



WHY EARLY LIFE EXPERIENCES ARE VITAL TO HUMAN HEALTH AND WELLBEING

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Our understanding of human development has transformed greatly in a short amount of time. For example, only a few decades ago, the prevailing bio-cultural belief was that prior to language development, a newborn infant (and infants in general) was not fully conscious and aware, and therefore lacked the capacity to feel pain^{7,4}. Consequently, infants requiring medical intervention received treatment without the use of anaesthesia, justified by medical experts that anything stronger would cause cardio-respiratory compromise and possibly death^{7,4}. Only in recent decades has this practice been viewed as unethical and barbaric⁴, giving rise to a greater understanding of early life consciousness.

Another misperception surrounding an infant's absence of pain sensation, was the belief that newborn nerve fibres lack myelination. Neuro-analytical studies in the 1980's were able to show foetal myelination of nerve fibres in the spinal cord and central nervous system (CNS) are complete by the 3rd trimester and myelination of pain transmission pathways (brain stem > thalamus > neocortex) completed by the 30th week of gestation⁴. Thanks to a growing body of research exploring early-life development, we now know that infants actually experience greater sensitivity to pain due to a greater number of pain receptors (nociceptors) present compared to adults⁴.

In addition to biological advances in our understanding of foetal and infant development, the Human Genome Project unintentionally opened a pandoras box when both surprising and unexpected findings of the project forced research scientists to acknowledge the role of the environment on human growth, development, and disease formation^{2,5,8}. Enter the field of Epigenetics, the study of how our environment influences the expression of genes and impacts on human social, biological and neural functioning². These advances seemed to create a bridge linking body and mind and opened channels of communication between scientific and phenomenological research to provide a robust foundation for the field of Prenatal and Perinatal Psychology to emerge.

Prenatal and Perinatal Psychology (PPP) may be defined as the "...interdisciplinary study of the earliest periods

of human development, including conception, time in the womb, experiences during and after birth, and experiences with caregivers and the family system through the first year of life⁹. The field of PPP draws on the theories, knowledge and understanding of multi-varied fields and disciplines such as: embryology, morphogenesis, bioengineering, evolutionary biology, psychophysiology, behavioural perinatology, neurobiology, affective neuroscience, attachment, traumatology⁹, and interpersonal biology⁸.

The convergence of so many disciplines, speaks to the complexity involved in understanding human development from a solely scientific viewpoint. However, human intuition, observation and the influential work of respected pioneers in the field such as R.D. Laing, Bowlby, Emerson, McCarty, Castellino, Chaimberlain, and Verny (and many more), have been saying for decades what science is now beginning to confirm, that life begins at the time of conception and the growing foetus is conscious, with a capacity to respond to its environment, and importantly, is shaped by its experiences in-utero; for better or for worse⁸.

Dr. Michel Odent, French Obstetrician, prolific author and leader in the field of perinatal education and childbirth since the 1960's, coined the terms 'primal period' and 'primal adaptive system'⁹. 'Primal period' is the time when a human being is completely dependent on its' mother, including foetal life, the time surrounding birth and up to the first year afterwards⁹. The term 'primal adaptive system' views the body as an interactive whole, whereby the immune, hormonal, and nervous systems are working interdependently and adaptively within the environmental context that is given. Odent states the following:

"Our basic adaptive systems – those involved in what we commonly call health – reach their maturity during the primal period. This is the time when they develop, adjust and regulate themselves. We could therefore assume that everything that happens during this period of dependence on the mother has an influence on our basic state of health – our "primal health" – and will have lifelong consequences"⁹.



As an example, studies show how the negative effects of toxic stress and maternal anxiety increase the risk of morbidities such as pre-term birth, growth restricted babies, changes in brain architecture, and permanent changes in a child's regulatory functions³. The Dutch Famine Cohort Study demonstrates how children that were affected by famine in utero, suffered a greater incidence of diabetes, obesity, cardiovascular disease and further health concerns as they matured^{8,10}. In addition, numerous studies demonstrate the effect of maternal stress, anxiety and depression on infants and small children. For example, offspring of mothers who experience post- natal depression (PND), had a greater likelihood of developmental and behavioural problems as well as declines in overall health status⁶. In low income countries, the addition of morphology changes in the

early neonatal period such as stunting of infant growth and poor weight gain were also observed⁶.

The gift that we are given now as human consciousness evolves, is the opportunity to understand the primal period as a critical time in human development where the foundation for the health and functionality of future generations is laid down. As we understand that the developing embryo, foetus and neonate, is conscious, aware and responsive to its' environment, we begin to fathom the necessity to develop ways to support and nurture families as early as the pre-conception period, so they may have an opportunity to develop deeper connections and relationships to their own early-life experiences and to the consciousness of their incoming babies.

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