indicators and data</li> <li>• Monitoring and evaluation reports</li> <li>• Programmes, projects, materials and guides for the general public</li> </ul>	<ul style="list-style-type: none"> <li>• Health care plan (general)</li> <li>• Recommendations solely referring to specific food/drink consumption</li> <li>• Programmes of physical activity or diet for specific populations (summer camp, sports camp, retirement homes etc.) and/or regions, provinces or municipalities</li> <li>• Research projects</li> <li>• General strategies for promoting health and preventing disease</li> <li>• Information material (such as leaflets)</li> <li>• Conventions and prizes</li> </ul>

Source: author's own work.

The qualitative study of the documents involved following the thematic analysis method (Guest 2012) using the Atlas.ti v.8 program. After generating the initial codes and linking them to the text fragments, an analysis map was drawn up based on these seven thematic categories or families: obesity as a disease (1), causality (2), costs (3), typology of measures (4), target groups (5), intervention settings (6) and outcomes (7). This procedure used inductive reasoning, by which the categories and codes, primarily based on textual quotations, emerge from the data through meticulous examination and checking. This systematization made it possible to create the matrices for qualitative analysis and thus facilitate the comparison, establishing the recurrent and/or contrasting categories between each country's documents (Chart 1, Procedures for Qualitative Thematic Analysis).

Chart 1. Procedures for qualitative thematic analysis.



Source: Authors' own elaboration.

This approach is an inherently interpretative act based on a detailed analysis of the narratives constructed by the government bodies, going beyond the merely descriptive and quantitative goals that are usually pursued in content analysis. The contents of these secondary sources have been analyzed as cultural texts (Campbell 2011) in the sense that they embody the hegemonic discourses and can therefore be considered as the authorized voices that construct the ‘reality’ (Kleinman 1988), in this case of obesity.

Lastly, and in a way that is complementary to the analysis, statistical sources have been used in order to better understand changes in the living conditions and health of these populations during this period. Given the breadth and diversity of the statistical sources, only the survey items of interest for the phenomenon under study have been analyzed. This is the case, for example, with unemployment, the general index of the population at risk of poverty and social exclusion, and the prevalence of obesity and overweight. With that in mind, surveys on living conditions (ECV), active population (EPA) and the National Health Surveys (ENS 2006, 2012, 2018) have been consulted for Spain; for Argentina, statistics on poverty and unemployment rate (INDEC), surveys on food insecurity (ODSA-UCA) and the National Surveys of Risk Factors (MS 2006, 2009, 2013, 2018). Finally, for Brazil, it was the Family Budget Survey (POF 2002–2003y 2008-2009) (IBGE 2004, 2011) and the National Health Survey (PNS 2013y 2019) (IBGE 2014, 2020).

## Results

### Taking measures against obesity: the main actions

#### *Weight matters: the global context*

Over 15 years ago, the WHO drew up the Global Strategy on Diet, Physical Activity and Health (DPAS) as an integral tool to guide member states in their efforts to prevent chronic diseases (Gracia-Arnaiz 2017, 68). Obesity is conceived principally as a disease linked to increased comorbidity and mortality, stemming from ‘unhealthy diets, inadequate physical activity’ and chiefly the result of “energy imbalances” (WHO 2004, 4). It is a multifaceted strategy that underscored the significance of the environment responsible for creating so-called “obesogenic” societies. With a principal objective of “*improv[ing] diets and increas[ing] physical activity that are sustainable, comprehensive, and actively engag[ing] all sectors, including civil society, the private sector and the media*”, the institution encouraged member states to elaborate national, regional and community policies that could focus attention on both individual and social environmental factors as targets for health promotion interventions. Most of the actions undertaken have challenged politicians, business people, educators and health professionals to promote more active and healthy lifestyles from within their respective spheres.

In recent years, the WHO has refocused its recommendations after noticing that the prevalence of obesity has continued to rise concurrently with the first implementation of these prevention-based actions (Table 2). In response to the recent economic crisis, a new paper referencing the micro-environmental factors shaping dietary patterns (employment, housing, social inequalities) or the macro-environmental factors influencing food consumption (increased food supply, decline of food prices, food corporations, and industrialization of agriculture) has been published (WHO 2012, 17). In this vein, the WHO European Region Food and Nutrition Action Plan 2015–2020 (WHO 2015) has focused on the need to act beyond promoting healthy food choices and physical exercise. Obesity is recognized as an inequality issue (WHO, 2014) and universal access to healthy foods proposed, especially for the most vulnerable groups, along with equity and gender equality in relation to nutrition for all European citizens. These objectives have been incorporated into the member institutions’ commitments on the eradication of poverty, the improvement of public health and fiscal policies on diet within the framework of the Sustainable Development Goals (UN 2015). At the heart of the debate is the need to improve food system governance.

Table 2. Relevant international programmes (2004–2018).

Institution	Year	Plan	Actions
WHO	2004	DPAS	Global Strategy on Diet, Physical Activity and Health
	2008	Action Plan	2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases
	2012	Report	Population-based approaches to childhood obesity prevention
	2013	Plan	Global Action Plan for the prevention and control of non-communicable diseases (2013–2020)
	2014	Group	Commission on Ending Childhood Obesity (ECHO)
			Fiscal policies for diet and the prevention of non-communicable diseases
	2016	Report	WHO European Action plan for food and nutrition policy 2007-2012
	2008	Plan	Vienna Declaration on Nutrition and Non-communicable Disease in the Context of Health 2020
	2013	Declaration	Obesity and Inequalities
WHO-EU	2014	Guidance	European Food and Nutrition Action Plan 2015–2020
	2015	Plan	Mapping the health system response to childhood obesity in the WHO European Region
	2019	Report	
OPS	2007	Strategy	Regional Strategy and Action Plan for an Integrated Approach to Prevention and Control of NCDs, including diet, physical activity and health
	2012	Strategy	Strategy for the prevention and control of NCDs
	2014	Plan	Action Plan for the Prevention and Control of NCDs in the Americas 2013-2019
	2014	Plan	Action plan for the prevention of obesity in children and adolescents
	2015	Report	Ultra-processed foods and drinks in Latin America: trends, effect on obesity and implications for public policy
	2018	Report	Food policies and programmes to prevent overweight and obesity. Lessons learned.

Source: author's own research.<sup>2</sup>

For its part, in 2007 the PAHO drew up the Regional Strategy and Action Plan with an Integrated Focus on the Prevention and Control of CNCs, proposing courses of action for their prevention and treatment. However, by 2012 it was already recognizing that while great strides had been made, it had not managed to halt the advance of CNCs. It therefore proposed implementing multisectoral activities while also taking the social determinants of obesity into account. In 2014 it stated that “the most important factors driving weight gain and obesity (...) are heavy consumption of products with low nutritional value and high sugar, fat and salt content (...), such as ‘snacks’ and fast food (...); the regular intake of sugary drinks and insufficient physical exercise. All these are part of an obesogenic environment” (OPS 2014, 8). For that reason, the PAHO urges member states to implement measures aimed at “transforming the current obesogenic environment into opportunities to promote greater consumption of nutritious food and an increase in physical activity” (OPS 2014, 17). The main proposals revolve around the promotion of healthy eating, the improvement of school environments, tax policies, and the regulation of advertising and labeling of foodstuffs. In recent years, in line with the WHO and its SDGs (Sustainable Development Goals), the co-existence of malnutrition and obesity in contexts of poverty and inequality has been recognized, with proposals to transform food systems to make them more sustainable and inclusive by means of regulations giving the population access to nutritious, safe and varied products (OPS 2018).

#### **Local strategies: implementing measures**

According to *The Global Strategy on Diet, Physical Activity and Health* of the WHO (DPAS-2004) and the PAHO (2007), the starting point for the measures implemented in Spain, Argentina and Brazil (Table 3) is that obesity is an epidemic disease, multicausal and very costly for the health system and society as a whole, but nevertheless avoida-

ble. Based on this premise, each country designs its own strategy for dealing with it, reproducing the diagnosis of its causes and replicating some of the measures proposed at the global level.

Table 3. Plans, programmes and significant actions in the prevention and control of obesity in Spain, Argentina and Brazil (2005–2018).

Country	Year	Plan/ Programme Law/ Law/	Description
<b>Spain</b>	2005	NAOS	Strategy for nutrition, physical activity and prevention of obesity
	2005	PERSEO	Pilot Schools Programme for Healthy Eating and Exercise
	2005	PAOS	Co-regulation code for food and drink advertising targeted at children, obesity prevention and health
	2008	GUSTINO Project	Programme encouraging restaurants to promote healthy and balanced menus
	2011	Law	Food Safety and Nutrition Act 17/2011
	2011	NAOS	Evaluation and monitoring of the NAOS strategy: minimum set of indicators
	2013	Fifty-fifty	Programme to improve the overall health of the adult population
	2013	Observatory	Nutrition Observatory and Study of Obesity
	2014	JANPA (EU)	European Action Plan on Childhood Obesity, 2014–2020
	2015	PANGEI	Food, Nutrition and Gastronomy Programme for Preschool Education (PAN-GEI). El gusto es mío (The pleasure/taste is mine).
	2018	Plan	Collaboration plan for improving food and drink ingredients and other measures
<b>Argentina</b>	2008	Law	Law No. 26396 on Food Disorders
	2009	Strategy	Res.1083/09. National Strategy for the Prevention and Control of CNCs and Healthy Argentina Plan
	2013	Programme	Res. 578/2013. National Programme to Combat Sedentarism
	2014	Law	Initiative for a Trans Fat Free Argentina (Food Industry)
	2014	Guidelines	Clinical Guidelines on the Diagnosis and Treatment of Obesity in Adults
	2015	Decree/Project	Project for Protecting Vulnerable People against Chronic Non-Communicable Diseases
	2016	Guidelines	Food Guidelines for the Argentine Population (update)
	2016	Programme	Res. 732/16. Healthy Eating and Obesity Prevention Programme
	2018	Round-table discussion	Round-table discussion between the Health Minister and the Ministry of Production and Work
	2019	Plan	National Plan for the Prevention of Overweight and Obesity in Children and Adolescents

Country	Year	Plan/ Programme Law/	Description
Brazil	2006	Manual	Obesity. Basic Care Notebooks, No. 12. Series A. Guidelines and Technical Manuals
	2011	Plan	Strategic action plan to tackle chronic non-communicable diseases (CNCDs) in Brazil
	2012	Policy	National Food and Nutrition Policy
	2013	Law	Ordinance no. 424/GM/MS 2013. Redefines the guidelines for organizing the prevention and treatment of overweight and obesity as a priority line of care for the Health Care Network for People with Chronic Diseases
	2014	Manual	Obesity. Basic Care Notebooks, No. 38
	2014	Guide	Dietary Guidelines for the Brazilian Population (revised)
	2014	Strategy	Intersectoral Strategy for Obesity Prevention and Control: recommendations for states and municipalities
	2015	Benchmark	A benchmark for monitoring food and nutrition in primary care

Source: author's own research.

Spain, concerned by the increase in the incidence of non-communicable chronic diseases, responded swiftly to the WHO mandate with its NAOS strategy (2005:10). Despite ranking in the middle of European countries in terms of its percentage of obese adults, it presents some high numbers for its child population, only surpassed by Italy, Malta and Greece. While NAOS stresses that “an exhaustive understanding of the causes and their multiple, complex inter-relationships is essential for changing public habits and intervening in the causes of obesity” (2005, 12), these essentially come down to two things: a) the sustained increase in sedentary lifestyles and b) the change in food patterns over the last 40 years from more to less healthy (Varela-Moreira et al. 2013). The rise of obesogenic environments has been blamed for these trends (NAOS 2005:11) and has led to a series of proposals that “encourage a decisive and sustained change toward a healthier diet and regular physical activity” (NAOS 2005, 19). Their aim is to reverse so-called “unhealthy lifestyles” through multifaceted actions, proposing programmes that require the collaboration of numerous social actors and interventions in different spheres (school, work, family). Among other initiatives, food and nutrition labeling has been introduced; some voluntary agreements have been concluded with restaurants and industries; food vending machines been banned from schools; and an observatory has been set up to periodically quantify and analyze the prevalence of obesity and measure the progress made in preventing it. Though the measures are enacted from different spheres, when we analyzed them as a whole, it was clear to see that there are limits to promoting the “decisive and sustained change” advocated. For example, the food reformulation has been proposed as an initiative dependent on the good will of every food company for its successful implementation; and the government has opted, for now, not to tax so-called “unhealthy” foods. It has, however, got on board with the European “School Fruit, Vegetable and Milk Scheme”, which aims to fund the free distribution of those items to schoolchildren from nursery to secondary school age.

Campaigns to prevent obesity have mainly been targeted at the general public and school-age children in particular. They have largely focused on convincing schoolchildren (and their parents) of the positive benefits to be gained from adopting a “healthy lifestyle”. Supported by health experts and educators, policy makers have created guides, workshops, games, audiovisual media, etc. that focus on changing behavior by instructing people on what, when, where and how much to eat or to exercise. The NAOS motto is “Come sano y muévete” (Eat healthy and get moving). The public's involvement in the creation of these measures amounts to appearing in the texts as the passive recipient of recommendations made by experts (also sports stars and celebrity chefs) that reinforce health discourses about appropriate or inappropriate foodways, and leisure and work. To these initiatives there have recently been added others targeted at children aged from three to six, with a gastronomic focus to inculcate the Mediterranean diet and, thus, “improve their food culture”. Emerging from the Resolution on European Gastronomic Heritage, the programme “El gusto es mío” (literally “The pleasure is mine”, but with a play on the Spanish word for taste) wants children not only to develop healthy habits, but also to learn in school to appreciate tastes, aromas and textures (Pangei 2015). In the world of work, there have been campaigns “to be more active”, promoting the idea of “replacing

coffee-breaks with walking-breaks”, “having work meetings while walking around”, “not sitting down for more than two hours at a time” or “taking a break from sitting every 30 minutes” (PAAS 2008).

In contrast to Spain, Argentina drew up its comprehensive strategy years later as healthcare had been focused on dealing with the problems associated with hunger and malnutrition in the wake of the 2001 crisis. Even so, obesity had already made it onto the agenda following the epidemiological surveys that were justifying its installation as an object of health policy from 2003/2005. In 2008 Law No. 26396 on Eating Disorders was promulgated, calling for the creation of a National Programme for the Prevention and Control of Eating Disorders, to include obesity along with bulimia and anorexia nervosa. With Resolution 1083/2009, obesity was now to be located within a National Strategy for the Prevention and Control of CNCDS and the Healthy Argentina National Plan. Up to that point, obesity had been considered a problem requiring specific care measures, beyond the Initiative for a Trans Fat Free Argentina (MS 2016b), which – in contrast to Spain – legally stipulated restrictions on the content of trans fat acids in industrial food production. Finally, in 2016 the National Programme for Healthy Eating and Obesity Prevention (PNASPO) was set up. In 2017 the first plenary session of the National Commission on Healthy Eating was held, bringing together representatives of the WHO, NGOs and members of civil society.

Like NAOS in Spain, PNASPO conforms to WHO and PAHO directives. It also starts from a diagnosis of obesity and its economic impact, stating that “overweight and obesity [are] related to unhealthy food and sedentary lifestyles...” (MS 2016a, 4) and “...the direct costs for the health system and the indirect ones for society are high... Obesity is associated with chronic illnesses and greater use of health system and other resources” (MS, 2016a, 3). Its purpose is to offer an integrated focus on healthy eating and the problem of obesity, including the aspects determining its growth in the context of an obesogenic environment, which is also identified as bearing primary responsibility. According to the programme, this environment is expressed in the easy availability of food products with high salt content, saturated fats and free sugars; the existence of inappropriate advertising; the consumption of inadequate diets; and the lack of physical activity.

While, like NAOS, it proposes various courses of action such as better front-of-package labeling, or the promotion and regulation of the food supply through agreements with industry to reduce salt, trans fats and sugars, it basically moots interventions in individual behavior through the promotion of a healthy diet and physical exercise at home, work or school (MS 2019). So as in Spain, graphic materials are designed, involving depictions of a healthy meal, for example, or audiovisual recipes and games, or food guides pushing messages such as “Eat rich, eat healthy”, “Your active break, add 30 minutes of physical activity every day”, “Up your intake of fruit, vegetables and fish” and “Cut your intake of ultra-processed foods”.

Recently, another initiative targeting the non-adult population has been added: the National Plan for the Prevention of Overweight and Obesity in Children and Adolescents (MS 2019). This views “obesity as an expression of malnutrition” within the framework of WHO and PAHO frameworks and thus seeks to treat “those who suffer most from malnutrition in all its forms”, with a rights and gender focus. While at the declarative level it seeks to upgrade food education and physical activity, reinforce nutritional quality, and promote sustainable food systems and the regulation of food products and environments (MS 2019), its core activities have amounted to information and training of teachers and school canteen cooks. Guides, manuals and fun educational materials have also been produced for children, with messages such as “eat in colour”, “eat a variety of fruit and veg”, “use your body every day”, among others.

Finally, the Brazilian guidelines for organizing actions to prevent obesity date back to the late 1990s with the definition of the National Food and Nutrition Policy (PNAN), revised in 2012 (Ministério da Saúde MS 2012). As in Spain and Argentina, PNAN regards the decrease in physical activity and unhealthy eating patterns as the causes of obesity, likewise proposing actions in various sectors “from the production to the final marketing of food and the securing of environments that facilitate changes in behavior by individuals and society” (MS 2012, 20). The problems of obesity are linked to the agroindustrial food systems, bringing the question of food sovereignty into the debate. At the same time, the individual is assigned responsibility for food choices, thus creating a need to “invest in communication and health education tools and strategies to support health professionals” (MS 2012, 23). A revised Dietary Guidelines for the Brazilian Population was published (MS 2014a) and, in basic care, documents created (MS 2006; MS 2014b) to support professionals in the management of obesity. As happens in Argentina and Spain, intervention is individually focused through the promotion of a healthy diet and physical activity tailored to the life cycle with mes-

sages such as “Do at least 30 minutes of physical activity every day”, “Keep your weight within healthy limits” (MS 2014b, 95) and guidelines on shopping, food hygiene and storage.

In 2014, the Inter-ministerial Chamber of Food and Nutrition Security co-ordinated the formulation of the Inter-sectoral Plan to Combat Obesity, involving the design of a unique intersectoral strategy for states and municipalities by various ministries, civil society and members of the WHO/PAHO. This nexus was justified by the need for joint action by government and representatives of movements and organizations from different social sectors with the overarching aim of ensuring fulfillment of the right to food. One of the objectives of the strategy is to “promote appropriate and healthy eating and physical activity in the environment we inhabit” (CAISAN 2014, 13). As in the other countries, so-called obesogenic factors are deemed responsible for this trend, with their actions similarly focused on changing individual behavior – above all by reducing the consumption of ultra-processed products. The informational and educational activities seek to encourage self-care and a culture of learning about food and nutrition. On top of that, the food guide and other learning materials contain messages to nudge changes in diet and physical activity: “Base your diet on fresh or minimally processed foods”, “Avoid ultra-processed foods” and “If you have cooking skills, try to develop and share them, especially with children and young people”.

In contrast to Spain and Argentina, the first line of action in the Brazilian strategy gives priority to “facilitating the physical access of families and communities to food and traditional recipes and, on the other hand, to expanding the availability of suitable and healthy food in the country’s public amenities” (CAISAN 2014, 17). Thus, also proposed within the scope of this policy are integrated measures that seek to foster family farming, boost the consumption of regional foods and traditional dishes, and promote the replacement of ultra-processed and processed foods with fruit and vegetables, whole grains or fish. The aim is to encourage smaller-scale marketing, taxes on food and inputs, and the institutional purchase of food produced by family farms through public appeals to philanthropic institutions (CAISAN 2014). Finally, protocols have been drawn up for the comprehensive care of overweight and obese patients within the country’s Unified Health System, and the Health Ministry has secured a Commitment Agreement with the associations representing the production sector to reduce the quantities of sugar, fat and salt in processed foods.

## Preventive measures and social distribution of obesity

Although the documents make clear the need to prioritize initiatives targeted at groups with a higher prevalence of obesity, there are few programmes directed toward the most vulnerable or focused on gender. However, the epidemiological data indicates that obesity mainly affects sectors with the lowest income and/or educational level, and that within those it is in some cases more prevalent in women.

In Spain during the period analyzed, there was a growing increase in excess weight. According to the Spanish National Health Survey (ENS), obesity went from 15.50% in 2006 to 17.45% in 2017. The data shows that it increased in both sexes, that it is greater with age, and that it is significantly higher among people with the lowest levels of income and educational attainment, especially women. Prevalence rises to 28.27% among people with no formal education, whereas it is down at 9.58% among university graduates. This difference is even more marked among uneducated women, 30.25% of whom are obese. A key epidemiological finding is that, over the period of the crisis, prevalence increased most rapidly among the most socially disadvantaged groups. Whereas in high-income sectors obesity even went down by one percentage point between 2006 and 2017 to stand at 9.29%, over the same period it grew by three percentage points in low-income sectors, rising to 22.37%. If we look at the differences by sex, obesity more than tripled in the case of the poorest women (23.98%), as against 7.26% for the highest-earning group (Table 4).

Table 4. Prevalence (%) of overweight and obesity. Population, specific source of study and year in Spain, Argentina and Brazil.

Country	Source	Year	Study population	Excess weight (S + O)	Over-weight (S)	Obesity (O)
Spain	ENSE (ENSE, 2006 2012 and 2018)	2006	Population over 18years old	48.7%	33.2%	15.5%
		2011/2012		53.7%	36.7%	17.0%
		2017/2018		54.4%	36.9%	17.5%

Country	Source	Year	Study population	Excess weight (S + O)	Over-weight (S)	Obesity (O)
Argentina	ENFR (MS, 2006, 2009, 2013, 2018)	2005	Population over 18years old	49.0%	34.4%	14.6%
		2009		53.4%	35.4%	18.0%
		2013		57.9%	37.1%	20.8%
		2018		61.6%	36.3%	25.3%
Brazil	POF (IBGE, 2004 and 2011)	2002/2003	Population over 20years oldPo- population over 18years old	40.6%	29.5%	11.1%
		2008/2009		49.0%	34.2%	14.8%
	PNS (IBGE, 2014 and 2020)	2013		56.9%	36.1%	20.8%
		2019		60.3%	34.4%	25.9%

Source: compiled by author using available data.

In Argentina, according to the 2018 National Survey of Risk Factors (ENFR), excess weight grew in all age groups, both sexes and all socioeconomic sectors, but comparison with previous surveys reveals that it increases with age, affects men more and is suffered most by people with lower income and educational levels. In the case of obesity specifically, it grew from 2005, reaching 25.3% in 2018. While no significant differences were observed between males and females (26.6% and 24.2%, respectively), its frequency is significantly higher in the group with the lowest level of education compared with the group at the other end of the scale. It is likewise higher in the lowest-income groups (27.6%) than in the top-earning groups (19.6%). In terms of progression, it has been increasing at a greater rate among lower-income groups: in 2005, it was 16.3% in that sector, while among high earners it was 13.1%; by 2018 these figures had grown to 27.6% and 19.6% respectively (Table 4).

In Brazil, the course of obesity has been reconstructed using different types of survey with disparate methodologies. The Family Budget Survey (POF) shows that the prevalence of obesity went from 11.1% in 2002–2003 to 14.8% in 2008–2009, going up with age and proving higher among the less educated mainly among women. Despite overweight being more common among men, it is women who present most with cases of obesity, 16.9% as against 12.5%. For its part, the 2013 National Health Survey (PNS) points to a continuous increase in excess weight and obesity (to 56.9% and 20.8%, respectively). In the obese group, 16.8% were men and 24.4% were women. In 2019, the prevalence of excess weight (56.9–60.3%) and obesity (20.8–25.9%) increased as compared to 2013, and excess weight (58.2–62.56%) and obesity (24.4–29.5%) rates remain higher among women. Over the past 17 years – between POF 2002–2003 and PNS 2019 – the evolution of the anthropometric status in adults was similar to the prevalence of excess weight – in other words, it increased gradually, reaching in 2019 more than twice the values observed in 2002–2003, in both men (from 9.6% to 22.8%) and women (from 14.5% to 30.2%) (IBGE 2020).

This unequal distribution of obesity has been considered to a very modest extent in the strategies analyzed, and more discursively than in the form of specific interventions. This contrasts with the fact that the primary regulations refer, albeit briefly, to the need to “act on the underlying economic, physical and social conditions that create and determine health” (PAAS 2008, 7). As previously stated (Gracia-Arnaiz 2017), the Food Safety and Nutrition Law of 2011, passed at the height of the crisis in Spain, notes in passing that obesity mainly affects the most socially disadvantaged classes and indicates that the NAOS strategy should therefore prioritize measures targeting those groups (Law 17/2011:6). That same year, the Evaluation and Monitoring of the NAOS Strategy (Ballesteros, et al. 2011) was published, a specific tool for evaluating all the actions realized that uses, among other things, gender and social class indicators; and in 2013 the Observation Center for Nutrition and the Study of Obesity was set up, its responsibilities to include detecting changes in the prevalence of obesity in response to social inequalities and environmental factors.

Although post-2015, following the reorientation of public policy resulting from the European Food and Nutrition Action Plan 2015–2020 (WHO-EU 2014), some programmes have targeted people at the lower end of the socioeconomic scale, they have adopted similar approaches, mainly directed at changing behavior. One example is the POIBA project (2010–14) devised by the Barcelona Public Health Agency for children aged 11–12, half of whom live in the poorest *barrios* of the city (Ariza et al. 2015). This programme aims to promote physical activity and healthy eating through educational workshops and recreational activities involving teachers, children and their families. An initial

evaluation of the programme's efficacy revealed positive changes and a short-term decrease in the obesity rate. However, they were larger and of longer duration among children from wealthier areas (Sánchez-Martínez et al. 2016).

Something similar is happening in Argentina. Despite a recognition of the increased prevalence of obesity throughout the whole population, but especially in the least privileged sectors, as well as the role played by environments and food systems, specific measures tend to disregard the social distribution of obesity. Although in 2015 the Project for Protecting Vulnerable People against CNCs began to be implemented, its activities have again focused on the promotion of physical activity and healthy eating. Here also the measures are directed at changing behavior, even in socially disadvantaged sectors (MS 2015). This is reinforced in the same messages: one ministry of health audiovisual resource does acknowledge that healthy eating depends on multiple factors, including the price of food, but also asserts that “you can improve your diet within any budget” (MS 2017). Another ministerial recommendation in the context of precarious food situations suggests that people should “prefer home-made food, it's healthier and cheaper” (MS 2017). Beyond these communicative efforts in the health sector, other steps have been taken to curb the increase in basic food prices in high inflation contexts such as suffered by Argentina – removing VAT on basic shopping-basket items, for example, and the Watchlist Prices or Essential Prices Programme, which includes a list of products with fixed prices (e.g. oils, pasta, wheat and corn flours, milk, yogurts and desserts, preserves, sugar, biscuits, yerba and jams). However, foodstuffs considered healthy are excluded, contrary to health policies.

In Brazil, the specific policies for tackling obesity have also focused on individualized measures that take little account of the unequal distribution of obesity. There have been strategies in the state schools with projects such as “Educating with the school garden” or state laws regulating the food sold and marketed in these spaces. In basic healthcare, income only features in consultations with the nutritionist and the subsidizing of diet plan prescriptions. However, the Food and Nutritional Security policies have emphasized access, food production and the promotion of family farming among the most vulnerable groups. Within the scope of the National School Food Programme, the application of at least 30% of budget to the acquisition of food from such sources is one of the greatest advances in terms of establishing criteria to achieve social impacts for public procurement. This emphasis has penetrated the debate on the definition of ‘adequate and healthy food’ in relation to obesity, signaling the importance of public policies and regulatory actions to secure it. Nevertheless, such co-ordination is still presented as a huge challenge, even more so given the current austerity policies and the dismantling of previous programmes by the current government. On the other hand, the Food Guide (2014) indicates that the information is useful for those suffering from specific diseases regardless of social class or gender, as like all such guides it is aimed at the general population. Even so, the emphasis must remain on food as a basic human right conditioned by dimensions of gender, race and ethnicity, requiring physical and financial accessibility.

## Discussion and conclusion

In culturally distinct but epidemiologically similar contexts, the three countries have been active in establishing policies to tackle obesity and have done so following WHO, EU and PAHO guidelines. Despite this, none of them has managed to reverse the trend. In the case of Argentina and Brazil, it has even grown at a faster rate than in previous phases, actually coinciding with the implementation of preventive actions. Although the typology of the programmes proposed in the three countries has been varied, it is less plural in terms of its nature and scope. The reasons are to be found, for one part, in the type of diagnosis constructed and the excessive emphasis placed on individual responsibility. The causes of obesity are related to profound changes in dietary habits and physical activity, and the solutions directed toward changing lifestyles. These “universal truths” about behaviors and environmental factors support similar anti-obesity strategies at a global level. It is, however, an imprecise diagnosis and the measures are, to say the least, insufficient. In the three countries, epidemiological studies are methodologically highly diverse and therefore their results cannot reliably be compared or the evolution of prevalence reliably assessed. It has been difficult, for example, to compare data on the prevalence of obesity because the range of methodologies used in epidemiological studies regarding the samples, cutoff points, diagnosis, etc. Similarly, the most widely used tool to establish when excess weight becomes pathological is still the BMI, despite some criticism because criteria to classify overweight and obesity may not be appropriate in all populations (World Health Organization et al. 2000). Indeed, the BMI is based on international standards developed for adults of Caucasian/Europid descent. However, on a worldwide scale, not all human beings share the same body type (Poullain 2009). In the case of Brazil or Argentina, diagnostic criteria for excess weight and obesity have not taken into account the possible differences in body weight due to ethnic group differences.

In general, biomedical understanding of obesity and overweight are characterized by a profound ambivalence. Obese people are regarded both as victims of a consumer and toxic society and guilty of not following nutritional recommendations. This perception is partly linked to the moralistic interpretation that science has made of the so-called societies of abundance (Gracia-Arnaiz 2013, 1187). Public debate on the causes of the rapid rise in obesity rates is not polarized, treating “individualising” or “systemic” frames (Lawrence 2004) as mutually exclusive, but invokes both. The negative consequences of a lifestyle in which both work and leisure are largely sedentary and transportation largely mechanized are pointed out, but individuals are also blamed for succumbing too easily to the temptations of cheap and abundant fast food instead of devoting the necessary time to food shopping and preparation of healthy meals. Although texts have identified numerous functional causes of the excessive accumulation of fat (metabolic, genetic, medicinal, hormonal), ultimately fat people are regarded as big eaters, people who eat too much and move too little. For this reason, most of the programmes focus on promoting a standardized model of diet and physical exercise – and thus individual self-control, indicating what and how much people should eat or move. Among the solutions proposed, the need for better nutritional education to improve food habits features prominently.

Attempts to improve lifestyles take the form of programmes aimed at educating the public (particularly children) but often fail to take into account the social nature of eating and health (Delormier, Frohlich, and Potvin 2009). There is scant reference in the texts to people’s lived experience (including that of obese people) or how and why they eat what they do. People are routinely labeled as “target groups” requiring “intervention” (Gracia-Arnaiz 2017). With the occasional exception, project targets are seen as simple recipients of proposals legitimized by experts – as people who need to be taught healthier choices, and not as individuals with the skills and knowledge to manage their own lives and resources. The concept of disease normally relieves patients of responsibility for their condition, but in the case of obesity this is not necessarily so (Cahnman 1968). Frequently, discourses lead us to believe that excess body weight is at least in part a self-inflicted condition, the result of a behavioral choice. Obese is a person who willfully transgress the normative patterns: a balanced diet and “normal” healthy body weight. In this sense, the medicalization of fatness, far from helping to destigmatize obesity is becoming a way of resignifying in moral terms.

Recommendations about “ideal” eating, cooking, drinking and exercise patterns seem to be based on the premise that those receiving these messages are groups or communities as homogenous as “average consumers” (Monaghan et al. 2013). The implicit conception postulates a “person” who is free to choose and rational in their decisions. However, these subjects are socially and culturally conditioned. Food choices are neither individual nor rationally straightforward, and it is necessary to work out the reasons why people act to the detriment of their own health despite being aware of the consequences. In countries ethnically diverse, food education cannot be a one-size-fits-all teaching approach to healthier eating, because people choose their food depending on their resources and likes and dislikes. These are largely conditioned by local culture (Carvalho 2018). We know that neither the accumulation nor the understanding of nutritional knowledge necessarily changes food habits (Fischler and Masson 2008). The answer is therefore to be found in the fact that the daily demands on many people do not allow for a more balanced and comfortable lifestyle, making it clear that in many cases a change of life is necessary for a change of diet – and that is not always easy or possible. For many, the lack of resources is the main reason.

Prevention strategies should be revised in order to match local evidence and context, integrating both the global and the local. Understanding the dynamics of particular contexts requires taking into account ongoing global processes, as they have unequal effects and responses depending on where they occur (Cunha et al. 2020). Thinking about (and treating) obesity in an environment of poverty (Ferreira and Magalhães 2005) should not be the same as thinking about it in a context of affluence. Regional differences and even different neighborhoods in the same city can also significantly factor into the causes of obesity as well as the resources allocated to addressing it. To be precise, one of the consequences of the current economic crisis and the austerity policies that accompanied it has been the increase of precarisation in the three countries, which has made access to safe and healthy food difficult among the most socially vulnerable. In the European context, Spain stands out as being one of the countries where social inequality has grown most in the last decade and where work has become more precarious. Since the beginning of the global economic crisis in 2008, living conditions have changed significantly. The government responded to the initial effects of economic recession by focusing its efforts on bank bailouts, liberalizing labor regulations, reducing health spending and increasing direct and indirect taxes (Navarro 2015). Although some macroeconomic indicators have improved since 2015 and, according to the Active Population Survey (EPA 2018), the unemployment rate fell to 16.55% in the fourth quarter of 2017, the number of unemployed is still nearly 3.5 million people. Additionally, the quality of jobs has

worsened, with more temporary contracts and lower wages, which do not allow many workers to lift themselves out of poverty (Fernández 2017). Both poverty and income inequality are among the highest in the European Union. According to the AROPE index, the proportion of Spain's population at risk of social exclusion increased from 23.3% in 2007 to 26.1% in 2018, and currently affects 12.3 million people (Llanos Ortiz 2017), many of whom depend on social assistance for basic needs (Caritas 2016).

In Argentina, following the recovery from the 2001 crisis, the situation worsened again with the international financial crisis and from 2015 the adoption of a neoliberal model to negotiate the local, regional and international economic problems. With fiscal and monetary tightening policies, inflation became widespread (52.1% variations in food prices for 2018/2019 according to INDEC, 2019a) and was not accompanied by adjustments in income, affecting purchasing power and social inequality. Thus, the percentage of people in poverty went up from 31% in 2006 to 35.4% in 2019 (INDEC, 2019 b), and the unemployment rate from 8.7% in 2006 to 10.6% in 2019 (INDEC 2019c). This has had a profound effect on access to food (both quantity and quality) in the least advantaged sectors, with the data confirming that food insecurity (the difficulty of accessing food in sufficient quantity and quality for economic reasons) affected 22.2% of the urban population in 2019, and within that 9.3% experienced actual hunger (ODSA-UCA 2019).

In the case of Brazil, poverty has been a constitutive part of its history, stemming from a situation of social inequality due to a long political trajectory privileging the strong concentration of income over decades. However, as a result of investment in policies to overcome poverty and malnutrition, the period 2001–2014 saw a marked and historic reduction in inequality. Even so, a critical phase began at the end of that year due to unemployment, a fall in average incomes, the growth of inequality and a consequent rise in poverty again. From the end of 2014 to the end of 2017, it increased by 33%, affecting almost 55 million people (Neri 2019). This rising poverty combines with the country's lack of social security networks accentuated by a political and economic crisis along with a series of austerity measures that have, for example, frozen investments in key areas such as health, education and social security reforms – and more directly in food and nutritional security, with the abolition of the National Council for Food and Nutritional Security. If up to 2014 inter-governmental policies succeeded in taking Brazil off the hunger map, current policies have put it back on again. As in Argentina, there is a growing recognition of malnutrition and obesity as different expressions of food and nutrition insecurity, with an implied assumption of their close interrelationship (Swinburn et al. 2019).

Thus, bearing in mind that international health agencies and governments recognize “the complex interactions between personal choices, social norms and economic and environmental factors” (WHO 2004, 9), and the need to take into account “local cultural and socioeconomic circumstances” and “social determinants for reducing inequality in the distribution of obesity” (WHO-EU 2014, 2), it is worth asking why studies were not first carried out on the complex nature of those interactions, exploring the local manifestations of the problem and proposing actions to transform adverse contexts on that basis. In this respect, health policies have not been transformative at all, and do not consider the context of the territory and the lives of the people who live in it. Health authorities point out the high cost of obesity for the health system, but do not account for the spending devoted to counter it. The purpose of reducing social inequalities and recognizing the impact of structural and intermediate determinants on obesity hardly has been implemented in a few community interventions in vulnerable people, and, usually, the assessment of these programs' effectiveness refers only to behavioral changes in eating habits, physical activity, and excess weight in the short term. Little is known about whether a healthier diet and an active routine are kept in the long term and, more importantly, whether they actually bring along an improvement in life conditions.

To date, the necessary efforts have not been made to understand how so-called “environmental factors” might have influenced social practices in general and eating habits in particular, or whether these influences have necessarily had a negative impact on the health of all to the same degree. Or at least the efforts made have not reflected the epidemiological data. Viewed as a whole, the programmes have taken up the quick-fix global slogans, since “raising awareness”, “promoting”, “encouraging”, “stimulating” healthy lifestyles is evidently easier than transforming structural factors beyond the diet/exercise axis or the weight of variables such as social class or gender. So far, they have served to demand responsibilities of the various social actors involved, while leaving it up to these subjects to make the ultimate decision to “choose” how to protect or put their health at risk according to their life chances. The options available are, however, subject to the effects of state economic policies that have, judging by the growing precariousness of a significant part of the population, acted counter to them.

In general, the responses have been formulated without further research into the different dimensions of obesity, either because they have been short-term, not based on diagnoses adjusted to each context, or coincided with the dismantling of previous policies that, as in the case of Brazil, had responded in an integrated manner to the various expressions of malnutrition, and in particular hunger. Some very recent initiatives can be taken as examples in this direction. Such is the case with the studies carried out in Brazil on the food environment from the point of view of access to healthy and sustainable food, which are mapping places and relating them to income levels in order to influence public policy (Backes et al. 2019; Camargo et al. 2019), or the research currently being carried out in Argentina with Health Ministry funding on obesogenic environments in socially vulnerable situations (CISPAN, FIC y Programa Nutricional de la Ciudad de Buenos Aires 2019). We will have to wait and see which measures are implemented once these determinants are identified and what the results are.

Note

<sup>1</sup>. The research on which this article is based forms part of two larger research projects, ‘The precarisation of everyday life: food (in)security, gender and health’ (CSO2016-74941-P, 2016-19) and ‘Eating matters: precarization and (in)secure food itineraries in later life’ (PID2019-104253RB-C21, 2019-23) both funded by the Spanish Ministry of Science and Innovation.

## Disclosure statement

No potential conflict of interest was reported by the authors. [AQ2]

[AQ3]

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C1 Author: Gracia-Arnaiz;

C2 Author: <font style="vertical-align: inherit;"><font style="vertical-align: inherit;">We could no check if Chart 1 has been uploaded correctly. We have tried to upload it again but this has not been possible. </font></font>;

C3 Author: Add reference: Monaghan, L.F, Colls, R., Evans, B. 2013. Obesity discourse and fat politics: research, critique and interventions. Crit.Publ.Health 23(3), 249-262. <http://dx.doi.org/10.1080/09581596.2013.814312>;

C4 Author: M. GRACIA-ARNAIZ;

## ATTACHMENTS

A1 File: Chart 1.jpg has been attached