THE SOCIAL COSTS OF DISEASE

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ABSTRACT

The goal of this work was to observe and analyze health inequalities, taking into consideration the influence that the social background of individuals has in the production and reproduction of inequalities. Taking ISTAT reports as databases, which concern aspects of daily life, the results - also confirmed by the literature and by countless empirical studies on the subject - agree with the thesis according to, in later life, the decline in the state of health appears to be delayed for subjects who occupy a highest social positions and a higher educational qualification, compared to those who are in disadvantaged socio-economic conditions and with a lower educational qualification. Differences that are also recorded in the purchase and consumption of drugs.

INTRODUCTION

The problem of inequalities in the health and health sector has been extensively treated in the social sciences (Lucchini, 2007; Cardano, 2008; Collicelli, 2011; Sarti, 2018). However, the reasons behind this phenomenon still remain to be fully clarified and the debate on ultimate causes and the mechanisms by which they act.

In this contribution, we try to account for some important advances recorded in the specialist literature and to illustrate some recent data on the causes and effects of health inequalities in the population and their social and economic effects.

In the last decades, in the Italian case (as in many European cases), there has been a marked and constant improvement in the health of the population: while life expectancy has increased, mortality is considerably reduced. However, it can be seen that not all citizens have benefited equally from these improvements. There are, in facts, strong differences in the outcomes of health greetings between the various social groups: the richer, more educated, resident in non-disadvantaged areas, and which socio-economic resources and opportunities, the more we tend to have a healthier greeting profile (Blaxter, 1990; White, 2002; Marmot & Wilkinson, 2006). If these inequalities are in themselves unjust and unethical, two further reasons remain to promote their contrast: first of all they are a constitutional priority - as foreseen by article 32 of the Italian Constitution -, secondly they represent a serious problem for the national economy (Costa, 2014) constituting a passivity both for costs related to care and for the lack of aggregate income produced by the individual activity.

For this reason, social inequalities in health must be faced up, for a question of fairness but also of costs; in fact, interventions aimed at reducing these inequalities, however expensive, could reduce the costs associated with them, an aspect not to be overlooked.

POVERTY, HEALTH, SOCIAL INCLUSION

Traditional approaches - and consequently the measures of "absolute poverty" and "relative poverty" - identify a "watershed" below which families (or in-

dividuals) are considered poor, or unable to satisfy a minimum level of needs considered socially acceptable. Monetary measures have the advantage of simplicity but involve a reduction of information and a high risk of making mistakes in identifying the subjects really at risk. As noted in several empirical studies, there is an overlap between low level of income and medium-high levels of deprivation (Ringen, 1988; Nolan & Whelan, 1996); there is also a substantial correlation between income levels, socio-economic well-being (therefore material and extra-material) and state of health, both in a substantial and self-perceived (or self-declared) sense.

The concepts of social exclusion, vulnerability and fragility aim to broaden the static and economic definition of monetary poverty by highlighting social, relational and subjective aspects of experience (Ayala et al., 2004).

The multidimensional approach shifts attention from the adequacy levels of monetary and capital resources to the abilities to choose, use and convert those resources in view of achieving freely set goals. Self-realization refers to dimensions of psychophysical and relational well-being that cannot be monetised, nor can they be brought back to the possession of material goods only.

One of the most fruitful international approaches is that of the capabilities and functionings proposed by Nobel Prize Amartya Sen, which leads us to rethink about the concept of inequality and bring it back into a multi-dimensional "evaluation space".

The vulnerable individual is the one who will have (or is at risk of having) a silent worsening of the general conditions of life consequent to the loss of the job or the breakdown of the social networks or even to the worsening of the health conditions (Ranci, 2002).

It is for this reason that the economic and financial aspects only provide a partial coverage of the semantic complexity of the well-being concept. Sen himself uses the term functionings to indicate the activities and conditions that connote the existence of the subjects: knowing how to read and write, being able to move freely, to participate in social activities, to enjoy good health (Lucchini & Sarti, 2005).

Furthermore, in line with the definition of health ex-

Tab. 1 - Aspects of daily life: Health status - age class and educational level

Data type			in good health	with at least one chronic disease	with at least two chronic diseases
Period	Age class	Educational qualification			
2018	6-24 years old	Primary school license, no qualifications	95,6	11,3	2,7
		Middle school license	91,8	15	3,2
		High school diploma	89,8	20,2	3,5
		Graduate and post-graduate	91,8	17,3	2
		Total	92,9	14,8	3
	25-44 years old	Primary school license, no qualifications	68,8	25,2	7,6
		Middle school license	80	22,1	5,7
		High school diploma	84,3	23,1	6
		Graduate and post-graduate	89,6	21,5	4,5
		Total	84,1	22,5	5,6
	45-64 years old	Primary school license, no qualifications	45,1	57,4	36
		Middle school license	60	49,3	24,4
		High school diploma	65,3	45,7	19,7
		Graduate and post-graduate	74,7	42,6	15,2
		Total	63,2	47,5	22
	Over 65 years old	Primary school license, no qualifications	25,3	84,8	65
		Middle school license	38,4	79,8	53,7
		High school diploma	45,5	78,8	50,5
		Graduate and post-graduate	49,9	73,5	44
		Total	34,1	81,6	58

pressed in the WHO Constitution, it not only has to do with medical/physiological factors, but has a more extensive meaning which indicates «a state of complete physical, mental and social well-being, and not the mere absence of disease or infirmity».

Health is therefore a condition of harmonious functional, physical and mental balance of the individual actively integrated into his natural and social environment (taking up Alessandro Seppilli and his reformist thought) and all the social and economic elements that contrast its realization are from to consider unfair inequalities, therefore to be faced and contrasted.

■ HEALTH INEQUALITIES

Taking up the definition of health inequalities by Simone Sarti (Sarti, 2018), we can say that “they concern unfair social conditions deriving from an unequal distribution of material and immaterial resources and that they are recognizable as the cause of the variability in the health conditions. More rigorously, we can define health inequalities as objective and systematic disparities affecting the possession of social, economic and cultural resources, and the attached ability to use these resources in order to enjoy the full psycho-physical efficiency of the body” (Tailors, 2018).

To understand and analyze inequalities objectively, it is necessary to distinguish at least three elements or the so-called social “determinants” of health: the socio-environmental context, social conditions, and individual characteristics (Sarti et al., 2011).

Going into the specifics, those who claim that health

inequalities depend on individual genetic, random and behavioral type factors (according to what is called the selection model), argue that a large part of the differences are due to natural factors related to the individual lives of each. According to this determinant, each individual must be considered the main person responsible for his own life conduct, according to what has been defined as the attitude of the victim-blaming (literally “blaming the victim”) (Sarti, 2018). The other determinant instead considers health inequalities as a reflection of social stratification, according to the “causation” model (Bartley, 2004; Wilkinson and Pickett, 2009; Phelan et al., 2010). In this case, individuals who are in disadvantaged socio-economic positions would be from the earliest stages of life, subject to deprivations which, over time, accumulate resulting in a deterioration of psycho-physical well-being, a high incidence of diseases and premature death. According to this view, therefore, lower qualifications and lower social classes correspond to higher mortality rates, a higher incidence of pathologies and a deterioration in the state of health.

Finally, among the determinants of health inequalities, there are also the socio-environmental contexts, that is those areas in which individuals share similar characteristics. Among these, there are to report risk factors related to the ecological environmental dimension, (such as the pollution of a certain area) or related to the administrative dimension (such as the Regional Health Systems) that provide citizens with an offer of health, which however may vary from context to the other and that make the difference between groups

regardless of individual characteristics (Sarti et al., 2011).

From the empirical point of view, the theses of the supporters of the “causation” boast a higher credit in the social sciences, as many longitudinal studies have confirmed the existence of substantial and significant effects that are exerted by the factors of social heterogeneity on health also at distance of time: exposure to risk factors since childhood, economic deprivation, relationship isolation, unemployment, unhealthy lifestyles, harmful work environments are some of the factors that have a causal role in the onset of particular pathologies or that at least contribute to weaken the psycho-physical state of the subject (Ross & Wu, 1996; Ross et al., 1999; Lee et al., 2003; Mackenbach et al., 2003; Eaker et al., 2004).

Of particular interest are studies on the modalities of intergenerational transmission of health inequalities. It would seem, in fact, that parents would influence the health of their children not only by genetic way (resistance or not to diseases), but also by socio-economic (material deprivations and difficulties in having certain resources), cultural and imitative (unhealthy life behavior: such as smoking or excessive alcohol consumption, etc.), as amply demonstrated by the studies of Wickrama et al. (Wickrama et al., 1997; Wickrama et al., 1999).

Still in the context of empirical studies on health inequalities, models inspired by the concept of “cumulative advantage” deserve special attention. In these models it is shown how the cumulative advantages have to do with processes of gradual accumulation of resources of various nature, and can be represented in the form of paths that diverge with advancing age. In this perspective, health is considered as an endowment or a form of capital that the various social groups must accumulate or at least preserve in different ways (O’Rand & Henretta, 1999; Di Prete & Eirich, 2006). This approach also considers the existence of devices for reproducing health inequalities not only in an intragenerational sense, as accumulation of endowments during life, but also in an intergenerational sense, as the transfer of resources from parents to children.

All these theories presuppose the existence of a positive relationship between low socio-economic position and psycho-physical deprivation, which would manifest itself already in the first years of life and would be amplified over time.

The most recent investigations inspired by the cumulative advantage theory use large bases of longitudinal and cross-section microdata, to avoid confusing causes with effects and mixing the age gradient with that of the cohort. In this sense, the cumulative advantage model proposed by Willson and his research team (2007) constitutes an attempt to unify the literature on social stratification with that on health inequalities. The sociologists in question believe that the socio-economic cumulative advantages are in principle unlimited, while those relating to health are necessarily limited, given that with the passage of time the body can only become more brittle and undergo processes of aging (Lauderdale, 2001). From this it follows that the socio-economic gradient in health inequalities grows up to a saturation threshold, and then undergoes a turnaround. It is therefore assumed that the health benefits attributable to accumulations

of socio-economic resources grow from conception to adulthood and then diverge in late age.

■ SOCIAL FACTORS AND HEALTH STATUS

A very effective model from an analytical and statistical point of view is that developed by Lucchini and Sarti (Lucchini & Sarti, 2009). The authors underline how the family background level influences all the variables that are on the right of the model (education, health, economic conditions). Education is conditioned by the family background and, in turn, contributes to structuring the subject’s socio-economic status, as well as his state of health. The economic conditions, however, end up directly influencing the subject’s health conditions.

The condition of origin and the cultural capital of the subject - as is now the tradition in sociological studies - have been inferred using the father’s and son’s educational qualifications expressed in years of formal education as the only indicators. In numerous researches (Schizzerotto, 2002; Giancola, 2009; Colarusso & Giancola 2020a, Colarusso & Giancola, 2020b) on the subject of social stratification, education plays a crucial role in the reproduction of social inequalities and is strongly correlated with income (Giancola & Salmieri, 2016).

Lucchini and Sarti’s study seems to show that an important component of health is actually influenced by the family background. This conditioning is also noted along indirect paths, in particular through the education of children, which increases the chances of obtaining greater availability of economic resources. These results agree with the thesis according to which, in old age, the decline in the state of health appears delayed for those who occupy the highest positions of social stratification (House et al., 1994; Reynolds & Ross, 1998).

These considerations are also confirmed by the ISTAT “Aspects of daily life” survey. From the table below, it can be observed that the population aged 65 and over and with a low educational qualification (no qualification or with elementary license), presents a precarious health condition: with at least one chronic disease (85%) or with at least two chronic pathologies (65%), compared to those always in the same age group, but with a higher qualification (graduate or postgraduate). As can be seen, the worsening of health conditions is accentuated with advancing age, starting from the age group 25-44, and already with wide differences between the educational qualifications.

We observe therefore that the state of health is, apart from that in the youth section, very sensitive to variations between educational levels. This item is reflected in other national sources.

In fact, in terms of fundamental empirical integration, the important work of ISTAT, as part of the “Socio-economic differences in mortality” project, is still a sign: the first study was related to life expectancy by educational level, and the results were released in April 2016 (ISTAT, 2016). The subsequent study produced results obtained using the mortality data for the 2012-2014 three-year period, and the study disseminated the standardized mortality rates by educational level, gender, territorial division and causes of death (ISTAT, 2017). In summary, it has been observed that the individual poverty of educational credentials, me-

Tab. 2 - Socio-economic differences in mortality - age group and educational level

	Femmine				Maschi			
	Livello di istruzione				Livello di istruzione			
	Basso	Medio	Alto	Tutti	Basso	Medio	Alto	Tutti
<i>Speranza di vita alla nascita della popolazione al Censimento 2011</i>	84,5	85,3	86,0	84,9	79,2	80,9	82,3	80,3
<i>Speranza di vita a 65 anni della popolazione al Censimento 2011. Periodo di osservazione dei decessi 2012-2014.</i>	21,9	22,3	22,9	22,1	18,2	18,9	19,8	18,7
<i>Percentuale di sopravvissuti a 90 anni. Periodo 2012-2014.</i>	37,1	40,7	44,5	38,5	18,9	22,1	27,0	21,0

Tab. 3 - Aspects of daily life: Consumption of drugs - age class and educational level

			Tipo dato	persone di 6 anni e più che hanno consumato farmaci negli ultimi due giorni
Periodo	Classe di età	Titolo di studio		
2018	6-24 anni	licenza di scuola elementare, nessun titolo di studio		12,3
		licenza di scuola media		16,9
		diploma		19,8
		laurea e post-laurea		23,3
		totale		15,8
	25-44 anni	licenza di scuola elementare, nessun titolo di studio		26,7
		licenza di scuola media		23,2
		diploma		25,9
		laurea e post-laurea		27,6
		totale		25,7
	45-64 anni	licenza di scuola elementare, nessun titolo di studio		56,6
		licenza di scuola media		46,6
		diploma		47,2
		laurea e post-laurea		45
		totale		47,3
	65 anni e più	licenza di scuola elementare, nessun titolo di studio		87,6
		licenza di scuola media		81,8
		diploma		80,5
		laurea e post-laurea		77,5
		Totale		84,1

assured by the educational qualification, is confirmed as a determinant of mortality (Table 2).

A significant part of these inequalities can be resolved with actions aimed at behavioral risk factors, the contrast of which would lead to a substantial improvement in the health of the population.

The use of drugs, on the other hand, is to be considered a proxy variable of the state of health and therefore indirectly of well-being. The evidence shows that in the youth section there is an increase in consumption as the educational qualification increases. This relationship disappears in the 25-44 range and then reverses clearly in the more mature groups (the most educated often come from higher social classes and, precisely in these, early prevention occurs in terms of greater use of drugs in this group). It is obvious that the qualification does not “shield” individuals from pathologies; rather we can affirm that

the qualification is a variable that indirectly sums up a certain condition of life (Table 3).

CONCLUSIONS

From the evidences illustrated, we can deduce that the social background of individuals has a strong responsibility in producing health inequalities. From this statistical mosaic it is possible to reconstruct and hypothesize various equalization actions with respect to the mechanisms of reproduction of inequalities: a) pushing towards equal educational opportunities regardless of family background; education is linked to awareness of health risks, the necessary psycho-physical care and prevention strategies; b) guaranteeing economic support to individuals in difficulty with the support of effective economic and social assistance measures, or through labor policies aimed at insertion and professional requalification; c) ensuring

equal conditions of assistance and health care. It follows that the objective of public institutions cannot be reduced to equity in health care - in terms of medical services provided both in quantity (for all) and in quality (with the same results for all) - but it should also extend to promotion of policies dedicated to the elimination of systematic and objective disparities in all other sectors of social life (Lucchini & Sarti, 2009).

Another important aspect to consider to fully understand the dynamics of production and reproduction of health inequalities, is to take an exhaustive and interdisciplinary vision in which different disciplines converge: sociology, epidemiology, medicine. This approach has been defined as eco-social (Sarti et al., 2011), and is characterized by the fact that there are several elements that contribute to clearly defining the concept of "health". These elements are analyzed as Chinese boxes, in which the health of individuals and their social conditions are integrated into a multilevel system, which holds together: bio-chemical aspects of the body (for example the functioning of the immune system), both context effects (for example pollution in some urban areas).

This implies above all a guarantee of coverage for the costs of health services, namely the costs incurred by families or by the State to provide services aimed at maintaining or improving health (for example, diagnostic, hospital, rehabilitation services, etc.). In addition to this, educational, training and support services to individual awareness with regard to pathogenic risk factors and malaise in a general sense must also be taken into account.

In Italy, studies on the social costs of diseases have so far mainly focused on pathologies characterized by chronic-degenerative course. There are also studies conducted on the social costs of pathologies with different characteristics linked to working conditions (times, places, precariousness of contracts) which imply significant decreases of individual productivity (with the consequent risk of poverty) and aggregates (in terms of loss on GDP, in an already "old" social system and with very low generational turnover). The next step is to answer the question: are we spending the available resources well? These studies should therefore be understood as a springboard towards more complete and more powerful studies in helping to rationalize the choices in medicine from an economic point of view (through cost-effectiveness and cost-utility analyzes ((Tarricone et al., 2000)) but also towards multidimensional studies that consider pathology and well-being in terms of repercussions on individuals (well-being in the broad sense) and on the social system as a whole for a better, fairer and healthier society.

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