Poverty makes people sick and also kills them: it is time to take it into consideration

La pobreza enferma y también mata: es hora de que la tengamos en consideración

If a free society cannot help the many who are poor,
it cannot save the few who are rich.
John Fitzgerald Kennedy

INTRODUCTION

In recent times, a long time known elementary fact seems to have been neglected: poverty makes people sick and even kills them.

However, the conclusion of the Commission on Macroeconomics and Health, chaired by Jeff Sachs, is well known: "The linkages of health to poverty reduction and to long-term economic growth are powerful, much stronger than is generally understood".

In a recent report, Richard Horton stated that: "Sachs argued that the poor were more susceptible to disease and less likely to seek medical care, even when that care was urgently needed. Poverty lies at the root of all evils. Attacking poverty is the path to develop progress... Fashions have changed. Now we are mobilized by universal health coverage, global health security, and the climate emergency... Yet, beating poverty remains a prerequisite for flourishing and sustainable lives. Disappointingly, global health and its leaders have judged poverty to be yesterday's idea". (1)

In Argentina, "at the beginning of this year poverty increased again. One estimate indicates that it rose to 34.1% of the population... A year ago, poverty was 25.5%. Meanwhile, indigence climbed to 7.9%, versus 4.9% in the first quarter of 2018...

This means that, of an urban population of 40,500,000 people, 13,800,000 are poor, with 3,600,000 new poor people in 12 months.

Of these totals, there are 2,900,000 urban homeless people, with an increase of almost one million new impoverished persons.

If these numbers are projected to the entire population, including the rural sector, there are more than 15 million of poor people, of whom 3.5 million are destitute". (2)

It is important to take poverty into account. "This attitude of indifference, for that is what it is, is inexcusable. Earlier this month, UNDP and the Oxford Poverty and Human Development Initiative published new research showing that 1.3 billion people are "multidimensionally poor". (1)

Multidimensional poverty means deprivations in standard of living, which is inability to buy even food, and even more have a house with cooking fuel, drinking water and adequate sanitation.

In 2018, the World Bank published its view on trends in global poverty (Piecing Together the Poverty Puzzle) and concluded that "the fight against extreme poverty is far from over".

In the world, what is more terrible, is that children are more likely than adults to be poor, half are <18 years, same as in Argentina, where one third are <10 years.

Within countries, there are great variations in poverty, ranging, for example, between 6% and 96%.

The final conclusion of Richard Horton (director of The Lancet), is a new warning.

"Poverty is not an economic state. It is an insidious disease of the human soul. Poverty consumes lives, eroding mental resources, diminishing cognitive capacities, and destroying life possibilities. Universal health will never be achieved unless and until poverty is eradicated. How tragic that our global health leaders have forgotten this lesson." (1)

HUNGER PERSISTS AND SEEMS TO PERSIST

This year, the Food and Agriculture Organization (FAO) report added to food insecurity, the concept of moderate food insecurity, in which people has reduced the quantity or quality of food because of economic reasons, a common situation nowadays in Argentina (severe food insecurity is when people have experienced hunger). The report estimated that 2 billion people do not have regular access to nutritious and sufficient food. Meanwhile, obesity is rapidly rising worldwide.

Despite progress made in previous decades, since 2015 the prevalence of undernourishment has plateaued with highest prevalence in sub-Saharan Africa and Asia. (3)

On July 18, the FAO and United Nations partners published their annual report The State of Food Security and Nutrition in the World. Following the trend from the two previous reports, the results point to the unlikelihood of achieving the goal established in 2015 to eradicate hunger and malnutrition and to ensure nutritious food for all (point 2 of the Sustainable Development Goal) by 2030.

The results show an inverse association between economic slowdowns and increased hunger and malnutrition between 2011 and 2017. An economic slowdown or downturn was observed in 84% of the countries, mostly in Africa and Asia, where under-

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nourishment increased. Greater income inequalities were also associated with an increased likelihood of severe food insecurity, in other words, of real hunger. The editorial article of the Lancet states: “Although we welcome food insecurity and nutrition problem monitoring, which is key to assess progress, monitoring on its own is not enough to address the situation. If the policies implemented are not effective, then we must call for stronger political commitment and international cooperation to solve the roots of the problem: poverty and inequality”. (3)

If we want to maintain hope of eradicating hunger and malnutrition by 2030, we must commit ourselves as professionals dedicated to people’s health; we must make this situation public and discuss the specific essential measures.

SOCIAL, YET PUNITIVE POLICIES

Nosrati and Marmot write: “... Across Europe, growing numbers of vulnerable people are targeted by public authorities for so-called anti-social behavior, (and they ironically add) including a seemingly irrepressible, yet inexplicable, urge to sleep on pavements rather than beds, or to engage in open displays of material hardship.

(...) Punitive social policies combine the dismantling of the welfare state with the expansion of the penal state and its institutional correlates. It is associated with the regulation of poverty and of social division in the wake of political or economic shocks, such as recessions, industrial decline, or deepening inequalities. Punitive social policy also reflects the shifting concerns of the state from offering social support for the poor to suppressing their inconvenient yet conspicuous presence in the public sphere...” (4)

In recent decades, incarceration rates have risen several times in the US and almost twice in Europe. “This punitive upsurge is not a linear function of crime since rates of incarceration are more than three times higher in places of concentrated disadvantage than in communities with similar crime rates”. And they question our attitude as healthcare professionals: “...In other words, why treat people and send them back to the conditions that made them sick?” (4)

Finally, they say: “... For instance, ending hyperincarceration is unlikely to help society’s most vulnerable unless the prison is viewed in tandem with other major societal institutions, including schools, labor markets, and health and social care systems. Moreover, one cannot help but notice that the state’s retributive interventionism at the bottom of the class structure stands in stark contrast to its avuncular protectionism at the top (...) In short, offering welfare to the wealthy while punishing the poor is not a means of achieving health equity”.

CARDIOVASCULAR RISK AND MORTALITY ARE DETERMINED BY THE SOCIOECONOMIC STATUS AND NOT BY RISK FACTORS

The PURE (Prospective Urban Rural Epidemiologic) study recruited 154,169 adults aged between 35 years and 70 years from 367 urban and 302 rural communities from 5 low-income, 11 middle-income, and 4 high-income countries. Participants were followed-up for a mean of 7.5 years. (5)

Major cardiovascular events (a composite endpoint of cardiovascular mortality, stroke, myocardial infarction and heart failure) were more common among those with low levels of education in all types of country studied, but much more so in low-income countries. After adjusting for wealth and other factors, the HR for low level of education (only primary school education) vs. high level of education (tertiary education) was significant and increasing: 1.23 (95% CI 0.96–1.58) for high-income countries, 1.59 (1.42–1.78) in middle-income countries, and 2.23 (1.79–2.77) in low-income countries (p interaction < 0.0001).

Similar results were observed for all-cause mortality, with HR of 1.50 (1.14–1.98) for high-income countries, 1.80 (1.58–2.06) in middle-income countries, and 2.76 (2.29–3.31) in low-income countries (p interaction < 0.0001).

Surprisingly, this clear difference in outcomes (almost twice as large in low-income countries) could not be explained by differences in risk factors, because although following the classic rule, these decreased as the level of education increased in high-income countries, in low-income countries, a completely inverse pattern was observed: risk factors increased with higher education levels (p interaction < 0.0001).

Hypertension and diabetes are among the most important risk factors for cardiovascular disease and mortality and treating them is proven to reduce complications, as does secondary prevention.

In high-income countries, medical treatment did not vary by education, whereas a consistent and significant inverse association was found between level of education and treatment in low-income and middle-income countries (p interaction < 0.0001).

The use of hypoglycemic drugs was significantly different: 74.5%, in high-income countries, 52.9%, in middle-income countries and 29.0%, in low-income countries. In the latter countries, 38.0% of those with the highest level of education were on medication versus only 23.1% with low levels of education (OR, 0.43, 95% CI, 0.34–0.54; p interaction < 0.0001).

Use of at least one medication for secondary prevention was reported by 77.3% of participants in high-income countries, 40.4% in middle-income countries, and 15.7% in low-income countries. In high-income countries, people with low level of education had higher use of secondary prevention medication (OR 1.82, 95% CI 1.14–2.89), whereas there was no variation in middle-income countries and had lower use in low-income countries (OR 0.26, 95% CI 0.17-0.42; p interaction < 0.0001). Yet, people with low levels of education in low-income and middle-income countries have higher mortality and incidence of cardiovascular diseases.

There are marked differences between those with the highest levels of education and those with the lowest levels of education in the treatment of hyperten-

sion and diabetes, secondary prevention, and mortality rates, as markers of substandard management. Given the increasing prevalence of cardiovascular disease, diabetes, and hypertension in low-income and middle-income countries, these findings emphasize the importance of better care and more use of proven pharmacological therapies.

HOW CAN SOCIAL DETERMINANTS BE INTEGRATED TO REDUCE NON-COMMUNICABLE DISEASES?

Once again, Michael Marmot states that: "...Social determinants are responsible for the distribution patterns of disability and mortality from non-communicable diseases (NCDs). They simply stated (referring to the WHO) that social determinants encompass the 'causes of the causes' of health inequity: the unequal conditions in which people are born, grow, live, work, and age; and the inequities in power, money, and resources that give rise to them". (6)

Social determinants shape the distribution of the four main behavioral risk factors of NCD -that is, unhealthy diet, physical inactivity, tobacco smoking, and excess alcohol consumption- and three physical conditions that are risks for NCDs -namely, high blood pressure, obesity, and diabetes.

Of particular importance is socioeconomic disadvantage in the early years, as it affects the development of parts of the brain that contribute to the regulation and control of behaviors and thoughts. In relation to risk factors for NCDs, this includes levels of cognitive control over diet and activity levels.

In 1891, Oscar Wilde warned of the immorality of recommending thrift to the poor, as it is still insisted at present: "To recommend thrift to the poor is both grotesque and insulting. It is like advising a man who is dying of hunger to eat less". (7)

Overweight, obesity and even diet are largely determined by the children's family environment, since these problems are seen in 5-year old children.

In England, among children aged 10/11, the prevalence of obesity in the most deprived areas was 26% compared with 11% in the least deprived areas in 2017. Inequalities go on increasing because the obesity problem cannot be solved without solving the inequality problem.

The social determinants driving the obesity gap need to be addressed urgently.

The individual level is always considered, but the results with diets and drugs have not been promising. The rationale has been that individuals are free to choose what to eat and how physically active to be. Evidence shows that this argument provides an inadequate explanation for the differences in distribution of health-related behaviors.

Conversely, healthy eating interventions targeted at individual behavior change, such as dietary counselling, have greater benefits for individuals of higher socioeconomic position, thereby tending to increase inequalities... Individual choices are constrained by social, environmental, economic, political, and cultural factors. (6) Social position causes unequal choices. There are many other influences on food choice. Lack of money is an important one.

"A similar pattern emerges in international comparisons. In 18 countries, fruit and vegetable consumption was low in all countries (average of 3.76 servings a day) but lowest in low income countries (2.14 servings a day) compared with high income countries (5.42 servings). Affordability was important: in low income countries the cost of five servings of fruit and vegetables a day represented almost 52% of the household income, compared with 18% in low middle income countries, 16% in upper middle income countries, and 2% in high income countries (...), the evidence available shows that low socioeconomic groups consume lower quantities of fruit and vegetables than more affluent groups. Affordability for a healthy diet is a critical factor for those on low incomes in all countries". (6)

Low socioeconomic groups in low and middle-income countries are more likely to drink alcohol than high socioeconomic groups.

Integrating action across sectors

"... To achieve this over the long term requires action on other sustainable development goals, including addressing poverty and inequality, and action across multiple sectors improve conditions across the life course.

More than 10 years since the publication of the final report of the WHO Commission on Social Determinants of Health, its call for action on social determinants to improve overall population health and to tackle health inequalities continues to resonate around the world. To achieve long term progress on NCD prevention, a whole system approach is needed to deal with the causes of the causes of risk factors for NCDs and take a life course approach to tackle social inequalities". (6)

CONCLUSIONS

The current system of a single global marketplace is called globalization. The biggest international monopolies shifted from the "Fordist" system, characterized by mass production with moving assembly lines -depicted by Chaplin in a famous film- to the production of high quality parts that are assembled in the main factory and company headquarters with new digitized and robotized systems. Few specialized workers who earn high salaries and produce high profits for the company are needed. But these workers become stressed in a few years by the tension and responsibility of handling the new machines. At the same time, there is an excess of temporary workers -often hired by contractors-, disqualified and earning very low wages in different parts of the world, who usually rotate or are dismissed periodically. These workers are not members of a union, have no labor benefits and no possibilities of obtaining protection from a union with their nonunion peers.

In this socioeconomic situation, it is well-known that the poor have lower quality of life and life expectancy and, in Argentina, in the last year, poverty

rose from 25.5% to about 34.1% and indigence climbed from 4.9% to 7.9%, with projections of more than 15 million of poor people, of whom 3.5 million are indigents.

In Argentina and worldwide, an inverse association was observed between economic slowdowns and increased hunger and malnutrition between 2011 and 2017. An economic slowdown or downturn was observed in 84% of the countries, most in Africa and Asia, where undernourishment increased.

Why is this important for cardiologists? Because, despite our argument, the socioeconomic status represented by education level, but not risk factors determine cardiovascular risk and mortality.

In well-designed trials, such as the PURE, (5) study, cardiovascular events and mortality increased significantly in low-income countries with low levels of education. But the differences in the outcomes among education groups were not explained by differences in risk factors, which were higher in low-income countries with higher education level.

In turn, in low-income countries, people with low education had lower use of medications for hypertension, diabetes and secondary prevention.

As Marmot states, (6) social determinants contribute to the presence of the four main risk factors of NCDs: unhealthy diet, physical inactivity, tobacco smoking, and excess alcohol consumption, and three physical conditions that are risks for NCDs: high blood pressure, obesity, and diabetes. As long as social inequalities continue to increase, there will be no way to improve the profile of risk factors or the mortality associated to NCDs.

The State social policy can range from the social support of the State to a punitive policy to suppress the inconveniences generated by its presence in public spaces. But stating that it is a personal problem of not saving sufficient money or unwillingness to work is to ignore the causes that provoke it and the possible institutional solutions.

We would like to conclude with a very simple yet very expressive quotation from Nelson Mandela: "Poverty is not natural. It is man-made and it can be overcome and eradicated by the actions of human beings. Overcoming poverty is not a task of charity, it is an act of justice".

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