RECAP SUMMER SCHOOL

MATERNAL DISTRESS IS A PUBLIC HEALTH ISSUE

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I am Marina Cuttini, and my topic is an introduction to maternal distress as a public health issue. I am a neonatologist, and I worked for several years in the NICU in Trieste, Italy. I gradually moved to research, becoming a perinatal epidemiologist first in Trieste, then in Florence and now in Rome.

Within the ReCAP collaboration, I am the coordinator of the Italian ACTION follow-up project, an area-based study that recruited all very preterm births in 2003-05 in 5 Italian regions with follow-up at 2 years corrected age, together with a sample of term-born controls. In 3 regions only (Friuli Venezia-Giulia, Tuscany and Lazio, we also carried out follow-up at school age (average 9 years). Data on maternal distress were collected both at 2 and at 9 years follow-up.

Maternal distress was defined (*Emmanuel and St John 2010*) as a woman's response to the transition to motherhood, including changes to the body, roles, and social circumstances; birth experiences; and the demands and challenges of being a new mother. I like this definition because, in contrast with the more commonly used bio-medical paradigm (*American Psychiatric Association DSM-IV and V*), it has the advantage of not pathologizing the mothers' unhappiness, without however denying the importance of attention and support, and the possible development of severe conditions such as major postpartum depression and even psychosis.

Maternal distress is a universal phenomenon. It was described in many different countries and cultures, both in the industrialized and developing world. Frequencies are in the range of 8-20% *(Kurtz 2017, Schmied 2013)* depending not only on the characteristics of the sample, but also on the screening tool and cut-offs used, and on the length of the postpartum period considered (e.g. 1, 6 or even 12 months). Values as high as 30-40% have been reported *(Skreden 2008)*

Fathers can be involved too, both as a consequence of their partner's distress, and as their own response to the challenges of parenthood (*Davé 2010, Cheng 2016).*

It is generally considered that mothers of very preterm and very low birth weight infants are at increased risk (*Vanderbilt 2009, Treyvaud 2014, Yaari 2019*), but the literature is not consistent on this regard *(Renske Schappin 2013, Tommiska 2002; Howe 2014)*. In the ACTION cohort at 2 years corrected age we found a prevalence of any maternal distress, from mild to severe, of 30%, without statistically significant

difference between mothers of very preterm and of term-born infants. (*Montelisciani 2020).*

Maternal distress is generally diagnosed after birth, but we know that the onset is often antenatal, up to 30-40% of cases. Together with depression, symptoms almost always include anxiety. Additionally, there can be excessive fatigue, poor concentration, feelings of worthlessness and helplessness, fear of being a “bad” mother, and even of harming the baby. Delusions and hallucinations can be present in the rare cases of postpartum psychosis.

The most important risk factors are a history of antenatal or pre-conceptional depression and poor partner relationship. Very important contributing factors are also lack or inadequate support, also by family and extended network, and problems with the infant’s health.

The duration of postpartum depression can be longer than recognized, as shown by the few long-term follow-up studies such as the one by *Davé et al, 2010*. After the initial year postpartum, where the rates of maternal and also paternal distress were quite high, there was a very slow decline over several years up to a child age of 11.

Particularly when chronic, maternal distress can have important and life-long consequences, concerning the woman’s health and quality of life; the couple relationship; and the child health and development, including earlier breastfeeding discontinuation, impaired cognitive development, socio-emotional, behavioural and mental health problems.

The relation between maternal distress and child development may be mediated by impaired parenting abilities, even with low levels of depression *(Conners-Burrow 2013)*. Several studies have documented inconsistent response to the infant’s needs, scarce interaction and scaffolding, insufficient offer of stimulating activities.

Additional postulated mechanisms are pre- and postnatal epigenetic influences that can modify the expression of the child genes without changes to the underlying DNA sequences (*Monk 2012*), and pre- and postnatal influences of the child brain structure and functions (*Shonkoff 2012, Dean 2018, O’Donnell 2017*).

Given this picture, what can be done? Pregnancy and early childhood are for most women a period of frequent contacts with the healthcare services and professionals. This represents a window of opportunity for screening and intervention if needed. But first, we have to ask the question!

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