HISTORICAL ARTICLE

Received: 27 APRIL 2024 | Accepted: 15 MAY 2024 | **DOI:** https://doi.org/10.57849/ulisboa.fm.jscml.0000004.2024

JORNAL DA SOCIEDADE DAS CIÊNCIAS MÉDICAS DE LISBOA

Children's Health and Well-Being: from the 19th to the 21th Century

Maria do Céu Soares Machado [1]

[1] Professor of Pediatrics, Faculty of Medicine, University of Lisbon; President of Sociedade das Ciências Médicas de Lisboa; President of AstraZeneca Foundation.

✉ machadomariaceu@gmail.com

ABSTRACT: Child healthcare was scarce till the second half of the 19th century and only in 1989 were children's rights officially acknowledged in the Convention on the Children Rights. But health is just one dimension of well-being that includes all domains of quality of life, whether physical, emotional, or social.

Nowadays, health indicators related to children are a matter of pride not only for the progress made but also for achieving similar values to other countries in the European Union.

Undoubtedly, from the 19th century to the 21st century, since the creation of the Sociedade das Ciências Médicas, the evolution of health in Portugal, notably children's health with the establishment of the National Health Service and proper planning, has allowed for significant and recognized gains.

KEY WORDS: Child healthcare

The oldest book in Sociedade de Ciências Médicas' Library, published by Garcia de Orta in 1563 was entitled "***Colóquios dos simples e drogas he cousas medicinais da Índia*** (1) *e assi dalgũas frutas achadas nella onde se tratam algũas cousas tocantes a medicina, pratica, e outras cousas boas pera saber."* Beyond the remarkable text, there is a preface from his friend and famous poet Luís de Camões who also lived in Goa and was the author of the epic poem Os Lusíadas.

Despite having searched through the library's 2300 books published since the 16th century, only three books were printed of child health by the end of the 19th century. The first identified is ***Traité des Maladies des Enfants,*** by Michael Underwood (Edition 1803) (2).

Underwood's book has chapters dedicated to various subjects, including mouth ulcers, cutaneous eruptions, diarrhea or crying babies. Prescriptions are astonishing, as the example of an ointment for cutaneous eruptions:

Cantharides en poudre, une once;
Faites bouillir dans demi-livre d'eau de Fontaine,
Reduisez à quatre onces
Ajoutez de basilicum jaune, quatre onces
Faites cuire jusqu'à ce que toute l'eau soit evaporée

Nowadays, cantharides are used to treat warts or as an aphrodisiac beverage!

Examining the almost 600 volumes of the Society Scientific Journal (published on a regular basis from 1835 to 1974), there are some reports of 16 or 17-year-olds but they were not considered children and there are also anecdotal cases like a 4-year-old found with a fetus in her peritoneal cavity, the likelihood of it being a deceased twin. From 1920, there are many monographs by the northern obstetrician Costa Sacadura on pregnancy or labour, however they never mention the newborn.

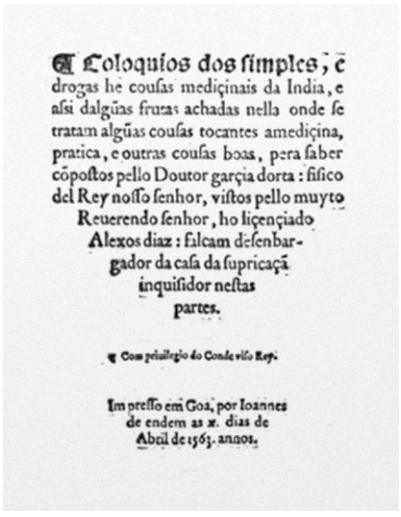
Given the high mortality rate below 5 years old, children did not have recognized a existence. Quoting Aristotle *"... children are irrational, unfinished and imperfect beings"*. Much more attention was paid to them by the medical community in the second half of the 19th century and only in 1989 were children's rights officially acknowledged in the Convention on the Children Rights (3).

The large-scale employment of children (from as early as 8 years old) during the industrial explosion of the late 18th century was common despite the knowledge that child labour was a form of child abuse and almost half of child "worked" in hazardous industries. Ambroise Tardieu, forensic medical doctor, studied all types of violence and abuse in children, including exposure to hazardous conditions on factories and coal mines and its results on their physical and mental health (4). And a recent research by Gowland found evidence that these children were fed a diet low in animal protein, severe growth delays and respiratory disease suggesting early life adversity and dangerous conditions in these children (5).

On the early 20th century, children were still seen as an *adult's thumbnail and parents'* property whose own interests prevailed. Care was limited to hygiene and nutrition and education, early work or medical support was a father's decision since disease was considered a moral regeneration process.

The *Hôpital des Enfants Malades* in Paris (1802) was the first centre in Europe dedicated to the exclusive medical care for children. It was followed by similar institutions in London, Berlin, Vienna, Boston and St. Petersburg (1869) although there are reports on the Hospital de Ninos Pedro de Elizalda (Buenos Ayres) since 1779 (6).

In 1853, Abraham Jacobi, concerned about the high infant mortality rate, founded a new medical specialty named Pediatrics based on the Greek words 'paidos' (child) and 'iatrous' (cure process) (7). Isaac Arthur Abt created the American Academy of Pediatrics and the Children's Hospital of Philadelphia, which placed a strong emphasis on research from its inception, two years later.


Colloquios dos simples, e
drogas he cousas mediçinais da India, e
asi dalgũas frutas achadas nella onde se
tratam algũas cousas tocantes amediçina,
pratica, e outras cousas boas, pera saber
cõpostos pello Doutor garçia dorta: fisico
del Rey nosso senhor, vistos pello muyto
Reuerendo senhor, ho liçençiado
Alexos diaz: falcam desenbar-
gador da casa da supricaçã
inquisidor nestas
partes.

Com priuilegio do Conde viso Rey.

Im presso em Goa, por Ioannes
de endem as x. dias de
Abril de 1563. annos.


TRAITÉ
DES
MALADIES DES ENFANS,
PAR M. UNDERWOOD, D. M.
Membre du Collège Royal des Médecins de Londres;
Auquel on a joint les Observations-pratiques de M. Armstrong, D. M. premier Médecin de l'Hôpital des pauvres enfans de Londres, & celles de plusieurs autres Médecins.
TRADUIT DE L'ANGLOIS.
ARS LONGA.
Hippocr.
A PARIS,
Chez THÉOPHILE BAROIS le jeune, Libraire, quai des Augustins, N°. 18.
M. DCC. LXXXVI.
Avec Approbation, & Privilège du Roi.

Fig 1. *"Colóquios dos simples e drogas he cousas medicinais da Índia"*, front page by Garcia de Orta.

Fig 2. "*Traité des Maladies des Enfants, by Michael Underwood"* front page by Underwood. 1st Edition hardcover and content.

In Portugal, a milestone in child care was reached with the establishment of Hospital de Dona Estefânia (1877), built at the request of Queen D. Estefânia, who used to visit the patients in hospitals with her husband D. Pedro and was impressed to see children alongside to adults and elderly. Children's diseases were infectious such as mumps, whooping cough, diphtheria, and scarlet fever or related to malnutrition (8).

The first pediatrician was Sara Benoliel (1867-1955), the Portuguese Pediatric Journal was established in 1938 by Carlos Salazar de Sousa. And HDE was the headquarters of the Portuguese Society of Pediatrics at its founding in 1948 by the De Sousa with Manuel Cordeiro Ferreira, Almeida Garrett (Porto) and Lúcio de Almeida (Coimbra).

However, actions had already been taken and portuguese legislation on public health emerged particularly concerning the prohibition of litter in public roads, manure piles or water puddles, as well as public disinfection and notification of diseases such as cholera, typhus, yellow fever, plague, smallpox, and scarlet fever.

A sanitary authority figure was created to assist doctors in providing instruction and prevention. Additionally, a sanitary park for disinfection and pest control of equipment, vehicles, clothing, tents, greenhouses, mobile hospitals, and laboratories was settled.

Yet, child health care improvement only began in the 1980's. In this third decade of the 20th century, health indicators related to children (defined by the age of 0 to 18 years by the World Health Organization) in Portugal are a matter of pride not only for the progress made but also for achieving similar values to other countries in the European Union.

Maternal and child health in Portugal is mentioned in the World Health Organization's World Health Report in 2008: "... infant mortality rate consistently and rapidly dropped from 77.5 in 1960 to 3.6 per thousand, as a result of the improvement in the socio-economic conditions of the Portuguese population and global health reforms with specific interventions in those areas (9). The medical journal Lancet also noted in 2014 that Portugal was one of the 10 safest places in the world to be born (10) and a low mortality rate under 5 years of age places Portugal among the top 10 in the world, together with Japan, Norway, Sweden, and Finland.

This successful story happened through political will by the Minister of Health Leonor Beleza who recognized the importance of this area; through the planning and implementation of strategies by the first National Commission for Maternal and Child Health (CNSMI) which are an example of best practices. Appointed ministerially in 1986, the CNSMI included the obstetricians Albino Aroso and Dória Nóbrega, and the pediatricians Torrado da Silva and Octávio Cunha who found a disastrous scenario, maternity wards without basic conditions of human resources and equipment while others had an excess of professionals and scarce utilization of medical machinery (11).

There was no coordination between levels of care and no specific training for professionals. A year later, the CNSMI program was approved by the health authorities to be implemented over 9 years, in phases with goals set for every 3 years. This included the organization and concentration of care, the requalification of maternity wards and neonatology services defined as Perinatal Support and Differentiated Perinatal Hospitals, regionalization and referral networks, coordination with Primary Care, and exemption of co-payments for pregnant women and children under 12 years old. Special post graduation and training programs were also organized for neonatologists and other professionals. Functional Coordinating Units, the famous UCFs, were established with the purpose of regular meetings between medical, nursing, and social work professionals from primary health care centers and hospitals to solve common problems.

And, in the 21th century, a a portuguese girl born in 2022 has a potential life expectancy of 83.52 years, while a boy has a life expectancy of 78.05 years (12). Mortality has significantly decreased globally from 0 to 19 years old, across all age groups. Almost all newborns benefit from neonatal screening and 99% of children have completed the National Vaccination Program by the age of 6. The percentage of children in the 1st cycle of education who are overweight or obese has also decreased. Nitety one per cent 91% of children and adolescents have a General Practitioner assigned, but there are significant asymmetries among the 7 major regions in Portugal, particularly in Madeira and The Azores Islands (13).

But health is just one dimension of well-being that includes all domains of quality of life, whether physical, emotional, or social. UNICEF considers six dimensions that measure well-being: material (poverty, family unemployment, low level of parents' education), health and safety (infant mortality, low birth weight, vaccination rate, and accident mortality), education (academic success in reading, math, and science), family (family typology and intrafamily relationships), health

risk behaviors (breakfast habits, fruit intake, daily physical activity, overweight), and/or violence (abuse, neglect, bullying) and subjective factors (perception of health, enjoyment of school, feeling of happiness) (14).

Portugal is one of the European countries with the most gains in education, a fundamental factor in correcting inequalities and promoting the Country's development and 90% of the population has at least 4 years of schooling. The early school dropout rate has significantly decreased, but it is still higher in boys, as is also the case in other European countries.

Regarding social aspects, the risk of poverty in childhood and adolescence is still significant, although it decreased after social support. Portugal is the 4th country in the EU23 European Union with the highest number of families with 3 or more children and risk of poverty in single-parent households, even higher if female-led. As for the protection of children and young people in danger, Portugal has an exemplary organization that has been able to prevent and intervene by working with the families, keeping the children with their parents or another family member.

Portugal's major regions show significant asymmetries: the Lisbon Metropolitan Area and the Algarve are younger, while the Azores, Madeira, and the North are older and have experienced greater losses of children and teenagers. The balance between immigrants and emigrants in this age group is positive and more pronounced in the Lisbon Metropolitan Area and the Algarve.

More than half of births occur outside of marriage, and nearly one-fifth of parents of all newborns do not live together. Only three countries in Europe have higher percentages of unmarried parents, with France in first place (59.9%). The maternal age at the birth of the first child has increased, with maternity after the age of 40 doubling in almost all regions and tripling in the Lisbon Metropolitan Area.

Mothers have a higher level of education and literacy. Over the past 20 years, there has been an 11% increase in those who have completed secondary education, and the number who have completed higher education more than doubled.

The most common profile of the Portuguese family is a couple with one child, while European families more frequently have two or more children. Divorces have increased, putting Portugal in the top position among EU countries in this indicator in 2017, followed by Luxembourg and Spain. Since the beginning of the millennium, single-parent households have continued to increase and are predominantly matriarchal, with no significant differences between regions.

Undoubtedly, from the 19th century to the 21st century, since the creation of the Sociedade de Ciências Médicas, the evolution of health in Portugal, notably children's health with the establishment of the National Health Service and proper planning, has allowed for significant and recognized gains.

REFERENCES

1. Garcia de Orta. Colóquios dos simples e drogas he cousas medicinais da Índia, 1st Ed, Printing Press, Saint Paul's College, Goa 1563
2. Michel Underwwood. Traité des Maladies des Enfants, Éditions Theophile Barois, Paris 1786
3. Convention on the rights of the child (1989) Treaty no. 27531. United Nations Treaty Series, 1577, pp.
4. Labbé J. Ambroise Tardieu: the man and his work on child maltreatment a century before Kempe. Child Abuse Negl 2005;29(4):311-24. DOI: 10.1016/ j.chiabu.2005.03.002)
5. Gowland RL, Caffell AC, Quade L, Levene A, Millard AR, Holst M, Yapp P, Delaney S, Brown C, Nowell G, McPherson C, Shaw HA, Stewart NA, Robinson S, Montgomery J, Alexander MM. The expendables: Bioarchaeological evidence for pauper apprentices in 19th century England and the health consequences of child labour. PLoS One. 2023 May 17;18(5):e0284970. doi: 10.1371/journal.pone.0284970
6. Medina-Albaladejo FJ, Calatayud S. Children's Diet during the Early Stages of the Nutritional Transition. The Foundlings in the Hospital of Valencia (Spain), 1852-1931. Int J Environ Res Public Health. 2021 Nov 15;18(22):11999. doi: 10.3390/ijerph182211999
7. Ligon-Borden BL. Abraham Jacobi, MD: father of American pediatrics and advocate for children's health. Semin Pediatr Infect Dis 2003 Jul;14(3):245-9. doi: 10.1016/s1045-1870(03)00055-4
8. Maria Teresa Neto, Lídia Gama, Fernando Correia, João Estrada. Histórias da História do Hospital Real de Todos-os-Santos e seus sucessores. Edição By the Book Lisboa, 2012
9. The World Health Report 2008: Primary Care Now More Than Ever. Geneva: World Health Organization, 2008
10. Wang H et al. Global, regional and national levels of infant and under-5 mortality 1990-2013. Lancet 2014;384(9947):957-79)
11. Maria do Céu Machado. O SNS dos avós aos netos in 45 Anos do SNS, Almedina, 2024
12. Instituto Nacional de Estatística, 2023
13. Maria do Céu Machado. Como Crescem. Colecção Os Portugueses. Edição Francisco Manuel dos Santos. Lisboa 2020
14. Child Well-Being in Rich Countries: a comparative overview. UNICEF Report Card 2018.