

Obesity as an Ecological Public Health Issue: From Public Health Science to Public Health Actions

Ekolojik Bir Halk Sağlığı Sorunu Olarak Obezite: Halk Sağlığı Biliminden Halk Sağlığı Hareketlerine

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ABSTRACT Obesity is at the base of the rapid increases in the prevalence of overweight-obesity and other nutrition-related non-communicable diseases (NCDs), such as diabetes, hypertension, other aspects of coronary heart disease, and 13 of the 15 major cancers. Due to its multifactorial aetiology, it is imperative that any actions that aim to reduce or reverse this need to consider a holistic and comprehensive approach that takes into account the social, environmental and circularity of food production, distribution, and consumption. Rayner and Lang proposed an approach to address such a challenge to public health researchers and practitioners by dealing with complex and challenging issues of economic, social, environmental and climate system change. It is known as the Environmental Public Health Approach. This adaptable approach is beneficial in exploring complex public health questions that are usable to all, including policymakers and public health specialists. Obesity and overweight are striking examples of modern complexity which must be quickly and effectively faced. In other words, obesity is a symptom of many of the transitions described by Rayner and Lang: Energy, Nutrition, Culture, Economy, Demography, Epidemiology, Environment. As such, it is necessary to interpret it according to the complexity of our modern society, but it must also be faced very practically, first and foremost by adopting an integrated approach such as the planetary one, which aims not only to investigate the effects of environmental change on human health, but also to study the political, economic, and social systems that govern those effects. This article highlights the shifting burden of obesity from developed to developing, from affluent to poorer communities. In other words, it tries to focus on the increasing inequalities due to such complex environmental pressures.

Keywords: Public health; obesity; environment and public health; environment; environmental health; ecological and environmental phenomena; environmental science; environmental policy; social environment

ÖZET Aşırı kilo-obezite ve diyabet, hipertansiyon, koroner kalp hastalığının diğer yönleri ve 15 majör kanserin 13'ü gibi diğer beslenmeyle ilişkili bulaşıcı olmayan hastalıkların (BOH) prevalansındaki hızlı artışın temelinde obezite yatmaktadır. Multifaktöriyel etyoloji nedeniyle, bunu azaltmayı veya tersine çevirmeyi amaçlayan herhangi bir eylemin, gıda üretimi, dağıtımını ve tüketiminin sosyal, çevresel ve dolaşımını dikkate alan bütünsel ve kapsamlı bir yaklaşımı dikkate alması zorunludur. Rayner ve Lang ekonomik, sosyal, çevresel ve iklim sistemi değişikliğinin karmaşık ve zorlu sorunlarıyla ilgilenerek halk sağlığı araştırmacılarına ve uygulayıcılarına meydan okumak için bir yaklaşım öne sürdüler. Bu Çevresel Halk Sağlığı Yaklaşımı olarak bilinir. Bu adapte edilebilir yaklaşım politika yapıcılar ve halk sağlığı uzmanları dahil hepsi için kullanılabilir olan karmaşık halk sağlığı sorularını araştırmada faydalıdır. Obezite ve fazla kilo modern karmaşıklığın hızlıca ve etkili şekilde yüzleşilmesi gereken çarpıcı örneklerdir. Yani obezite Rayner ve Lang'ın tanımladığı geçişlerin çoğunun bir belirtisidir: Enerji, Beslenme, Kültür, Ekonomi, Demografi, Epidemiyoloji, Çevre. Bu nedenle onu modern toplumumuzun karmaşıklığına göre yorumlamak gerekir, fakat aynı zamanda, her şeyden önce, yalnızca çevresel değişimin insan sağlığı üzerindeki etkilerini araştırmayı değil, aynı zamanda politik, ekonomik ve sosyal sistemleri incelemeyi amaçlayan gezegensel yaklaşım gibi bütünsel bir yaklaşımı benimseyerek çok pratik bir şekilde karşılanmalıdır. Bu makale, obezitenin gelişmiş toplumlardan gelişmekte olan toplumlara, varlıklı topluluklardan daha yoksul topluluklara doğru değişen yükünü vurgulamaktadır. Başka bir deyişle, bu tür karmaşık çevresel baskılar nedeniyle artan eşitsizliklere odaklanmaya çalışır.

Anahtar Kelimeler: Halk sağlığı; obezite; çevre ve halk sağlığı; çevre; çevre sağlığı; ekolojik ve çevresel fenomenler; çevre bilimi; çevresel politika; sosyal çevre

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In the past, environmental health problems have often been successfully addressed by controlling a single source of pollutants or exposure. However, today's issues are usually more complex. Challenges such as climate change, resource depletion with their enormous implications for human health and wellbeing, the obesity epidemic, and persistent worsening of social inequalities in health have been identified as planetary health and ecological public health issues. Such complexity makes necessary an integrated and holistic approach to environmental health in a broader spatial, socioeconomic, and cultural context beyond individual toxic or infectious threats.¹

'Planetary health' and the related concept of 'ecological public health, maybe the ultimate 'wicked problems' of our time.²⁻⁴

In the case of obesity of the 84 risk factors evaluated by the Global Burden of Disease Study in 2017, high BMI had, by far, the most significant relative increase in exposure since 1990 and was among the top five risk factors in terms of attributable deaths and disability-adjusted life years.⁵ Only a small number of comprehensive, policy-based approaches have been implemented.⁶ As a result, no country or sub-population within a country has witnessed a decline in obesity. This represents one of the biggest population health failures of our time.⁷

Such a condition is at the base of the rapid increases in the prevalence of overweight-obesity and other nutrition-related non-communicable diseases (NCDs), such as diabetes, hypertension, other aspects of coronary heart disease, and 13 of the 15 major cancers.⁸⁻¹¹ This means that it must be urgently faced first and foremost by holistically interpreting the phenomenon to indicate to policymakers a comprehensive and effective strategy that must take into proper account the effects of food production on the environment.¹²

In other words, the circularity of food production and the societal infrastructure must be fully considered. It creates inequalities due to accessibility and affordability of healthy foods, transport and accessibility to opportunities that avoid obesity (physical activities, green spaces). It also needs to consider that such a burden is shifting from developed to developing countries.

HOW TO MANAGE SUCH COMPLEX?*,¹³

Repeated calls from world-leading scientists in public health have emphasised the importance of identification

and study of *population risk factors* in their social, cultural and historical context as a critical development for the future of public health science and policy.¹⁴⁻²³ In the more traditional view of science, populations and subsequent health outcomes are often treated as the sums of individuals' health, not as a system of interacting individuals, groups, and society. This reductionist approach to population health sciences often neglects social, political, economic, cultural, and historical contexts as population risk factors. Determinants of population characteristics may not be direct causes of illness or mortality; however, they are central factors that affect the distribution of direct risk factors such as alcohol drinking or tobacco smoking.^{24,25}

Several key societal factors, such as economic, political, and social ("upstream"), are the fundamental drivers of population health.^{17,23,24} These factors are the determinants of the distribution of "intermediary" and more "proximal" risk factors. These could be thought of as intermediary linking factors between the more extensive economic and political reforms (changes of economy and public service, changes in public policy, cuts or the elimination of certain areas of public spending, changes in provision for health care, social disorganisation), and direct individual risk factors (the high rates of smoking, drinking, narcotic use, psychosocial stress, or the increase in environmental pollution).

Our understanding of the world around us has changed quite fast in recent years. The globalisation of economic systems has enormous impacts on populations and the ecosystems on which human survival depends.²⁶⁻²⁹ The complexities of such transitions and the multiple links amongst the systems, these being economic, social, environmental, and climate change will affect any economic models that attempt to measure the costs of environmental health interventions.

McMichael has written extensively on the concept of the interrelatedness of societal and environmental systems and population health, the type of actions that researchers and public health practitioners will need to take for practical benefits of population health.²⁵ Rayner and Lang in 2013 proposed an approach to address such a challenge to public health researchers and practitioners by dealing with complex and challenging issues of economic, social, environmental and climate system change.³ This ecological public health approach considers human health inseparable from the "health" and working of the environment surrounding us. It pays close attention to the change and transitions in those systems that define the human and environmental ecosystem.³

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WHAT IS ECOLOGICAL PUBLIC HEALTH VS TRADITIONAL APPROACH TO PUBLIC HEALTH?

The ecological public health approach can help address the challenges faced by public health today by integrating complexity, multiple interactions and change of societal systems. It allows one to pose a question, to explore and understand the possible answers, by the inclusion of variables or factors which are measurable and not readily measurable. The approach can understand the ecosystem processes and the system as a whole and how it determines population health. This adaptable approach is beneficial in exploring complex public health questions that are usable to all, including policymakers and public health specialists. Richard Levins, through his many years as a farmer, understood the works of the ecosystem and how this could be the answer to public health questions.²³

Ecological public health can be a helpful approach to inform economic models of cost-benefit analyses of complex environmental interventions. It can also assist in understanding better the co-benefits of such interventions considering the ecosystem challenge rather than single/siloed approach interventions.

SOCIETAL SYSTEMS AND THEIR TRANSITIONS

The following sections will briefly describe the societal systems and their transitions, as proposed by Rayner and Lang.³ These system transitions cannot be seen or understood in isolation. Their totality and complexity should not be seen as a challenge but as an opportunity to take public health actions that contribute to practical improvements in population health.

BIOLOGICAL AND ECOLOGICAL TRANSITIONS

Biological transitions are characterised as processes of change of all life forms within and in constant interaction with their environments. Within this transition, all life changes occur with the broader ecosystem's change. Like any other species on the planet, the human population is in constant contact with their physical, biological, and social environment. Our existence is highly dependent on the presence of many environmental factors. Consider, for example, the beneficial human-bacterial coexistence, and the health impacts of reducing this symbiotic existence.

Its ecosystem shapes human health, and the ecological public health view changes. Therefore, this approach highlights our dependency on our ecological system. As described in several other sections, the human-induced re-

versible or irreversible impacts on our Nature's health will have transmitted effects on the health patterns in populations. These patterns will also have an unequal distribution. Accessibility affordability of foods (see resource transition) can impact malnutrition and hunger. Coastal erosion, loss of land, increased water salinity and loss of freshwater resources can lead to forced displacement and migration.³⁰

DEMOGRAPHIC CHANGES

The demographic transition is the change from high birth and high death rates to low birth and death rates. These changes, observed mainly in developed societies, can be primarily attributed to improved living standards and investments in human development aspects such as health care, education, and infrastructure. However, birth and death rates still exist between developed and developing economies. Birth rates and death rates are still high in some parts of the world, and the life expectancy gap can be as large as/or more significant than the 20+ years difference between poor and affluent countries, societies, and communities.³¹ The socio-demographic and geo-political distributions of population profiles and characteristics also determine this transition. For example, there is an increasing proportion ageing population in most of the high-income countries, in contrast to high fertility rates and younger populations in some low- and middle-income countries.

Population growth in combination with economic development has already stressed the ecosystem resources. Its impacts on land use, soil quality, water and food security, loss of biodiversity, and environmental pollution, if unabated, could potentially contribute to a planetary ecosystem not being able to sustain human life.²⁸

EPIDEMIOLOGY AND HEALTH TRANSITION

Rayner and Lang refer to epidemiologic transition as the perceptible change in the distribution of determinants of morbidity and mortality in populations.³ The change characterises health transitions from observable disease patterns to other diseases. Due to many national and international efforts, changes in living conditions, health care and public health efforts, in combination with human and economic development, there has been a global shift from infectious diseases linked to malnutrition and poverty to diseases to non-communicable degenerative disorders. These patterns are changing to contributions of other transitions: demographic, energy/resource, economic and cultural.

URBAN TRANSITION

Currently, more than half of the world's population is urban.³² Cities are very complex social, economic and ecological hubs of dense population, with increasing demands on energy, food, water and infrastructure, and their constant need for land expansion. Besides their constant demands for resources, cities also contribute to shifts in population demographics and population movements. City life can contribute to adverse population health, such as a sedentary lifestyle, increased exposure to air pollution, noise, heat, and lack of green space. Cities are also beneficial for people's wellbeing because they provide innovative access to goods and services and facilitate social interaction).³²

RESOURCE TRANSITION: ENERGY, FOOD AND WATER SECURITY

While in the proposed view of Rayner and Lang, energy transition takes its place. In the same context, food and water can also be discussed as vital resources for any society.³ Population growth, increasing resource demands, urban transitions, land use, and decreased biodiversity will increase energy, food, and water security.^{25,31} The equitable insufficiency and safety (or otherwise equitable availability, accessibility, and utilisation) of these resources will mainly impact human development and societal growth.

The globalisation of food markets and the high dependency in most developed countries for food sourced from other world regions have impacted the self-sufficiency and sustainability of food sources in developed and poor communities. The economic power of developed economies to purchase food globally has a likely knock-on effect in poorer countries and communities. Recent examples show that this affects sustainability, affordability, and accessibility to foods and impacts resources such as water, energy, biodiversity loss, land use, soil degradation, and pollution. Food accessibility and affordability is a serious issue in many parts of the world. Economic circumstances can create vulnerability to food insecurity, such as; inflation of food prices, debt and seasonal unemployment. There is a growing awareness amongst food insecure households of food insecurity and poor health, education, and working capacity. Furthermore, monotonous diets or consuming lower-quality foods has been identified as a critical pathway towards decreased health, education and overall wellbeing.^{23,33}

As a consequence of climate change and productivity change, crops such as rice, wheat and cereal are expected to decline between 4% and 11%. Their nutritional values

are also expected to decrease. In addition, warmer conditions intensifying climate extremes could cause severe yield losses.³⁴ These changes alongside other environmental changes due to modern farming practices are projected to influence food security in many countries.

ECONOMIC TRANSITION

Economic models of constant growth based on cheap fossil fuels, free market, deregulation, reduced state control, and restrictions of state governance of economic growth, led by neo-liberal think-tankers.^{35,36} Have contributed to the principles of efficiency versus sufficiency and sustainability.^{37,38} The high dependency on resources and uncontrollable exploitation has led to depletion and loss of ecological services humanity depends on.³⁹

These shifts have created environmental and health inequalities opportunities combined with demographic, ecological, resource, and urban transitions.

CULTURAL AND DEMOCRATIC TRANSITION

The cultural transition or change refers to the history of our social organisation. Rayner and Lang refer to this as the change in ideas and material factors shaping cultural and democratic shifts.³ Although it is discussed here as a separate transition, its change depends on economic, political and social transformations. This change holds an enormous capacity-its explosive rapidity and cumulative directionality. Culture is acquired within one generation and can be transmitted across generations. This cultural change also has rapid effects on our relations to our ecosystem. While evolutionary processes take millions of years to develop and adapt, human cultural capacity for rapid change had made possible the impact in the natural world within centuries, and more rapidly in the last century.

The rapid globalisation, economic and social change, the way we live, eat, communicate reflect our cultural evolution. Public health preventive actions, including smoke-free immunisation policies, are changes that have beneficially shaped population health. Food, smoking, alcohol, gambling advertising, fear of vaccination, and other societal transitions changing their intensity from developed to developing countries or from more affluent to less affluent communities have shifted the burden of public health adverse impacts parallel to these cultural shifts. The cultural transition is also reflected by the fact that more information is being available through different media, particularly social media, and changes in school education. These have the power to contribute to an increase in awareness of ecosystem and climate change.

NUTRITION AND OBESITY TRANSITION

Following such an approach, the next section will show that also obesity is a complex global concern, which must be tackled in an adequate comprehensive manner.

OBESITY AS A PARADIGMATIC EXAMPLE OF MODERN COMPLEXITY

COVID-19 has revealed the precariousness of the systems upon which trade, food, energy, Transportation and social safety nets depend. The shortcomings of these very systems exacerbate the conditions for a virus to emerge, propagate, and become a global catastrophe.

More generally, according to Sturmeberg & Martin, the current pandemic has clearly shown that “everything is connected to everything else.”⁴⁰

Obesity and overweight are striking examples of modern complexity which must be quickly and effectively faced. Such complexity has been structured through a famous Foresight thematic obesity map (Figure 1). This map puts the metabolic fact of being overweight at the centre: if people consume more than their bodies expend energy, they gain weight.

Such complexity must be appropriately assessed and managed either in time or space.

Following a descriptive approach, Jaacks et al. tried to draft a sort of “Obesity Transition”.⁷ From the thirty most populous countries, representing 77·5% of the world’s population, they identified

Stage 1 of the obesity transition is characterised by a higher prevalence in women than men, in those with more

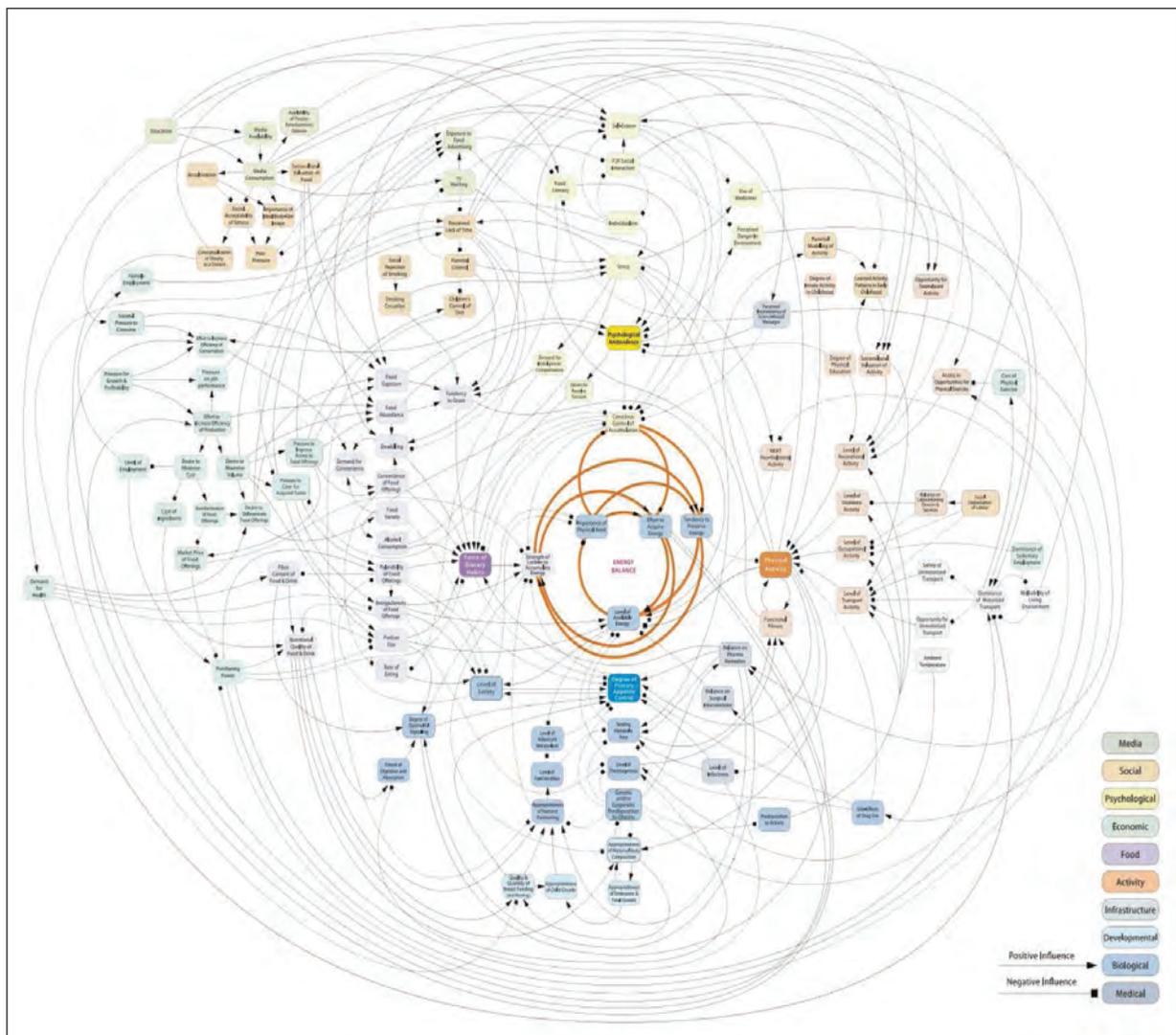


FIGURE 1: Foresight thematic obesity map.⁴¹

elevated compared to lower socioeconomic status, and adults compared to children. Many countries in South Asia and sub-Saharan Africa are at this stage.

In Stage 2, there is a significant increase in the prevalence among adults, a minor increase among children, and a narrowing of the gender gap and socioeconomic differences among women. Many Latin American and Middle Eastern countries are at this stage. Turkey, Iran, Egypt, Russia moved from stage 1 in 1975 to stage 2 in 2016. Cross-sectionally, in Turkey, more economically developed regions, where the education level is higher, had a lower obesity prevalence among women than in less developed areas. However, similar patterns were not seen for men.^{42,43} High-income East Asian countries are also at this stage, albeit with a much lower prevalence of obesity.

Stage 3 occurs when the prevalence of obesity among those with lower socioeconomic status surpasses those with higher socioeconomic status. Plateaus in obesity may be observed among women with high socioeconomic status and children. Most European countries are currently at this stage.

Popkin et al. developed another approach that considers socio, cultural, economic and medical issues.¹² They propose five patterns (stages) which are summarised in Figure 2.

In particular:

1. Stage 1 collecting food: All but a few small groups have passed the Palaeolithic period of ordering food.

2. Stage 2: famine: Diets in this stage were quite simple with minimal variation in their diet and were subject to episodic periods of extreme food shortage. Over the past decade, famine has been limited mainly to South Samarian Area, South Asia, North Korea, and refugees and migrant

groups elsewhere. Even as we move into the period of receding famines (Stage 3) and even stage 4, it is essential to note that famines can occur related to conflicts (e.g., Kosovo, Yemen) or natural disasters (India, Sub-Saharan Africa, droughts or floods) which may become more frequent and of longer duration with climate change.

3. Stage 3: In this stage, consumption of fruits, vegetables, and animal protein increased, and starchy staples became less critical in the diet

4. Stage 4: Nutrition-related non-communicable diseases (NRNCDs): A diet high in total fat, cholesterol, sugar, and other refined carbohydrates and low in polyunsaturated fatty acids and fibre (e.g., a diet with a large proportion of UPFs), often accompanied by an increasingly sedentary life is the case in large proportions of the world today, even among subpopulations in countries with a high prevalence of the Double Burden of Malnutrition (DBM).⁴⁴ Enhancing activity is essential for good health but is not the major driver of entry and persistence in stage 4.⁴⁵⁻⁴⁷

5. Stage 5: behavioural change: In this stage, food consumption reverts towards whole and minimally processed foods that resemble dietary intakes in stage 1 with a higher share of plant-based foods and nutrients (e.g., fruits, vegetables, beans, and other complex carbohydrates and lower intakes of refined foods, meats, and UPFs). To progress to this stage sooner and shorten/minimise Stage 4, largescale government programs and policies to promote a healthier food environment that supports human and plan-

*** Double burden of malnutrition (DBM) is the coexistence of undernutrition (i.e., micronutrient deficiencies, underweight and childhood stunting and wasting) and overweight/obesity and diet-related non-communicable diseases. The global health community has been slow to acknowledge that the large proportion of low- and middle-income countries (LMICs) is facing DBM.*

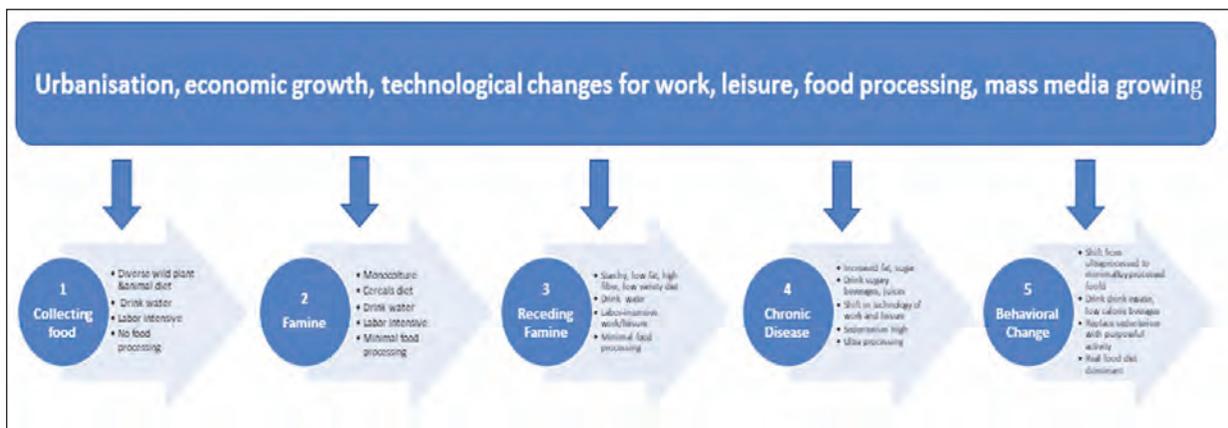


FIGURE 2: Stages of the nutrition transition (source 12 modified).

etary health are essential. Increased physical activity and reducing sedentary time are also crucial for promoting better human health. Still, dietary shifts are the central need to reduce the risk of NCDs across the lifecycle, improve healthy growth, and maximise human health.

As such, Popkin et al. acknowledge that the key drivers of the “nutrition transition” are:¹²

- *Urbanisation*: has been and will remain a significant driver of changes in activities and diet. One notable aspect of urbanisation is the increasing spread of urban functions to smaller towns and rural areas.^{48,49} In the 21st century, the prevalence of individuals with obesity has increased rapidly among rural populations worldwide, and in many countries, rural obesity is now more prevalent than urban obesity.^{11,50}

- *Incomes* have, on average, grown globally at both the national and the individual levels, and the effects on diets have been profound.⁵¹⁻⁵⁴ Overall economic growth and access to modern advertising have encouraged individuals of all ages to refashion their diets significantly.^{55,56} Concurrently, income inequalities have risen across many countries and have also been linked with the prevalence of individuals with obesity.⁵⁷ When it comes to the role of income, the relatively cheap cost per calorie of ultra-processed foods is undoubtedly one key aspect, as are their ready-to-eat and ready-to-heat availability to save time costs for the urban worker.^{58,59}

- *Increased formal labour force participation* among men and particularly women given pre-existing gender roles has reduced time for food preparation.^{53,54} As incomes rise, workers increasingly seek and consume time-saving processed foods. This is particularly true for women working outside the home, who are still primarily responsible for childcare, reproduction, housekeeping, and food preparation.

- *Technological change* has impacted all activities. Home production now includes gas, propane, electric stoves; indoor water; washing machines; rice cookers; and many other appliances. Televisions, computers, note pads and smartphones are replacing active leisure. New transportation modes have replaced walking with heavy loads and biking from buses and subways to tractors, trucks, and cars.

- *Farm programs*: Various policies and subsidies impact food supplies for many countries. These usually support cash crops and subsidise essential sugar staples like rice, wheat, and corn at the expense of many coarse grains and traditional healthy vegetable protein sources such as

lentils or a wide array of other bean products. The same is true for many animal source products in many countries.

- The food industry has engineered two shifts in consumers’ food choices. First, the industry has created affordable, convenient and hyper-palatable UPFs that are ready to eat or heat, displacing traditional food preparation methods. Food packaging also influences behaviours. Food producers strategically include familiar characters on packages and pay to locate products at children’s eye level and beside checkout counters.⁶⁰⁻⁶²

This essential point is influenced by an enormous number of relations and conditions introduced at the beginning of the article and can be summarised as the Ecological Public health approach. Simply put, obesity is a symptom of many of the transitions described before: Energy, Nutrition, Culture, Economy, Demography, Epidemiology, Environment.

According to Rainer and Lang, such a complexity could be faced in terms of actions by means the following dimensions:³

1. The *material*, which refers to the physical infrastructure of the existence
2. The *biological*, which refers to the bio-physiological processes throughout the most comprehensive context
3. The *cultural* which refers to the importance of how people think
4. The *social* is the interactions between people at the individual or institutional level.

Such dimensions are heuristic but could effectively help us tackle complex issues.

The Table 1, taken from Rayner and Lang, gives some examples of how such impending concern should be addressed by actions that can be carried out by Markets, Governments and individuals (or communities).

COMMENTS AND CONCLUSIONS

According to Popkin, to date, no country has successfully decreased the prevalence of overweight/obesity or the burden of diabetes and other NCDs.¹²

In essence, this article attempts to explain that such a global concern must be effectively tackled only by assuming that even a sophisticated health promotion action is not sufficient. The results can’t be expected in the short run. Still, it is necessary to put a new approach to health that can’t be taken as an externality of our socioeconomic development. According to the Lancet, “COVID-19 has

TABLE 1: Tackling obesity with the ecological public health model (source 3, modified).

		Altering the four dimension of existence to reshape diet and physical activity			
		Material World	Biological World	Cultural World	Social World
Focus of action	Making market work for healthy by	Linking probability to more beneficial food ranges	Changing price signals of food to favour fruit and vegetable	Agreeing not to target children	Promoting good, wholesome food to all, but especially to low-income social groups
		Making food acquisition costs reflect environmental externalities	Shopping more often for less to burn energy from food than fuel	Supporting honest consumer information	Aligning companies' success with consumer health
		Reducing reliance on fossil fuels to encourage physical activities in daily life	Promoting smaller portion sizes	Promoting more flexible and diverse social role models	Accepting restriction on the commodification of relationships in food marketing
		Ensuring health targets are built into wastage reduction targets	Farmers producing less fat, sugar meat and dairy products		Promoting only self-regulation that works for health
Making governments work for health	Making it secure to walk or bicycle to work, school or leisure	Setting incentives for better-quality food for all socio-economic groups and ethnic minorities	Setting clear, long-term cultural goals	Setting minimum income standards for a sustainably produced, wholesome diet	
	Aligning sustainable consumption targets with public health target	Focusing subsidies to promote healthier food ranges	Helping educate "taste" to be more discriminatory	Ensuring all citizens have a requisite level of food choosing, sourcing and preparation, and general food literacy	
	Incorporating health into the food industry sustainability strategy targets	Using public procurement and other fiscal measures to manage demand	Supporting the strengthening of social rituals when people through food	Introducing fiscal measures such as aligning taxation of marketing expenditures with the health properties of food and drinks	
	Using planning functions to build physical activity into daily life (school, work, local)	Setting and paying for high standards of public sector catering		Providing more remedial support for overweight people	
		Ensuring local government fully reflects national obesity targets			
Marketing the public live healthy by	Demanding an extension "defensible" public space beyond home and protected malls, etc	Altering the composition of their diets	Accepting the need to eat less unless they engage in more physical activity	Eating together, regular meal-times and breakfast	
	Enabling children to play in streets and parks	Building exercise into daily life to promote energy balance	Being more health discerning about when, how often and what to eat	Using foot as an affirmative social engagement	
	Getting out of their homes reclaim civic space	Creating new cultures of daily activity, e.g. accepting less car use	Being prepared to redefine parental responsibility for long term benefit rather than short term family peace		
	Accepting fewer parking spaces for cars		More trust in science must be more transparent and plainly communicated to the people		

proven that the economic and political success of individual countries is founded on the health of its population". Health is the core of our life.⁶³

To some extent recasting a sentence by Oscar Wilde (1891): "Progress is the realisation of public health", where public health (in particular the environmental one) is not

just a utopia (as Oscar Wilde said), but a very practical and real issue.⁶⁴

More recently, INPHET (Int'l Network on Public Health and Environment Tracking) claimed, "At a time of growing recognition of these impacts, of financial crises and of globalisation that demands greater European competitiveness, we thus believe that better tracking of the environment and its effects can help achieve the two goals of healthier populations and healthier economies".⁶⁵

Coming to the core of our thought, it is necessary to clarify some central questions "What is development? Can economic growth be decoupled from environmental or

health damage? Is there a limit to advancing general well-being within an endless economic development? Can health and the environment be internalised into dominant market economics?"

In the case of obesity, it is necessary to interpret it according to the complexity of our modern society. Still, it must also be faced very practically, first and foremost, by adopting an integrated approach such as the planetary one, which aims not only to investigate the effects of environmental change on human health but also to study the political, economic, and social systems that govern those effects, and last, but not least a real and integrated approach is adopted at the local and global level.⁶⁶

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