

Translation by Patrizia Rustichelli-Stirgwolt

The review of the Italian association of psycho-neuro-endocrine-immunology

Edited by Francesco Bottaccioli

PNEI NEWS

The new knowledge of science and health

HEALTHCARE IN THE EARLY STAGES OF LIFE



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EDITORIAL

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Francesco Bottaccioli

EARLY STAGES OF LIFE: RESEARCH AND PRACTICE

Page 4. The basis of life

For those who provide medical care to infants and children, the development of epigenetics has opened new perspectives of prevention. In fact it has been demonstrated that the first years of life determine traits of the psychobiological asset with important subsequences on health and disease. These traits are reversible. It is up to the healthcare institutions and politics to take upon these new responsibilities along with possibilities of virtuous interventions.

Alessandro Bianchi

EARLY STAGES OF LIFE: EXPERIENCES

Page 8. Paradigm shift in the patient's treatment

Among all kind of conducts, medical proceeding is based on tradition and tends to be repeated and be passed on without any significant change. Although changing is necessary and it is possible.

Gianpaolo Donzelli

Page 10. Neonatal pain and Traditional Chinese Medicine

A virtuous alliance between the Neonatal Intensive Care Unit at Anna Meyer Children's Hospital in Florence and the Traditional Chinese Medicine Centre "Fior di Prugna", Local Health Unit, Tuscany.

Sonia Baccetti, Antonella Traversi, Federica Sabatini, Laura Lega, Barbara Cucca

EARLY STAGES OF LIFE: THE GENTLE TOUCH

Page 12. Osteopathy for newborn babies and children

Osteopathy was conceived by Taylor Still a century ago. Last December it has been finally recognized as healthcare profession also in Italy. It represents a valuable resource to be integrated in the PNEI care model.

This research involves Neonatology departments of more than 25 Italian Hospitals.

Diego Lanaro

MALE AND FEMALE, MAN AND WOMAN

Page 16. The origin of the differences between the genres.

This article is a summarized excerpt from *Psiconeuroendocrinoimmunologia e scienza della cura integrata. Il Manuale*, Edra, Milano, pages. 88-92, Francesco Bottaccioli & Anna Giulia Bottaccioli (2017).

It tackles the bio-psycho-social complexity of genres differences by criticizing both the reductionist biological and psychological models and those ones proposed by

the post-feminism which ignore or judge as unimportant the male-female differences.

Francesco Bottaccioli, Anna Giulia Bottaccioli

BOOK REVIEW

Page 22. Bullying, a sign of nowadays

Page 23. Damasio discovers PNEI.

EDITORIAL

Taking care of the initial settings of life: it is possible if there is the will to do it.

Francesco Bottaccioli

Master Director of Pnei.

We have now enough scientific evidence to ascertain that the early stages of life have a significant influence on the psycho-biological traits in later life and thus on health and disease. It was possible to arrive to this conclusion thanks to the 1970s/1980s works of two researchers operating in different fields: the psychologist John Bowlby and the epidemiologist David Barker. Epigenetics has provided molecular basis to their studies. The theory of attachment, the theory of fetal origin of diseases and epigenetics are the three driving forces leading to the current synthesis¹.

We are facing an epochal turning point in the scientific field because the early intuitions of psychology have now a place on established basis and most importantly because it is defined where healthcare can have a large impact on individual and collective health. This path is possible as long as there is determination and largeness of means to achieve it and we abandon the primitive and inadequate idea of prevention seen as the only tool available for society to support the health of the citizens.

The early stages of life start with conception, pregnancy, birth, and are followed by a non- short period due to the psycho-biological characteristics of our species. We know that the central nervous system as well as the immune system will take their definite asset towards the end of the second decade of life. This asset is extremely sensitive to the initial settings. Let us consider the immune system as an example. The main factors that influence its correct development are: 1) the psychophysical conditions during pregnancy including stress and nutrition. These two elements can alter the stress axis of the future child and lead to a defect in the control of inflammation during childhood and adult life (allergies and autoimmunity); 2) the length of gestation is crucial. Prematurity affects the establishment of the intestinal microbiota leading to an unbalanced immune profile; 3) breastfeeding is an essential tool for the correct development of the immune system whereas formula milk can alter it; 4) the type of attachment established by mother and child. The well-documented psycho-emotions-immunity relationships² prove to be a powerful factor of balance or unbalance in the development of the immune system in the newborn baby and infant; 5) chemistry both as environmental and pharmacological toxins can alter the development of immunity.

This represents an extensive and at the same time a detailed field for aimed interventions both at a social level (as the Florence experience shows, see pages 4-7) and at hospital care and therapies level (pages 10-15). Achieving it on a large scale requires two changes: a new national political orientation that looses the grip of industry on public health and an unprecedented courage on the side of the healthcare authorities in shifting the paradigm as wished by the President of the Meyer Foundation (pages 8-9). A goal that lies at the base of SIPNEI's work.

1. Bottaccioli F., Bottaccioli A.G. (2017) *Psiconeuroendocrinoimmunologia e scienza della cura integrata. Il Manuale*, Edra, Milano, cap. 5
2. Bottaccioli A.G., Bottaccioli F., Minelli A. (2018) Stress and the psyche-brain-immune network in psychiatric diseases based on Psychoneuroendocrineimmunology. A concise review. *Ann. N.Y. Acad. Sci* (in press)
3. Bottaccioli F. (2018) Ontogenetica ed epigenetica del sistema immunitario nelle prime fasi della vita, *Pnei Review 1*: 92-110