

# **Mental health related effects of breastfeeding**

**Szabolcs J. TÖRÖK**

**Semmelweis University, Budapest, Hungary**

[torok.szabolcs@public.semmelweis-univ.hu](mailto:torok.szabolcs@public.semmelweis-univ.hu)

## *Introduction*

Parallels can be found between the beginning of life and the end of life, between birth and dying. Today, both happen mostly under hospital conditions, however, it is increasingly evident that besides some necessary medical tasks, there are many other, non-medical needs of the "sick" (or rather, call it like this: dying person, pregnant women, newborn). At the beginning and at the end of life both medical and non-medical issues are present.

The birth and the accommodation of a newborn are not only biological processes, but also the beginning of the development of the personality. The feeding process of a newborn or a young infant goes beyond its biological aspects. It is more than the importance of the composition of the nutrients, the nutritional supplements, or the physical development.

The following chapters will outline some of the aspects of breastfeeding in relation with mental health and emotional development of the infants as well as their mothers.

## *The biological benefits of breastfeeding and its connection with mental health*

An official report has been published recently by the U.S. Department of Health & Human Services, Agency for Healthcare Research and Quality (Ip, 2007) reflecting the effects of bottle feeding and breastfeeding on babies' health issues. Some of the interesting statements from the meta-analysis of more than 9,000 relevant articles are the following:

Four month of exclusive breastfeeding reduced the need for hospitalization due to respiratory diseases by 72% of babies during their first year of life. The incidence of non-specific gastrointestinal inflammations (and the need for hospitalizations due to these conditions) reduced by 64% among breastfed infants (Ip, 2007). The incidence of middle ear infection has been reduced by 50% among those who were breastfed exclusively for at least 3 month in comparison with those who were bottle fed. Other conditions less commonly occur among breastfed

children: asthma (reduced by 72% - exclusive breastfeeding for at least 3 month); atopic dermatitis (reduced by 42% high risk families - exclusive breastfeeding for at least 3 month); obesity (4% decrease with all breastfed months); type-2 diabetes (reduced by 39% among breastfed infants, during later childhood years). The incidence of childhood leukemia was also found decreased among breastfed children: the incidence of Acute Lymphocytic Leukemia (ALL) decreased by 19% and the incidence of Acute Myeloid Leukemia (AML) reduced by 15% among those who were breastfed for at least 6 month (Ip, 2007). It should be noted that only data from the developed countries was processed in this study, therefore it can serve as a good approximation for our country as well.

Besides the above mentioned meta-analysis we could cite many articles on the issue how breastfeeding reduces the incidence of diseases and accordingly the number of hospital admissions necessitated. For the purpose of the analyses of mental health aspect of breastfeeding we can focus on the evidence that reduced number of hospital admissions in early childhood can have a significant positive impact of the mother-child relationship in this very sensitive period.

The infant and childhood diseases (particularly serious or chronic illnesses) also burden the parents. Although these times of crises can strengthen the parents by offering an opportunity to develop new coping mechanisms, yet they can overburden the parents and could be the sources of excessive chronic stress or initiate acute crises in the family. It can occur both on an individual or a family system level. These acute crises can superimpose on the difficulties arising from the life-cycle challenges of families living with small children and can result in breakage of marriages as the worse.

The separation experiences a child might go through determine the emotional or personality development of that person. During self-knowledge group sessions or individual counseling sessions we often encounter stories about long hospitalization or other traumatic separation events. As scientific background theories of these issues we can quote the observations and experiments of Spitz (1946), Erickson (1963), Bowlby (1973), and Riemann (1990). The correlation of early childhood hospitalization and the potential risk of disturbed emotional development can be assumed obvious.

### *Breastfeeding and intelligence*

A number of studies and meta-analysis reveals that there is a detectable correlation between breastfeeding and better school performance, higher intelligence, lower incidence of learning difficulties. This has been confirmed by a WHO declaration as well, which analyses the long-term

effects of breastfeeding (Horta, 2007). These results have led to fierce professional and methodical debates over the past decades. The detailed discussion of these findings would overextend the framework of our present essay, so we can only refer to these results, and debates. In any case, it is easy to see that the above factors may interact with children's psychological development, integration into the peer group, and they can be considered as risk factors to secondary mental and behavioral disturbances.

### *Breastfeeding and childhood behavioral disorders*

The prestigious Journal of Pediatrics journal has recently published the results of a large prospective study of Oddy and colleagues (Oddy, 2010) about the behavior and mental health of children and adolescents in relation with breastfeeding, using a 14 years of follow-up. The purpose of the survey was to determine the effect of breastfeeding itself on children's mental health that are independent from other factors and significant statistically. The study was conducted in Western Australia involving 2900 pregnant mother. The survey found that if breastfeeding happens only for a shorter period of time (breastfeeding lasting less than 6 months, including those who did not have breast milk), it can be identified as an independent risk factor regarding the development of childhood behavioral problems, as opposed to the longer periods of breastfeeding (breastfeeding lasting more than 6 months) practices. For the determination of any behavioral problems the well-known CBCL - Child Behavior Checklist questionnaire (Achenbach, 1991; Gádoros, 1996) was used five times during childhood years (2, 6, 8, 10 and 14 years of age). Again it must be emphasized that in this study particular attention was paid to identifying the potential disturbing factors, confounding variables, and thus the duration of breastfeeding as an independent variable could be measured. It is a remarkable value of this survey that the design of it was a longitudinal, prospective, cohort study with relatively large number of participants (n = 2900). Considering these facts the results are even more remarkable.

### *Breastfeeding and abuse, neglect*

The journal of American Academy of Pediatrics has recently published an article (Strathearn, 2009) reporting a significant close relationship between poor maternal treatment (particularly maternal neglect) and the duration of breastfeeding, which is independent from other factors. With other words, breastfeeding was found to be an independent protective factor against maternal maltreatment and neglect. This correlation was independent from the following, potentially influencing factors: socio-demographic factors

(maternal age, education, marital status, race, employment); desired or undesired pregnancy; substance abuse during pregnancy; employment status of the post-partum period; parental attitudes towards infant; anxiety or depressive symptoms; parameters of the baby (sex, maturity, fact and duration of separation from mother, quality of care at intensive care unit). The study involved as much as 7.000 mother-child units who were investigated in a prospective study design. Maltreatment was defined as neglect or any emotional or physical abuse documented in official notes or reports.

The maternal maltreatment showed reverse relationship with the duration of breastfeeding: non-breastfed infants have 4.8 times higher chance for maternal maltreatment, compared to those who had been breastfed for at least 4 months. After correction for potential confounding environmental factors the non-breastfed infants showed a 2.6 times higher risk for maternal maltreatment compared to their breastfed peers.

Nevertheless, between breastfeeding and non-maternal maltreatment (committed by father, step-father, other relative, or any other person) there was no detectable correlation. In other words this means that while a reduction could be detected regarding the maternal maltreatment during breastfeeding, it has got no detectable effect on maltreatment from other (not maternal) maltreatment. Based on these results we can assume that breastfeeding plays a significant role in the development of a protective, “different” relationship between mother and child and this is independent from other environmental factors.

### *Breastfeeding and mental health of nursing mothers*

Early cessation of breastfeeding, and non-breastfeeding considered to be a risk factor for maternal postpartum depression (Ip, 2007; Kendall-Tackett, 2010). Untreated maternal depression could have an influence on the infant's or toddler's mental or emotional development. Children of depressed mothers are bearing an increased risk for development of the following conditions: low self-esteem, mental illness, substance abuse or other behavioral problems. Experience of close body contact with the mother and intense emotional relationship that occur during breastfeeding can compensate the negative effects of maternal depression leading to the above mentioned conditions (Kendall-Tackett, 2010).

Lessons learned from a recent study breastfeeding have a positive effect on the development of experienced maternal self-efficacy (Tarkka, 2003). Later results demonstrated that breastfeeding and attachment parenting care has a positive effect on family relationships as a whole (Epstein-Gilboa, 2010).

In addition, addressing these issues from economic or work related aspects, it is a remarkable finding that nursing mothers are missing less days from work, and breastfeeding has a positive effect on their work satisfaction and productivity (Lawrence, 2011).

## *Summary*

The issue of a healthy start of life is one of the leading themes of current national or international public health programs. The benefits of breastfeeding on physical health are relatively well known by professionals as well as by the public. Nevertheless, breastfeeding is influencing not only the biological but the mental and emotional development of the infants and toddlers as well. These non-physical parameters are likely to be as important for families as their child's physical development. Thus, wider dissemination of related information and further scientific research should be done on this field.

## *References*

- ACHENBACH, T. M. (1991). *Manual for the Child Behavior Checklist / 4-18 profile*. Burlington, VT: University of Vermont Department of Psychiatry, Bd.
- BOWLBY, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.
- EPSTEIN-GILBOA, K (2009). *Interaction and Relationships in Breastfeeding Families*. Hale Publishing.
- ERIKSON, E. H. (1963). *Childhood and Society*. New York: Norton.
- GÁDOROS J. (1996). Szociodemográfiai rizikótényezők vizsgálata gyermek viselkedési kérdőív alkalmazásával. *Psychiatria Hungarica*, 11 (2), 147-166.
- HORTA, B. L., BAHL, R., MARTINES, J., & VICTORA, C. (2007). *Evidence on the long-term effects of breastfeeding: systematic reviews and meta-analyses*. Geneva: World Health Organization. Retrieved from [http://www.who.int/child\\_adolescent\\_health/documents/9241595230/en/index.html](http://www.who.int/child_adolescent_health/documents/9241595230/en/index.html) [01.12.2013]
- IP S., CHUNG M., RAMAN G., CHEW P., MAGULA N., DEVINE, D., et al. (2007). *Breastfeeding and maternal and infant health outcomes in developed countries*. Evidence Report/Technology Assessment, No. 153. Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from <http://www.ahrq.gov/downloads/pub/evidence/pdf/brfout/brfout.pdf> [01.12.2013]

- KENDALL-TACKETT, K (2010). *Depression in New Mothers*. 2nd edition. Routledge.
- LAWRENCE, R. A., & LAWRENCE, R. M. (2011). *Breastfeeding. A Guide for the Medical Profession*. Elsevier.
- ODDY, W. H., KENDALL, G. E., LI J., JACOBY, P., ROBINSON, M., DE KLERK, N. H., SILBURN, S. R., ZUBRICK, S. R., LANDAU, L. I., & STANLEY, F. J. (2010). The long-term effects of breastfeeding on child and adolescent mental health: a pregnancy cohort study followed for 14 years. *Journal of Pediatrics*, 156 (4), 568-574.
- RIEMANN, F (1990). *Grundformen der Angst*. München: Ernst-Reinhardt-Verlag.
- SPITZ, R. A., & WOLF, K. M. (1946). Anaclitic Depression - An Inquiry Into the Genesis of Psychiatric Conditions in Early Childhood. *Psychoanalytic Study of the Child*, (2), 313-342.
- STRATHEARN, L., MAMUN, A., NAJMAN, J. M., & O'CALLAGHAN, M. J. (2009). Does Breastfeeding Protect Against Substantiated Child Abuse and Neglect? A 15-Year Cohort Study. *Pediatrics*, 123, 483.
- TARKKA, M. (2003). Predictors of maternal competence by first-time mothers when the child is 8 months old. *Journal of Advanced Nursing*, 41 (3), 233-240.