

# Common mental disorders during pregnancy and baby's development in the first year of life

Clementina Pires de Almeida - WeDoCare - Private Practice Porto. Flávia Cunha - WeDoCare - private practice Porto Eduardo Sá - FPCE- Universidade Coimbra

## Objective

The aim of this study was to evaluate the impact of Common Mental Disorders (CMD) during pregnancy on child's mental development during the first year.

A prospective study was carried out with 204 pregnant women in the third trimester of pregnancy and continuing with their babies to 3.5 and 12 months of age.

## Introduction

Pregnancy has been considered to be a stressful period for some women during in which they have to deal with many physical, hormonal and/or psychopathological changes. Several studies point to an increased risk for psychopathological disorders, and that high levels of depressive, anxiety, panic and/or somatic symptoms occurring during pregnancy and after birth, (perinatal Common Mental Disorders - CMD) are important predictors of subsequent postpartum depression and postpartum anxiety.

The physical and emotional state of mothers during pregnancy is thought to affect the well-being and equilibrium of the baby. Difficulties experienced during this period may be associated with lasting effects on babies as far as their emotional, behavioural and cognitive levels are concerned.

## Method

To assess the presence of CMD, the Brief Symptom Inventory (BSI) and the Inventory of the Clinical Evaluation of Depression (IACLIDE) were used. Evaluation of the babies' mental development and the socio-emotional state was carried out using the Griffiths Mental Scale (0-2) and the Brief Infant Toddler Social and Emotional Assessment (BITSEA).

## Conclusion

We observed 20 babies born to women with a positive diagnose for CMD and who presented a positive screen in the BITSEA. We also observed a statistically significant relationship regarding the diminished development in certain Griffith's sub-Scales of babies whose mothers showed presence of psychotic, anxiety, hostility and depressive symptoms, during pregnancy. So, we conclude that the presence of CMD influences the mental, social and emotional development levels of infants in their first year.

## Results

Regarding the presence of Common Mental Disorders (CMD) in pregnant at least of 25 weeks of gestation, it was found that 53 (27.5%) pregnant women were positive for diagnosable psychopathology. It was also found that 68 (79.1%) presented with symptoms of hostility, 66 (33.5%) paranoid ideation, 34 (17.2%) anxiety and 42 (21.2%) depression. When we analysed the presence of depression in IACLIDE, we found 37 (19.1%) participants who were depressed. In the analysis at 3,5 months of age of babies born to women with positive diagnose in BSI's Anxiety subscale, statistically significant differences in Personal-Social ( $p=.004$ ), Performance ( $p=.004$ ) and Global ( $p=.008$ ) subscales were found between the two groups of babies. In the Personal-Social Performance subscale and Global scale, babies born to women with positive diagnose in BSI's Anxiety subscale scored lower. Babies born to women with positive diagnose in the BSI's Obsessive-Compulsive subscale, showed lower mean values on all the Griffiths 0-2 subscales ( $p=.102$ ), and there were significant differences in the Hand-Eye Coordination ( $p=.051$ ) subscale. Babies born to women with positive diagnose on BSI's Depression subscale had a statistically significant ( $p=.018$ ) higher mean score ( $M = 106.8$ ,  $SD = 21.7$ ) than babies born to non-depressed women ( $M = 105.9$ ,  $SD = 17.0$ ) in the Locomotor subscale. Babies born to women with positive diagnose in BSI's Psychoticism subscale showed significant differences on the Hand-Eye Coordination and Performance subscales, whereas babies born to women with Psychotic symptoms showed lower mean scores. At 12 months significant differences were also observed: babies born to women with a positive diagnose on BSI's Depression subscale had a lower mean score in Global mental development ( $M = 102.7$ ,  $SD = 12.9$ ) than babies born to women who did not have depressive symptoms ( $M=107.6$ ;  $SD=10.7$ ); these same babies had a lower mean score ( $M = 98.8$ ;  $SD = 17.5$ ) on the Personal-Social subscale when compared with babies born to non-depressed women ( $M = 106.5$ ;  $SD = 15.5$ ) ( $p=.021$ ) and babies born to women who showed Hostility symptoms had a lower mean value ( $M = 103.5$ ;  $SD = 11.5$ ) in the Global mental development than babies born to women who did not show such symptoms ( $M=111,2$ ;  $DP=9.1$ ) ( $p=.030$ ).

## BIBLIOGRAFY

- Austin, M., & Leader, L. (2000). Maternal stress and obstetric and infant outcomes: Epidemiological findings and neuroendocrine mechanisms. *Obstetrics & Gynaecology*, 40 (3), 331-337.
- Briggs-Gowan, M., & Carter, A. (2004). The Brief Infant-Toddler Social and Emotional Assessment problems and delays in Competence. *Journal of Pediatric and Psychology*, 29 (2), 143-155.
- Griffiths adaptadas ao português: versão parcial para investigação. *Laboratório de Fala da Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto*.
- Davids, A., Holden, R., & Gray, G. (1963). Maternal anxiety during pregnancy and adequacy of mother and child adjustment eight months following childbirth. *Child Development*, 34 (4), 993-1002.
- Degoratis, L., & Leonard, R. (1993). *BSI-Brief Symptom Inventory. Administration, scoring and procedures manual*. Pearson.
- DiPietro, J. (2002). Prenatal/Perinatal stress and its impacts on psychosocial child development. *Encyclopedia on Early Childhood Development*, 257-260.
- Fatoye, F., Adeyemi, A., & Oladimeji, B. (2004). Emotional distress and its correlates among Nigerian women in late pregnancy. *Journal of Obstetrics & Gynecologists*, 24 (5), 504-509.
- Figueiredo, B. (2005). *Psicopatologia da maternidade e paternidade* (Vol. 12). Edições Afrontamento.
- Gavin, N., Gaynes, B., Lohr, K., Meltzer-Brody, S., Gartlehner, G., & Swinson, T. (2005). Perinatal depression: a systematic review of prevalence and incidence. *Obstetrics & Gynecology*, 106, 1071-1083.

# Mother-infant relationship during pregnancy and babies' development in the first year

Clementina Pires de Almeida – WeDoCare – Private Practice Porto. Flávia Cunha – WeDoCare – private practice Porto Eduardo Sá – FPCE- Universidade Coimbra

## Objective

The aim of this study was to gauge how, in Portuguese pregnant women, the mother-baby relationship during the pregnancy (Maternal-Fetal Attachment, Maternal Adjustment and Maternal Attitudes) affects babies' Mental and Social-Emotional Development. A prospective study was carried out with 204 pregnant women in the third trimester of pregnancy and continuing with their babies to 3.5 and 12 months of age.

## Introduction

The need to establish emotional ties is vital to the human being. As we create our relationship with the world, we do so by developing an emotional bond with those who care for us, thus creating and developing our internal working models. This process starts long before birth with the development of the maternal-fetal relationship

Research has shown us the great role that the mother-infant relationship plays in the neurobiological and psychological development of the babies. When born, the babies are totally dependent on the adults for survival and the mother-baby relationship is of extreme importance in regulating their internal and external states

The Maternal-Fetal Attachment (MFA) refers to an initial phase of a continuum process of mother-infant attachment that extends itself into the postnatal period.

Studies have confirmed that the attachment with the fetus is generally developed upon the basis of an internal representation which is more and more elaborate and personified of the fetus as pregnancy develops, expressed in behaviors that demonstrate care and commitment to the fetus.

MFA also has significant implications for maternal-infant bonding in the postpartum period and can be positively correlated with the mother-child relationship and the social, emotional and cognitive developments.

## Method

To assess mother-baby relationship during pregnancy were used the Maternal Fetal Attachment Scale (MFAS) and the Maternal Adjustment and Maternal Attitudes (MAMA). Evaluation of the babies' mental development and the socio-emotional state was carried out using the Griffiths Mental Scale (0-2) and the Brief Infant Toddler Social and Emotional Assessment (BITSEA).

## Results

Our study findings revealed that babies at 3.5 months and one year of age, born of mothers classified with a good MFA during pregnancy had a higher Global Mental Development than infants whose mothers did not.

When we analyzed MFA and Social-Emotional state at 12 months, we found a total of 23 (31.5%) infants with a positive screen for BITSEA, being 4 (5.5%) infants born to women who scored as having low MFA and 19 (26%) infants born to women who scored as having high MFA. These values showed no statistical significance.

In the same line of the MFA, babies who were born to mothers with a good MAMA during pregnancy had better levels of Social-Personal, Eye-Hand Coordination, Realization as well as a better Global Mental Development.

When we correlated data from Maternal Adjustment and Maternal Attitudes (MAMA) and infant Mental Development, it was found that babies at 3.5 months, born to women who scored as having a low MAMA had lower Global Mental Development values, when compared with babies born to women who scored as having a high. However, these values were not statistically significant.

At 12 months of age, we found that babies born to women with low MAMA had a higher mean value of Global Mental Development ( $M=107.1$ ;  $SD=11.3$ ), and in the Locomotion subscale showed a statistically significant higher mean value. When we analyzed Maternal Adjustment and Attitudes during pregnancy and Social-Emotional state at 12 months we found a total of 30 (39.5%) infants with a positive screen for BITSEA, being 16 (21%) infants born to women who scored as having low MAMA during pregnancy and 14 (18.4%) infants born to women who scored as having high MAMA. These differences had statistically significant values for the group of the boys.

## Conclusion

This study showed that maternal experiences of affections are associated with the mother-infant interaction providing a better or worse Mental, Emotional and Social Development, and as such, can be an important diagnostic aid to identify women for whom the mother-baby relationship is sub-optimal.

### BIBLIOGRAPHY

Belsky, J., Spritz, B., & Crnic, K. (1996). Infant attachment security and affective-cognitive information processing at age 3. *Psychological Science*, 7 (2), 111-114. Benedek, T. (1959). Parenthood as a development phase: A contribution to the libido theory. *Journal of the American Psychoanalytic Association*, 7, 389-417. Briggs-Gowan, M., & Carter, A. (2004). The Brief Infant-Toddler Social and Emotional Assessment problems and delays in Competence. *Journal of Pediatric and Psychology*, 29 (2), 143-155. Canavarro, M. (1999). *Relações afetivas e saúde mental*. Coimbra: Quarteto. Castro, S., & Gomes, I. (1996). As escalas Griffiths adaptadas ao português: versão parcial para investigação. *Laboratório de Fala da Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto*.