Revista Românească pentru Educație Multidimensională
ISSN: 2066-7329 | e-ISSN: 2067-9270
Covered in: Web of Science (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2024, Volume 16, Issue 2, pages: 395-406 | https://doi.org/10.18662/rrem/16.2/863
Submitted: March 22nd, 2024 | *Accepted for publication:* March 28th, 2024

The Economic Benefits of Health Education

Ecaterina ANTON [1]
Mihaela TOMAZIU-TODOSIA [2]
Felicia-Cătălina RĂCOARE [3]
Iuliana-Claudia MIHALACHE [4*]
Irina DUMITRAŞCU [5]

[1] Clinical Hospital of Obstetrics and Gynecology Cuza Voda Iasi, ecaterinatomaziu@gmail.com
[2] "Grigore T. Popa" University of Medicine and Pharmacy Iasi, mihaela.tomaziu@umfiasi.ro
[3] "Grigore T. Popa" University of Medicine and Pharmacy Iasi, felicia.racoare@umfiasi.ro
[4] "Grigore T. Popa" University of Medicine and Pharmacy Iasi, iuliana-claudia.mihalache@umfiasi.ro, *corresponding author
[5] "Grigore T. Popa" University of Medicine and Pharmacy Iasi, Clinical Hospital of Obstetrics and Gynecology Cuza Voda Iasi, irina.dumitrascu@umfiasi.ro

JEL classification: H10, I15, I25, O10

Abstract: *Health education is an essential topic for contemporary society because it focuses on providing information to improve and sustain the health of the community. This type of education covers issues of broad interest, such as disease prevention, promoting a healthy lifestyle, the importance of nutrition and exercise, and stress reduction. Health education aims to raise awareness and build skills for healthy behaviour. This article aims to cover topics of interest to society such as a literature review to emphasize the importance of the concept of health education, a theoretical approach to the factors that influence health, in the idea of the possibility to act on them. The specialized literature shows a connection between education for health, health and economy, a connection that the authors proposed to highlight also by referring to the social determinants of health that we believe start, on the one hand, from children's education and, on the other on the other hand, from the economy. Health and education can be considered determinants of the economy and, implicitly, health education contributes to the balanced development of society. Most of the time, an educated child will be a healthy, employable adult; there is a possibility that not every healthy child will be educated, but will be able to work. Society is interested in people's labor force, without considering that a low standard of living and lack of health care will exhaust the labor force sooner.*

Keywords: *economy, development, health, education.*

How to cite: Anton, E., Tomaziu-Todosia, M., Răcoare, F.-C., Mihalache, I.-C. & Dumitraşcu, I. (2024). The economic benefits of health education. *Revista Românească pentru Educație Multidimensională, 16*(2), 395-406. https://doi.org/10.18662/rrem/16.2/863

©2024 Published by LUMEN Publishing. This is an open access article under the CC BY-NC-ND license http://creativecommons.org/licenses/by-nc-nd/4.0/

Introduction

The health status of the population has an indisputable social value and is a national priority that determines the development of each country. In this context, the need for health education arose from the necessity to emphasize the importance of health to economic decision-makers. Health education is primarily intended for youngsters enrolled in educational institutions and can be promoted through (1) courses and lectures; (2) practical activities; (3) projects and aims to (1) develop communication skills; (2) adopt a healthy lifestyle; and (3) healthy group activities. Teaching this subject will lead to a healthier community by: (1) preventing ailments; (2) healthy behavior; and (3) medical literacy. Personal autonomy is also an important aspect that refers to the fact that health-educated people become more autonomous in managing their own health; they can make informed decisions and actively participate in promoting their own well-being. Health education is a valuable investment in improving the health of individuals and communities. By providing information, developing skills and promoting a positive attitude towards health, it helps to create an environment where people can make informed decisions and adopt behaviors that promote their well-being. Health education and its ramifications for the individual and society is important and has its roots in the history of health promotion, influencing the modern health promotion and education movement.

Methodological framework

The importance of the theme stems from the need to understand that health is a resource for development and not a consumer of resources. The motivation for the choice of the theme calls for the answer to the following questions in the research approach: (1) Can the economy of health the health of the population? (2) Can the investment in the health of the population, through education, be seen as an investment for sustainable economic growth?

The research methodology used to answer the above-mentioned questions includes both qualitative and quantitative analysis. Qualitative research has the role of providing the possibility of a vast understanding of the research subject and also a complex explanation of it, through methods such as analysis and synthesis that ensure the formation of a faithful image of the studied phenomena. The methods used focus on the identification of concepts and their elaboration, as well as on the identification of studies with reference to the correlation between the efficiency of the financing of

health services and the health status of the population, considering the existing interdependence between them. An initial evaluation of the specialized literature, using information sources, highlighted the existence of studies on this segment, with emphasis on different areas; the state of health of the population influences, and is influenced, both by the economy of a country and by the ways of financing the health sector. We selected the specialized literature according to the content, with an emphasis on the health education, on the term "health" and ”education”, determinants of health and education, as well as on their effects, their correlation resulting in the possibility of identifying the points of interaction between them. After identifying and analyzing the conceptual framework, based on the analysis of specialized literature and existing studies in the field, we analyzed the economic factors that influence health and health education, the importance of health education for the economy. We analyzed the Economic factors influencing the society health and education and the Social determinants of health and education by performing a quantitative analysis, based on the grouping method.

Literature review

The literature shows the importance of education and health for the economy since the 1960s, as presented by Schultz (1960) when he develops the concept of human capital and, later, Schultz (1961) talks about the importance of education for the economy, aspects which they associate with human capital. Later, Becker (1964) argued that education along with health can increase the productivity of an employee and thus will generate increased income for the respective firm and society.

We can say about the economy of a state that it’s defined by its population's degree of education, which, in turn, influences the status of health; on the other hand, the economy is directly proportional to both the educational level and the health status of the population, through the resources allocated to these sectors. Therefore, there is an interdependent relationship between a country's economy, education and health. On the other hand, insufficient financial resources at the family level leads to a lack of access to education and health care, which, over time, reflects in the difficulties of entering the workforce. Health education has taken on an interdisciplinary approach; it is a critical component of health systems, covering numerous elements of individual and collective life in order to promote and preserve health.

Health education has evolved over time, impacted by societal developments. Traditions, myths, and cultural practices were used to pass on

health-care knowledge in ancient cultures. Ancient tribes and communities accumulated empirical knowledge on medicinal herbs, diet, and hygiene. In the 18th and 19th centuries, scientists became concerned about hygiene, nutrition, and disease development. In the 19th - 20th centuries, health education meant hygiene promotion, vaccines, the control of infectious diseases (Detels et al., 2015, 1–38).

In the 20th century, interest in medical education in educational institutions increased, and professions such as nurses and health educators took shape. With the increase in the incidence of disease in society, especially after the Second World War, the importance given to prevention increased, and thus health education began to promote healthy lifestyles, a balanced diet, physical exercise, and the avoidance of smoking (Bradley, 2006, 254–262). Downie et al. (1990) defined health education as "a communication activity aimed at improving health and preventing or reducing ailments among individuals and groups by influencing beliefs, attitudes, and behavior" (Downie et al., 1990, 28). The World Health Organization constantly conveys the importance of health and its interdependence with various other factors such as the economy, environment, etc., defined health education as "consciously comprising school opportunities for learning involving some form of communication to improve health knowledge, including the development of life skills leading to individual health and community" (World Health Organization, 1998, 12). Gold and Miner (2002) consider health education "any combination of learning experiences, planned and based on sound theories, that provide individuals, groups, and communities with the opportunity to obtain the information and skills necessary to make quality decisions about the state of health" (Gold & Miner, 2002, 3). Over time, several definitions of health education have emerged, with an emphasis on its importance for the economy and the sustainable development of society.

Economic factors influencing the society health and education

The state of health is influenced by economic factors, but the economy is also directly related to the health of the population; this connection refers to the fact that health will give labor, an important aspect for the economy; on the other hand, an increased level of the economy of a state will contribute, in most cases, to a balanced health of the population. This aspects involves a close collaboration between economists, health professionals, and decision-makers to identify optimal solutions for improving the health sector. After reviewing the literature, Kennedy et al. (1996), Gravelle (1998), Ruhm (2000), House (2001), Jensen & Richter

(2004), Chung & Muntaner (2007), Lanz et al. (2007), WHO (2007), Powers & Faden (2008), Heckman et al. (2010), WHO (2013), Goldberg (2016), among the economic factors that can influence health, we mention:

(1) Income and socio-economic status have a significant influence on health, as people with higher incomes often have better access to medical care, food, education, and living conditions-aspects that generate a better overall state of health. The level of education is closely related to health; more educated people tend to adopt healthy behaviors and have better access to health information. Education also contributes to a better understanding of how to manage and prevent disease.

(2) Resource allocation refers, on the one hand, to how limited resources, such as the health budget, are distributed to meet the health care needs of a population; on the other hand, in health education, the allocation of financial resources can also refer to how they are managed for food, consulting medical services, which focuses on the benefits for health.

(3) Economic and social policies depend on decision-makers and available resources and also directly reflect on the health of the population. Investments in infrastructure, health services, and prevention programs can help improve health. (3) Cost-benefit analysis uses cost-benefit analysis to assess whether a particular medical intervention provides value for the resources invested. (4) Medical insurance has economic aspects that are essential to the health economy. Insurance models, financing, and cost distribution between insurers, providers, and beneficiaries are examined.

(4) Globalization can influence access to food, technology, and other resources that impact population health. Global economic changes can contribute to the rapid spread of disease and public health challenges worldwide.

All of these elements are dependent on both national and individual economic resources. Economic factors that influence the health of the population can lead to a number of issues that influence society as a whole, such as (1) health inequalities, the problems related to health inequalities, including unequal access to medical services, and socio-economic factors that contribute to disparities in the health status of the population. (2) employment opportunities: the availability and quality of jobs can influence the health of the population. Stable and well-paid jobs can contribute to an individual's well-being, while unemployment or employment in precarious jobs can have negative effects on mental and physical health. (3) access to medical services: costs and accessibility of medical services are key economic factors. Populations with lower incomes or without health insurance may

have difficulty accessing medical services, which can lead to delays in diagnosis and treatment.

Social determinants of health and education

The social determinants of health originate in the economy, are present throughout the world, and although their persistence, characteristics and distribution affect people's health and also the economy, they are difficult to diminish and even more difficult to eliminate. However, even if they are perceived as having effects at the level of vulnerable groups, there are also individual members of disadvantaged groups who may feel less of the effects of these factors on their own health. The fact that social determinants have a strong role in shaping population health does not show that there can be actions and behavior at the individual level that influence one's own health outcomes independently of the group. And while health services are independently related to groups and publics, at a general level, health policies are also designed according to a certain pattern of population behavior, which is why they can be ineffective for certain categories of people. Analysis and action on the social determinants of health needs to be a priority both at the individual level and as part of local, national and global public health communities. Social and economic circumstances affect health throughout life, and people with limited financial means are, in principle, the most affected; however, it is necessary to consider the fact that the social determinants of health affect the whole society, and to reduce their disadvantages, collective actions are necessary. Study and intervention in all these areas confirm the importance these factors have for individual and social well-being.

For a factor to represent a fundamental cause in the deterioration of health, it must, according to Lanz et al. (2007), meet three basic criteria, namely: (1) cause multiple diseases; (2) determine multiple risk factors; (3) to persist over time. We can talk about a series of factors determined by the economy and which, in turn, influence the state of health, respectively the social determinants of health.

(1) *Health policies* are extremely important, as they affect a large number of people. For example, while an individual health care provider may or may not have good clinical justification for using an intervention for which evidence of safety and efficacy is weak or insufficient, recommending its widespread adoption is a matter of policy of health. Health policies determine access to health services. In this regard, Lantz et al. (2007) consider the importance of health policies to support the access of all people to health care but, at the same time, state that "inequalities in access to

health care are often smaller than those corresponding to inequality in access to housing, education, food and other resources. And the latter are often more important than personal health services in generating or ameliorating health inequality." (Lanz et al., 2007, 1253 – 1257). Therefore, health policies, through the lack of access to health care, do not represent the fundamental cause of health vulnerability or social disparities in health, but the state of health is, to a large extent, a result of determinants such as housing, education, status socio-economic, respectively the conditions in which people are born and live. Thus, health policies do not have the same effects on different groups of people; in this context, we can identify factors such as socio-economic status and income inequalities. Likewise, Goldberg (2017) argues that access to medical services is only a relatively minor determinant of population health; the main determinants of health and its distribution among people are economic conditions.

(2) *Socio-economic status* can represent a way that influences, over time, the state of health of people, by making it difficult to take care of health, due to the lack of financial resources and knowledge about this aspect. In this regard, House (2001), noted the tendency of studies to put "overemphasis" on income inequality as a determinant of health. He believes that the reduction of income accentuates the social and psychological risk factors, health behavior, simultaneously with the reduction of socio-economic status, education, access to health services. These socioeconomic conditions, along with inequalities in health care, may largely explain why income is so strongly related to health. Marmot et al. (1978) developed a study based on the hypothesis that the higher a person's socio-economic status, the higher the risk of conditions, taking into account the increased level of stress. The research was carried out on more than 18,000 British civil servants, and the result was contrary to the original hypothesis, that is, workers at the lowest level were at the highest risk of ailments.

(3) *Income inequalities*, not poverty itself, has harmful consequences on people's health. This "inequality hypothesis", developed and analyzed by the World Health Organization in the book "The Economics Of Social Determinants Of Health And Health Inequalities: A Resource Book" (2013), is applicable worldwide and shows that the risk of disease depends on the stratification of society. In this sense, by reducing economic inequality between people, there should be an improvement in health at the national level, according to WHO (2013). Indeed, the inequality hypothesis suggests that, all other things being equal, a reduction in income inequality could improve the health of the poor, but it is difficult to appreciate the same effect on the rich. These conditions include the inability to access protective

goods and services, such as a car, health services, etc. Researchers at the Harvard School of Public Health found that income inequality in the US was linked to mortality rates; they relied on a measure of income distribution, calling it the "Robin Hood Index" (Kennedy et al., 1996, 1004 – 1007), representing a measure of total income to be redistributed from the rich society, above the average, to the poor society, below the average, in order to obtain, thus, an equality. The association between income inequality and health outcomes, creating more and more questions, Gravelle (1998) provides an answer in his article "How Much of the Relation Between Population Mortality and Unequal Distribution of Income Is a Statistical Artefact?", arguing, that "a positive correlation between population mortality and income inequality may occur at the aggregate level, with effects on individual mortality risk." (Gravelle, 1998, 382–385).

(4) *Social protection* and its impact of health, education, economy, exists and is a significant one, and there is evidence. There are studies that highlight the potential role of social protection on the health of the population. Ruhm (2000) argued that the social insurance system reduced the infant mortality rate. The research highlights the fact that reducing the infant mortality rate has a significant long-term effect on the economy. The lack of social protection affects the standard of living and influences the decisions of individuals, which have consequences over generations. Social protection, by supporting access to care, improves health outcomes, particularly for vulnerable groups, in low- and middle-income countries. Most social protection programs have shown a positive result on the possibility of accessing health services, the nutritional status of the population, with visible results on health.

The importance of health education to the economy

Regarding the influence of health on the economy, we studied, with the help of secondary data from the System of Health Accounts (SCS) (2023), the cost of heart diseases in Romania during the years 2001–2021. According to the data provided by the System of Health Accounts (SCS), in Romania, stroke represents the second cause of mortality (21.64%) and disability (11.34%), with an annual cost for the Romanian state of approximately 657 million euros, meaning 0.4% of GDP. Many people who have suffered a stroke will have a low quality of life, have difficulty reintegrating into work, or will be dependent on a permanent caregiver. According to the same data sources, annually, hospitals in Romania record costs of approximately 671 million lei (145 million euros) for stroke treatment, not including recovery costs. Also, the annual burden of disability

pensions caused by this condition is approximately 32 million lei (approximately 6.8 million euros). Premature death due to stroke of people active in the labor field also contributes to these costs, over $9,000 per year, according to a study by ANPP; the authors' estimates do not include cases that benefited from day hospitalization but analyze only those in chronic form. Also, with regard to the costs of heart diseases, the same study shows that in Romanian hospitals, over the course of a year, there are over 200,000 cases of patients with atrial fibrillation complicated by stroke, and the number of stroke patients is approximately 128,000 annually.

Regarding the influence of health education on the economy, Figure no.1 shows the contribution of health education, alongside the many factors that support economic development. Economic policies and institutions, human capital, and technologies contribute to economic development through the health of the capital, which, through education, will contribute to technological innovation.

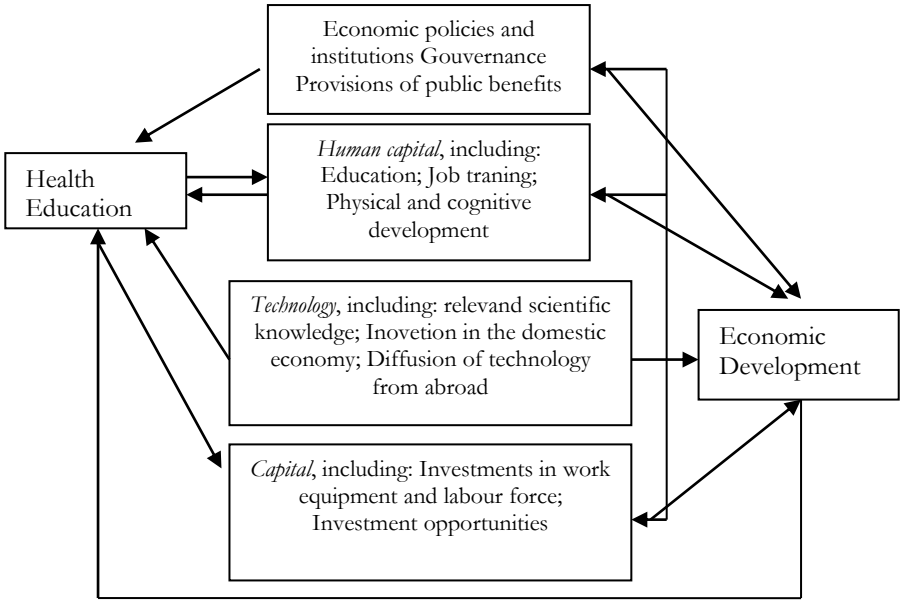


Figure no. 1: Health education as a contribution to economic development
Source: made by the author, based on Sachs (2001, 26)

Conclusion

In conclusion, we can say that the education, the health, and the economy are often major themes of debate. The present study, based on a vast specialized literature, shows that health education has many economic advantages: (1) Health education provides essential information and knowledge about how to prevent disease; knowledge of risk factors, healthy habits, and preventive measures can help reduce illnesses and costs associated with medical treatment. (2) Health education promotes a healthy lifestyle, regular exercise, adequate sleep, and avoiding harmful substances; these practices contribute to maintaining a general state of well-being and preventing chronic diseases. (3) Knowing about one's own health helps people become more responsible for their life choices; health education teaches people to take responsibility for their own health and make informed decisions. (4) People who have participated in health education are more likely to identify early signs of medical problems and seek medical assistance at an early stage; this can reduce the need for emergency medical care and contribute to the early diagnosis and treatment of conditions. (5) Investing in health education can lead to significant long-term financial savings. (6) Health education is not only about disease prevention but also about improving the quality of life; informed people can make better decisions about nutrition, physical activity, and stress management, which contribute to overall well-being and life satisfaction.

The limits of the study

Limitations of the present study included: (1) Choice of dimensions: the study does not include a number of dimensions such as cultural values or the environment. In the Human Development Report (1991) there was an attempt to measure cultural values, with the idea of developing the Human Development Index (HDI), but the difficulty in identifying the most precise quantitative method determined the assignment of this task to academic institutions. (2) The choice of variables according to which health education could be developed: it would be useful to include in the study variables such as life expectancy at birth, food security and living conditions, in order to better characterize the influence of health education on the economy and the health of the population; however, the only data available to measure food security are those on average calorie consumption/capita, which do not fully reflect food balance and can hide serious deficiencies.

References

Becker, G.S. (1964). *Human capital, a theoretical and empirical analysis, with special reference to education*. 3rd ed. The University of Chicago Press

Bradley, P. (2006). The history of simulation in medical education andpossible future directions, *Medical Education*. 40: 254–262. doi:10.1111/j.1365-2929.2006.02394.x

Chung, H., & Muntaner, C. (2007). Welfare state matters: a typological multilevel analysis of wealthy countries. *Health policy (Amsterdam, Netherlands)*, *80*(2), 328–339. https://doi.org/10.1016/j.healthpol.2006.03.004

Detels, R., Gulliford, M., Karim, Q.A., Tan, C.C. (2015). Health promotion, health education, and the public's health. In S. Carroll & M. Hills, *Oxford Textbook of global public health* (6th ed.). Oxford University Press Print Publication (pp.1-38). https://doi.org/10.1093/med/9780199661756.003.0127

Downie, R., Fyfe, C., Tannahill, A. (1990). *Health promotion: Models and values*. Oxford University Press.

Gold, R.S., Miner, K.R. (2002). Report of the 2000 Joint Committee on Health Education and Promotion Terminology. *Journal of School Health*. 12: 3-7. https://doi.org/10.1111/j.1746-1561.2002.tb06501.x

Goldberg, A.E. (2016). *The SAGE Encyclopedia of LGBTQ Studies*. Sage Publications. Inc.

Gravelle, H. (1998). How much of the relation between population mortality and unequal distribution of income is a statistical artefact?, *British Medical Journal. 316*(7128): 382–385. https://doi.org/10.1136/bmj.316.7128.382

Heckman, J. J., Moon, S. H., Pinto, R., Savelyev, P. A., & Yavitz, A. (2010). The Rate of Return to the High/Scope Perry Preschool Program. *Journal of public economics*, *94*(1-2), 114–128. https://doi.org/10.1016/j.jpubeco.2009.11.001

House, J.S. (2001). Related Social Inequality in Health and Income. *Journal of Health Politics Policy and Law*. *26*(3): 523–532. https://doi.org/10.1215/03616878-26-3-523

Human Development Index (HDI). [1991] https://hdr.undp.org/data-center/human-development-index#/indicies/HDI

Jensen, R.T. & Richter, K. (2004). The health implications of social security failure: evidence from the Russian pension crisis. *Journal of Public Economics*. *88*(1-2): 209–236. https://doi.org/10.1016/S0047-2727(02)00143-3

Kennedy, B.P.; Kawachi, I. & Prothrow-Stith, D. (1996). Income distribution and mortality: cross sectional ecological study of the Robin Hood index in the United States. *British Medical Journal. 312*(7037): 1004–1007. doi: 10.1136/bmj.312.7037.1004

Lanz, P.M.; Lichtenstein, R.L. & Pollack, H.A. (2007). Health Policy Approaches to Population Health: The Limits Of Medicalization. *Health Affairs*. *26*(5):1253–1257. https://doi.org/10.1377/hlthaff.26.5.1253

Marmot, M. G., Rose, G., Shipley, M., & Hamilton, P. J. (1978). Employment grade and coronary heart disease in British civil servants. *Journal of epidemiology and community health*, *32*(4), 244–249. https://doi.org/10.1136/jech.32.4.244

Powers, M. & Faden, R. (2008). *Social justice: the moral foundations of public health and health policy*. Oxford University Press

Ruhm C. J. (2000). Parental leave and child health. *Journal of health economics*, *19*(6), 931–960. https://doi.org/10.1016/s0167-6296(00)00047-3

Sachs, J.D. (2001). *Macroeconomics and health: Investing in health for economic development report of the Commission on macroeconomics and health*. World Health Organization Geneva. https://apps.who.int/iris/bitstream/handle/10665/42463/9241545526_ger.pdf?sequence=2&isAllowed=y

Schultz, Th.W. (1960). Capital formation by education. *Journal of Political Economy*. *68*(6): 571 – 583. https://doi.org/10.1086/258393

Schultz, Th.W. (1961). Investment in human capital. *The American Economic Review*. *51*(1): 1 – 17. https://www.jstor.org/stable/1818907

System of Health Accounts (SCS). (2023). https://insse.ro/cms/sites/default/files/field/publicatii/sistemul_conturilor_de_sanatate_in_romania_in_anul_2021_editia_2023_0.pdf

World Health Organization. (1998). *Health promotion glossary*. [online] http://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf

World Health Organization. WHO (2007). *World health statistics 2007*, WHO Press, France. [online] https://www.who.int/gho/publications/world_health_statistics/whostat2007.pdf?ua=1

World Health Organization. WHO. (2013). *World health statistics 2013*, WHO Press, Italy. https://apps.who.int/iris/bitstream/handle/10665/81965/9789241564588_eng.pdf;jsessionid=9B015841D501A8C557C25D46760175E0?sequence=1