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THE LONG-TERM EFFECTS OF FOETAL LIFE AND BIRTH

A Theoretical Approach

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As the first normative crisis, birth might be the primal experience of change for every person. Current research shows that the foetus not only perceives what is happening to him/her in the perinatal period, but he/she even responds to it. Birth experiences and the subsequent reactions create patterns, which may activate again in later life situations. These patterns include physiological, behavioural, cognitive and emotional components, and they influence the personal development as well as the adult functioning and well-being.

In this paper, we introduce our theory of the probable long-term effects of perinatal experiences. Our hypotheses are based on medical and epigenetics research findings, on current theories about the significance of the perinatal period and on our 22 years of psychotherapeutic experience. We discuss the effects of the perinatal experiences along the following four topics. According to our assumption, the perinatal experiences become the basic pattern (1) of how we cope with change, (2) of how we manage stress and losses, (3) of how we can bond with others, and (4) of what our attitude is towards touch and towards intimacy. However, the emergence and the functioning of these basic patterns are not rigid and schematic. They are also formed by the subsequent experiences during the entire life, and they can be corrected in any period of life. At the end of the paper we summarise the symptoms in adulthood, when psychotherapy might be recommended to process the traumatic perinatal experiences.

Keywords: foetal development, birth, perinatal psychology, trauma, emotional elaboration, transpersonal psychotherapy

1. Introduction

The past is over, but its consequences are still part of the present. We do not have direct evidence about how foetal life and birth can influence our adult lives. Many related factors are present simultaneously, therefore it is difficult to identify the concrete cause of an adult life-event. As an example, we cannot state why some

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people have difficulties in establishing partnerships as adults, because there can be several reasons for it. However, if we look beyond the individual level, there are already scientific findings on the possible long-term effects of foetal life and birth (BARKER 1998; NOBLE 1993). In the present paper, we introduce these research findings, as well as our theory, based on scientific evidence and on our therapeutic work. This theory includes our hypotheses about how the perinatal experiences influence the development of personality, physical health and different psychological processes, namely attachment, coping, emotional regulation and the ability to change.

2. The new concept of perinatal development

2.1. The foetus is competent

The psychological and neurobiological research of the last 30 years has fundamentally changed the scientific opinion of the foetal development. It is still difficult for many adults to believe that a foetus or a newborn baby has any competence, because they seem to be very vulnerable and helpless. But every foetus and newborn baby is competent in his/her own life. That means that in a predictable environment they can respond adequately to every life-event (CHAMBERLAIN 1998; 2013). Adequate respond means, that a foetus is able to perceive his/her environment, to represent the world in his/her mind, to recall his/her memories and to actively form his/her environment by reacting to the stimuli he/she receives (TYANO & KEREN 2010). The foetus even processes his/her experiences and he/she reacts emotionally to his/her life events. The foetus integrates those experiences and reactions, continuously improving his/her adaptability and survival capability.

These earliest experiences are kept in the memory in a special way. The perception of a foetus and a newborn baby is undifferentiated, their experiences are rather represented in their memory as holistic and complex experiences (KULCSÁR 1996). These contain bodily (motional, kinetic, proprioceptive, tactual), olfactory, acoustic and visual, and also emotional or even painful experiences (GROF 2008). At this stage of life, verbal memory is not matured enough, therefore these holistic memories are stored by the implicit or procedural memory. (KULCSÁR 1996, SQUIRE 2004). This so called 'body-memory' exists in adult life as well, but the more advanced verbal memory dominates over it.

Babies do not have verbal memories, they have physical sensations, consequently when they try to express themselves, they 'talk' about their experiences with body language. A newborn baby reacts with voice, movements and physiological processes. At times, they are crying or howling desperately, at other times they are smiling or just looking around calmly. Sometimes it is difficult for an adult to understand this 'language', nevertheless, this kind of self-expression is not random but meaningful.

2.2. The foetal development is based on the interaction of the genetic program and the environmental influences

Results of epigenetic research suggest that environmental stimuli influence foetal growth and development that is based on a genetic program (BAUER 2004). The foetus lives in relationships. He/she has direct bodily relation to his/her mother, but he/she also has connections to others by acoustic and tactile modalities. The environmental stimuli mediated by the mother and others require continuous adaptation from the foetus and this fundamentally influences his/her physical and psychological development.

In this paper, the word ‘perinatal’ as an attributive refers to the total pre- and perinatal period, which begins at conception, includes birth and ends 6–12 weeks after birth. This period can be sectioned into the aforementioned three subsections. The foetal experiences are significantly variant in these periods, so every subsection requires different types of adaptation from the foetus.

- I.) The first subsection of the perinatal period lasts from conception to birth. In this period, the mother’s body is the ecological environment of the developing organisation, and it is nourishing and protective. During pregnancy, the relationship between the mother and the foetus is unequal, because the mother actually contains her foetus. The fundamental experience of the foetal life is growth and development, which is the basic experience of existence. This can be basically joyful, but it is influenced by the environmental stimuli and by the physical and emotional reactions of the foetus to these stimuli. The essential condition for a joyful experience of existence is that the foetus feels safe. A fearful, threatening experience diminishes the basic safety of the foetus, and triggers a stress reaction. Without processing a stressful experience, the foetus stays in a tensed state, which may become a trauma. Such a trauma can stay unconscious for a long time, waiting for solution and healing (e.g., during labour, it is very stressful for the foetus when the cervical os is not open for a long time. This experience can result in phobia of closed spaces in later life.)
- II.) The second subsection is the process of birth. When the birth starts, the foetus moves to the state of liminality, in other words he/she enters the border area of the inner and outer world. During birth, the foetus is experiencing the greatest and fastest change of his/her life. During this time, the foetus needs protection and encouragement to have enough power to go through the entire process which is full of life-threatening pains. The foetus relies on his/her own strength as well, and ‘makes decisions’ for the required adaptation, but sometimes those decisions are not appropriate. If the foetus does not get any help during this time, then the natural process of birth may be interrupted, and this may result in a cesarean birth.
- III.) The third subsection is the arrival to the outside world. The adaptation of the child to the new circumstances of the outer world is continuous in the

first days and weeks. He/she perceives and explores the expanded environment. In this period of life, the baby needs to change his/her relationship with his/her mother and with the other family members. The optimal change of these relationships requires the experience of the continuation between foetal life and outer life. If the continuity is interrupted, the infant may feel the world less safe, because it makes it difficult for him/her to identify his/her mother and his/her family in the outside world. This happens if the newborn baby is separated from the mother right after birth.

The general consideration of psychology and psychotherapy is that every important experience which comes with an emotional response and increased tension requires elaboration. Therefore, the various perinatal experiences need to be processed, even if there was no trauma during foetal life or birth. The quality and the intensity of these experiences determine the difficulty of the elaborative process and the support the child needs. The elaboration often takes place spontaneously in children's everyday activities (e.g. during playing hide and seek), but sometimes it requires the assistance of a perinatal specialist.

If the elaborative process fails, the experience may become a trauma, which can cause mood and behavioural disorders. Most of the crises of childhood and adulthood are based on unprocessed experiences. It may also happen that an experience affects the person as a shock. A shock-like experience in early childhood can result in dissociation (BAUER 2004; STUPIGGIA 2007). In cases of dissociation, the experience loses its subjective nature. That means that the person cannot make connection with it anymore, and cannot recognise it as his own experience. This often results in psychological disorders later.

Foetal life and early childhood are the most sensitive life-periods in terms of trauma. A foetus or a newborn baby, and even an infant is not able to cope with stressful life-events alone. A human infant is well prepared for life by nature, but only in a supportive, healthy and nourishing family. Parents, nevertheless, are vulnerable. Of course, most of them would like to take care of their children in a good way. However, the fundamental social mistakes and misconceptions about pregnancy (e.g. overmedicalisation of birth) and motherhood (e.g. the thought that 'crying strengthens the lungs'), and incorrect habits can cause traumas to the children. Such a start makes it difficult for the baby to adapt to his/her everyday life. It can also cause psychological symptoms and disorders from mild attachment difficulties to severe mental illnesses, like autistic spectrum disorder, ADHD, or somatoform disorders (LYMAN 1999; ODENT 1999; MAIELLO 2007; BABENKO et al. 2015). However, loving parental nourishing and supportive relationships during foetal life and birth establish the physical health and optimal development of the foetus and the baby. Growth and healing is deeply embedded in our human nature.

3. Stress in the perinatal period

The phenomenon of stress and its physical and mental consequences are an important and highly researched topic of psychology as well as of medicine. From a psychological point of view, this subject is important because all the emotional processes have a stress component as well. Every emotional event – e.g. if a pregnant mother is scared by something, or feels joy seeing her husband, or is worried about her sick child – triggers sympathetic physiological reactions: the muscles are tightened, and specific hormones are released in the body. These physiological reactions are much more measurable than the elusive emotional components. It is important for our health to have adequate tools to release the physiological arousal associated with emotional processes, and this has even more significance during pregnancy.

Anxiety might be considered the strongest emotional stress-factor. Every event that threatens the sense of safety during pregnancy provokes stress reactions in both the mother and the foetus. Through the strong physical connection between the mother and her foetus, the maternal stress automatically causes increased stress-levels in the foetus. The maternal stress is only one factor which can trigger stress reactions in the foetus. The most common stressful foetal incidents are the danger of abortion, losing a twin, the process of birth, the danger of severe diseases and maternal depression. Of the list above, we discuss the effect of maternal stress and the stress of birth in more detail in this paper.

3.1. The effect of maternal stress on the development of the foetus

The stress level of the pregnant mother has a strong influence on the physical and mental health of the next generation (ROBERTS et al. 2014, BABENKO et al. 2015). The maturing nervous system of the foetus responds sensitively to stress, and in cases of intense stress, the important cognitive functions (e.g. attention or memory) might not develop properly (SHIN et al. 2006; BAUER 2004). Results of epigenetic research also show how one generation hands over the effects of stress to the next one by changing the expression of the genetic code (BAUER 2004). Food intolerance might be among the ‘transmitted’ disorders which is not only a digestion problem, but as a stress-symptom it might be associated with other mental and physical illnesses.

Among the risk factors of the foetal development, maternal anxiety is outstanding for two reasons:

1. The anxiety of the mother reduces the amount of blood in the abdominal artery, so the blood supply of the uterus becomes decreased. As a result, foetal nutrition deteriorates, which risks the development of the nervous system and of the heart (DIPIETRO 2004; MONK 2001).
2. The high level of the stress hormones, especially of the corticosteroids, generally hinders the physical development of the foetus (BAUER 2004; ROBERTS et al. 2014).

3.2. The effect of the stress of birth on the mental and physical health of the baby

Birth is one of the most stressful events in life. The sudden environmental changes and the physical and mental difficulties during the process trigger tension in the foetus. Experiencing physical and mental relief after birth is key for health later in life.

‘Inter arma silent musae’ (when the cannons roar, the muses stay silent) says the Roman saying. It is well known for 2500 years – but it is not taken seriously – that at high stress level intimacy, the capacity of communication and creativity are lost (PORGES 2011). The most significant psychological consequences of high stress levels can be summarised as:

1. At high stress level, we cannot connect to others and we can pay very little attention to our partners, friends or even to our children (PORGES 2011).
2. At high stress level, we cannot use our own creative power to help ourselves (BYRON et al. 2010).

This also means that unprocessed stress of pre- and perinatal experiences causes developmental disturbances. These may be manifested in adulthood as:

- constriction of social life
- disturbances of attention and memory
- disturbed emotional self-regulation
- atrophy of self-motivated behaviour

Every perinatal event that threatens the safety of the foetus or the newborn baby triggers strong stress reactions. If the baby cannot calm down after birth because of his/her separation from the mother, then the intense stress-reactions can be fixed for a long time (BAUER 2004). That is problematic, because this high tension-level might become the natural homeostatic stress level for a lifetime. We often see this phenomenon in our therapeutic work. Many adults seem to be competent and well-functioning, but in the background, there is a personality with strong desire for compliance, and it turns out that the individual can only maintain his/her functions with strong control and with strong internal tensions.

4. Perinatal psychology

One of the main questions of the psychological scientific research is how an individual can prosper in his/her life. For prosperity, everybody needs a ‘compass’, a personal philosophy, which helps orienting in life. This personal philosophy can give answers to the question: What should I do with myself and with the people who are important to me in the constantly changing world? The experiences of foetal life, the pattern of birth, the first experiences after birth are the earliest building blocks of our personal philosophy, and these stay significant for a lifetime. The perinatal experiences are the foundations of the personality. Therefore, it is very important to process

these experiences, and the processing can take place any time. Two questions influence our psychological state at any time:

1. To what extent have we processed our early experience?
2. How do we handle the fear of death?

In this paper, we focus on what impact the beginning of life has on an individual's entire life. In the following section, we present our theory about the long-term effects of the perinatal experiences (OROSZ & SNAGY 2017). Our hypotheses are based on both the scientific literature and our observation from our psychotherapeutic work with approximately 3000 people. The long-term effects of the perinatal period are exceedingly complex. For better understanding, we discuss them along the following topics:

- ability to change and the pattern of managing boundaries
- ability to cope with stress and losses
- pattern of attachment, of bonding and of engagement to others
- attitude towards touches, towards one's own body, and towards intimacy

4.1. Birth as the basic pattern of coping with change

Perinatal research confirms that the experience of birth, as the first significant experience of change, becomes the basic pattern of coping with change (NOBLE 1993). During birth, we learn how to move from one state of life to another one. During birth, the foetus becomes a child. The experience of this transition becomes a pattern, therefore every time we are in a process of change (e.g. moving to a new flat, starting school, or starting a new job) this early pattern comes alive. Our hypothesis based on our therapeutic work is that if our birth was easy and safe, we will not be afraid of changes. However, if we had a hard time during birth, it could inhibit us from altering our lives even if it was necessary. In the process of the personality development, this early pattern of change activates most intensely in adolescence and around the mid-life turning point.

One of the most important factors of change is that the earlier and the later identities of the person are different. The altered identity means that the person defines him(her)self differently than before, and he/she also expects altered communication and attitude towards him(her)self from the social environment. These changes can be considered as alterations of the boundaries of the self. The disruption of the natural way of birth decreases the baby's sense of safety. In that case, it is difficult for the baby to integrate the experience that the result of change – the altered situation – is valuable and desirable into his/her new personality. Experiencing an unpleasant change might disrupt the identity development, because the person has difficulties to identify with his/her new identity. That can destroy the adaptability of the person, which can lead to other social failures and finally to isolation. Through withdrawal the person can protect him(her)self from further painful events, but it also inhibits the development of social skills. As we can see, this process can become a vicious circle.

4.2. The importance of mourning after birth

If the baby cannot integrate the experience of change associated with birth into his/her identity, then he/she will not be able to mourn over the lost life-situation (namely foetal life) either. In this case, mourning may be blocked for decades, and usually psychotherapy is needed to end the mourning. As it often happens in therapy, the termination of grief is connected to the loss of a close relationship or even the loss of a little pet. Our observation is that an unexpected loss of an important relative or even of a little friend often triggers a severe and mostly inadequate mourning reaction. The psychological processing of these losses is a huge task for the person, during which earlier losses can be processed as well. This bereavement can also alter a person's attitude towards changes, which can result in the development of the personality. Thereby the identity of the individual becomes more mature and his/her self-evaluation becomes more realistic.

4.3. Effect of perinatal experiences on attachment

Attachment is an invisible bond which does not allow mother and child to move away from each other. The attachment is not an emotion, it is rather a complex behavioural pattern, in which both mother and child are active participants. The shared aims of the mother and her baby in attachment are maintaining safety and evolving mutual trust. These are created by the proximity and by the supportive behaviour of the participants. This is considered as secure attachment, which is mainly based on the reliable and predictable relationship between mother and child, but it is also shaped by other harmonious social relations (SCHORE 2002; ZIMERMAN & DOAN 2003).

Perinatal factors that trigger secure attachment:

- Experience of togetherness between mother and foetus during birth. The continuous connection of the mother to her foetus provides safety for the foetus, by the experience of not being alone.
- Undisturbed 'golden hours' right after the birth. The first few hours after the baby comes to the world are parts of an extremely sensitive life-period, which is key for the emergence of secure attachment. The newborn baby's sense of safety depends on whether the mother can hug her child tightly in these first hours. The skin-to-skin contact between mother and child allows for the baby to identify his/her mother, and to make sure that this mother is the same mother who was containing him/her for nine months.
- The 'good enough' parental caring behaviour in the first few months, which fits the needs of the baby. Beside a 'good enough' mother or father, the child gradually learns how to make contacts with the world and with other people.

The basic pattern of secure attachment forms not only the ability to make intimate relationships as an adult, but also the capability to integrate into communities, to engage with and cooperate with others.

4.4. Influences of birth on attitudes towards touches and towards intimacy

Touch is a fundamental form of expression of being in a relationship with someone. The touches that reflect bonding are strikingly different from any violent, abusive or threatening touches that may cause pain. A supportive and interested touch, which is full of attention, expresses the readiness to link. The touches trigger not only emotional but also strong physiological reactions. A pleasant touch is associated with euphoria when oxytocin is released in the body (NYITRAI 2011). As a result, the person calms down, feels safe and opens up towards his social environment. In the mother-child relationship, mutual touches are extremely significant. These are the main tools to reduce the stress levels of both the mother and the child. Unfortunately, this form of intimacy is not familiar for many people who experienced touch only in a sexual context.

5. Indications for perinatal psychotherapy

Previously we have summarised the possible long-term effects of perinatal experiences. We have shown that a gentle childbirth without violence (see LEBOYER 2011) might result in good enough physical and mental health at birth, which, according to Michel ODENT (1999), as ‘primal health’, establishes good enough health for a lifetime. However, the baby can have difficulties or even traumas in foetal life or during birth. These experiences also cause long-term effects. In this case our skills and abilities of perceiving the world and reacting to it might evolve in a special way. Then, the main focus of development is to avoid the pain associated with the early difficult experiences. The capabilities learned in that way help us to survive, especially in childhood, when we are very vulnerable. However, these abilities might be partially inadequate in adult life. For example, social withdrawal might enroot in perinatal life. If the first experience of a newborn baby is separation, he/she might think that the world is unsafe and he/she cannot count on anyone. A child with this experience might become exceedingly independent and assertive. He/she will be highly competent in professional life, but he/she might have difficulties in social situations (e.g. making relationships).

Naturally, there might be many different factors behind our everyday behaviour and difficulties. These factors are memories of our experiences from conception to the present moment of our lives, which are built on one another in our minds in a cascading manner. Considering this, we cannot say that our present life is determined solely by the perinatal experiences. However, perinatal experiences are significant for many reasons (BARKER 1998; ODENT 1999; JANOV 2011; RENGGLI 2013).

First, the representations of the early experiences influence the functioning of the subsequent information processing. In this sense, the early experiences can be considered as ‘eyeglasses’, through which we perceive and interpret later events of our lives.

Secondly, the experiences associated with foetal life and birth are extraordinary, because they often touch the problem of life and death.

Thirdly, perinatal experiences are the root of our development, because they and the reactions associated with them are being organised into special patterns, which might activate later at any time (GROF 2008). However, this is not a rigid and schematic process, we always have the opportunity to change these early patterns.

In the following section, we summarise the frequently occurring adult difficulties which can be associated with the inhibited process of perinatal experience. However, first we would like to note that the symptoms of perinatal problems in adulthood are often preceded by signs in childhood as well. The most common childhood signs of untreated perinatal difficulties are:

- infant regulation problem
- functional disturbances of the gastrointestinal tract
- anxiety disorders in childhood
- poor general health (many illnesses) in childhood
- several accidents during childhood

When summarising the symptoms, we do not use the common diagnostic categories of psychiatry (BNO or DSM). The description is based on everyday language, to show that the problems are not distinguished along health and diseases.

5.1. Frequent symptoms of untreated perinatal difficulties in adulthood according to our hypotheses

Difficulties of attitude towards change

- The significant constriction of the comfort zone
- Hard decision making
- Detachment problems in the beginning of adulthood
- Inability to make intimate relationships
- Difficulties around the mid-life turning point

Disorder of relationships

- Ambivalent relationship with the mother. Love is present in the relationship, but it is often overwhelmed by anger, and intimacy is missing
- Long-lasting sex-free partnership

Unreasonably long-lasting mourning

Anxiety disorders, if the current life events do not justify the alleviation of the tension and especially if the symptoms of the anxiety might be symbolically associated with birth. For example:

- fear of being in a closed place (e.g. elevator, subway)
- fear of passing through tunnels
- fear of rotating elements (often of whirlpools generated by draining water in the bathroom)
- fear of death

- excessive fear of being abandoned or losing someone
- classic symptoms of panic disorder
- obsessive need for cleanliness

Disorders associated with touch

- aversion to being touched
- need for continuous body contact

Reproductive disorders

- Functional infertility
- Difficulties in procreation or in conception
- Multiple spontaneous abortions
- High-risk of pregnancy
- Strict rejection of having a baby

6. Psychotherapy of perinatal experiences

Specific psychotherapeutic methodology for processing perinatal experiences first appeared in the 1970s. There are only a few therapeutic centres in Europe and North America where psychotherapy focuses on perinatal traumas. The bases of our psychotherapeutic methodology for processing perinatal traumas were founded by Katalin Orosz, clinical psychologist, between 1990 and 2001. The further development of this therapeutic methodology is currently managed by a professional group called Experimental Study Group for Birth; they have been working since 2005. The methodology's main elements are:

1. The methodology is embedded in a transpersonal approach.
2. In the therapeutic work we use a person-centred attitude (ROGERS 1951). Therapy focuses on the development of the psychological functioning rather than on the exploration of the disorders.
3. For the interpretation of the extreme human conditions, we use the personality model based on the analytical psychology of Carl Gustav JUNG (1928).
4. Existential psychology (FROMM 1976; FRANKL 2006) and psychotherapy (YALOM 1980) also provide an important framework for interpretation of psychological functioning.
5. Body-work is a fundamental therapeutic tool for exploring the early experiences embedded in the body-memory.
6. An important component of our methodology is to enhance the client's personal responsibility for the development of his/her own psychological functioning.
7. A transpersonal psychotherapeutic group named Birth Change and Healing is the fundamental space of the psychotherapy of perinatal experiences and traumas. The group work usually lasts 3 consecutive days and includes a follow-up meeting a month later. The group includes imagination, body work

and movement practices. We also teach self-helping tools like diary writing, working with dreams, relaxation techniques and methods for elaborating feelings.

7. Summary

The fundamental tool of the preservation and restoration of physical and mental health is processing the emotional components of our experiences, especially if they are traumatic. Perinatal experiences have important influences on our well-being for a lifetime, but neither the everyday nor the medical significance of their effects are well known yet. Therefore, co-operation is needed on societal level to reduce the traumas of the next generation.

Birth is the first major change in life. The experiences associated with birth influence our development, especially our ability to cope with changes and losses, our attachment patterns, and the capability to handle self-boundaries. Furthermore, the intensity of the stress reactivity in adulthood depends strongly on the experienced extent of the tension at birth and elaboration of that stress. Elaboration is important, because research results show that a high level of stress makes intimate relationships and childbearing difficult, and it inhibits the creative self-helping processes. Perinatal experiences can be processed at every stage of life. In adulthood, perinatal psychotherapy can be the best space for processing these early experiences, especially if they were traumatic. During 22 years of work we have created a transpersonal psychotherapeutical group named Birth Change and Healing for processing perinatal traumas in adulthood.

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