Perinatal psychiatry, birth trauma and perinatal PTSD

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Credit: PLOS Blogs

It is now blatantly clear that a woman's increased vulnerability to developing PTSD is closely linked to that fact that, when compared to a man, she is much more likely to be the victim of the toxic traumas of childhood sexual abuse, rape, and intimate partner violence. More recently another type of trauma that women are uniquely vulnerable to enduring is garnering increasing attention—the psychological trauma associated with giving birth.

Dr. Rebecca Moore is the lead psychiatrist for the Tower Hamlets Perinatal Mental Health service based in London, U.K. Her clinical interests include PTSD and birth trauma, premenstrual dysphoric disorder (PMDD), the treatment of anxiety and depression in the perinatal period, and supporting the parent infant bond. Dr. Moore is passionate about improving services for women traumatized by birth and hosts an annual forum on Birth Trauma in London in December each year. Her goal is to form networks with those working with families with Birth Trauma around the world to share knowledge and innovative practices.

I recently spoke with her to understand more about Birth Trauma and PTSD.

Dr. Jain: You are a perinatal psychiatrist who specializes in treating psychological aspects of birth trauma. Can you start by talking a little bit about what a perinatal psychiatrist does and why there is a specific need for this type of expertise for pregnant women? Can you comment specifically on your work with immigrant/refugee populations who may have high rates of mental health problems to begin with?

Dr. Moore: Perinatal psychiatrists work with women with new onset or preexisting moderate to severe mental health diagnoses through their pregnancy and up to a year after birth.

We are community based and work with women and their families to support their mental health through this vulnerable time period. This includes regular outpatient review, community nursing support, psychological support, and expertise around prescribing medication

during pregnancy and breastfeeding, alongside monitoring the developing parent infant bond.

Perinatal services recognize the fact that for some women, pregnancy is a challenging time period and that certain disorders—Anxiety or Bipolar Disorder, for example—have high rates of relapse.

There is an increased risk of suicide after pregnancy, and suicide remains one of the leading causes of maternal death in the first 42 days after birth in the United Kingdom, as highlighted by the last MBRRACE-UK release "Saving Lives, Improving Mothers' Care – Surveillance of Maternal Deaths in the UK 2011-13."

Perinatal disorders often develop rapidly, and our team provides a rapid specialist response to these crises and can facilitate rapid treatment and admission to local Mother and Baby Units if needed. London has three Mother and Baby Units, but many areas of the country still have no provision at all, such as Wales or Northern Ireland.

I work within Tower Hamlets, a very deprived area in East London, with a young population who have higher than average numbers of children. Our population is growing rapidly, it is expected to grow by 26% over the next twenty years, and there is a high birth rate, around 5500 births per year, so the demand on our service grows yearly.

50% of our referrals are Bangladeshi women, which reflects our local population. We have a hugely transient population with people moving in and out of our area, and we have women within our service from all over the world who have often been exposed to war or huge trauma. We often work with interpreters and have to be extremely mindful of the cultural and spiritual aspects of our care.

Dr. Jain: When researching this topic of Birth

Trauma, I ran into some issues regarding definitions: there appears to be considerable variability regarding what this term means. Can you offer a definition of Birth Trauma and also comment on how this is different from Postpartum PTSD?

Dr. Moore: You are right, there is not yet any standard diagnostic definition, and this can cause confusion as there is a significant difference between Birth Trauma and Postpartum PTSD regarding symptoms and treatment.

When a woman has a traumatic birth, I mean that there was something subjective about the birth that was traumatic. This does not have to be life threatening or medically traumatic. We are thinking of the psychological impact of that birth experience on the mother.

Birth Trauma definitions include "a negative and disempowering physiological & emotional response to a birth" or "when an individual (mother, father, or other witness) believes the mother's or her baby's life was in danger, or that a serious threat to the mother's or her baby's physical or emotional integrity existed." I love Rachel Yehuda's use of the term trauma as "a watershed event, an event that kind of divides your life into a before and after."

Common themes include feeling unheard or not listened to, a lack of compassion from medical professionals, and feeling out of control or helpless.

Around 25% of all births in the UK are identified by women as being traumatic. This really strikes me, as it is such a high rate. In fact, if we look at the annual birth rate in the United Kingdom, this means around 173,000 women are traumatized after delivering per year.

Only 1% of births in the UK result in infant death or life threatening near-miss episodes, indicating that subjective understanding of the birth event is crucial.

One third of women present with sub-clinical trauma, and I believe it is essential to perceive trauma responses as being on a continuum.

For many women, these birth experiences will never be discussed or explored. Although women may not develop a diagnosable disorder, they will often experience significant levels of distress and symptoms may persist for many years without treatment. There is often a significant impact on women's future pregnancies and birth experiences, and I have met women who only have one child because their first birth experience was so negative and they cannot contemplate coping emotionally in another pregnancy.

When we talk about Postpartum PTSD, we are talking about women who had a traumatic birth who then go on to develop all the diagnostic criteria we would expect in PTSD.

Around 1-6% of women who have a traumatic birth will go on to develop a diagnosable clinical episode of PTSD.

It's also important to mention and think about birth partners who can also be traumatized by birth as well as mothers.

Dr. Jain: In your experience, what are the common pitfalls surrounding diagnosing Postpartum PTSD? How is it distinguished from the more well-known Postpartum Depression? What are the clinical markers for who is more vulnerable to developing

Postpartum PTSD, and what are the associated resiliency factors?

Dr. Moore: Unfortunately, this is an issue we see time and time again in clinical practice. Many professionals know little about Birth Trauma or PTSD following birth, and services in the UK are very much focused on identifying Postnatal Depression.

If we think about the criteria needed to make a formal diagnosis of PTSD, there are clear differences in the symptoms needed to make a diagnosis of Postnatal Depression.

With Postpartum Depression we would look for core symptoms of pervasive low mood or anxiety, fatigue, and anhedonia, with possible altered sleep and appetite or suicidality.

In PTSD we would expect to see the key features of avoidance, intrusive memories, labile mood, nightmares, or flashbacks, and taking a history of the birth experience in depth would be key.

Research has been carried out into what makes someone more likely to develop PTSD following childbirth. These risk factors can be thought of as those that exist before the birth; the birth itself; and the type of support and care women get after birth.

Some women will be more vulnerable to a traumatic birth because of pre-existing problems, such as women with a history of psychiatric problems or previous trauma. There is also evidence that women with a history of trauma will be more vulnerable to PTSD following birth if they have inadequate support and care during the birth.

During birth, certain complications or events may be more stressful to

women than others. Broadly speaking, women are more likely to get PTSD if they have an emergency cesarean or assisted birth (forceps or ventouse), although PTSD can develop after a vaginal delivery.

Other stressful aspects of birth, such as blood loss, a long labor, a high level of pain, or a large number of interventions, are not conclusively related to getting PTSD.

Women who feel out of control, helpless, or overwhelmed by events during birth, or who have poor care and support from midwives and doctors, are significantly more likely to get PTSD.

Following the birth, support from friends and family, and possibly that from healthcare professionals, may help women resolve their experiences and recover from a traumatic birth.

Studies have also highlighted an increased risk of developing postpartum PTSD with a stillbirth, the birth of a baby with a disability resulting from birth trauma, or a baby requiring a stay in the Neonatal Intensive Care Unit (NICU).

One of the strongest risk factors we know of is when women dissociate during birth. One woman I worked with spoke of dissociating in pregnancy and "losing all track of time" and "feeling like she was in a fog." She believed her baby "had been born" and "taken out of the room without her consent" and felt overwhelmingly anxious, until suddenly she looked down and saw her pregnant bump and realized she was still pregnant.

The literature regarding resilience is unclear, and we still do not fully understand why some women develop PTSD after birth and some do not. Women come into labor with their own unique genetic make up, personal history, and own expectations of their labor and how it will

proceed. To my mind the issue that often makes the most difference regarding the outcome is that psychological expectation and understanding of birth and how it is addressed and handled during labor. I have seen women who had long distressing labors with numerous physical interventions or complications who have not gone on to be traumatized as they have had one amazing healthcare professional with them through the whole process explaining, listening, and comforting them and hearing their fears or wishes voiced.

Dr. Jain: It appears to me there are a couple scenarios of how Postpartum PTSD might occur: A woman already has PTSD (treated or untreated) and the psychological stressors associated with pregnancy/giving birth trigger a relapse of her PTSD symptoms; or the actual experience of giving birth is traumatic—either the mother's life is threatened or she witnesses a threat to the life of her newborn. This trauma then serves as the stressor, which can, in some cases, lead to PTSD. Can you speak about other scenarios?

Dr. Moore: These are the most common routes to PTSD after birth that we see; the variance is in the individual stories and responses to trauma that we hear.

I think it's important to flag up here that the woman's life might not actually be in danger, it is her response to events that she perceives as traumatic, so she might have a non life threatening bleed but find that traumatic or it may be the after care that is traumatic—care on the postnatal ward, for example. What medical professionals might class as

"normal" may be far from normal to the mother involved. Women have repeatedly spoken to me of this issue.

It is important to distinguish between women who feel angry about their birth experience and have irritability and intrusive thoughts about their birth, but who lack the other symptoms of PTSD.

Subclinical symptoms are really important in my opinion and incredibly common, and these women may not have diagnosable PTSD but must still be heard and listened to and supported.

Dr. Jain: If one does a Google search for Birth Trauma or Postpartum PTSD, it is impossible to ignore the number of self-help organizations, patient advocacy groups, and online support forums that pop up. Indeed, prevalence statistics for Postpartum PTSD from Western studies are approximately 1 to 3%. From an epidemiological standpoint, this would make it quite common. Yet Postpartum PTSD is something that receives very little attention in medical schools and psychiatry training programs. Is this a case of medical science needing to catch up with what is happening every day on the frontlines?

Dr. Moore: Absolutely!

I think at present this is a really neglected area of teaching and training whilst being something that affects thousands and thousands of women each year here in England.

My sense is that this is changing. Certainly here we are starting to see Birth Trauma being discussed and talked about, and networks of professionals are coming together to push for more training and better awareness.

It's something that I feel really passionate about, and locally I run a Birth Reflections Clinic to allow women to debrief after a traumatic birth and an Annual Birth Trauma Conference in London (this year December 9th 2016, which all are welcome to attend free of charge). I lecture medical students, psychiatrists, health visitors, and midwives, and I feel this is an area that should be a key part of the undergraduate and postgraduate curriculum.

Here in the UK we are really fortunate to have some amazing web forums, such as MatExp, which allows members to share best practices and knowledge. There are many excellent blogs by women writing about their own Birth Trauma, such as Unfold Your Wings or Ghostwritermummy, which helps raise awareness. There are also some nice sites sharing good birth experiences, which can be empowering for first time mothers to read and prepare for birth, such as tellmeagoodbirthstory.com.

Dr. Jain: Related to this, there appear to be some very real social and systemic phenomenon that may be exacerbating the issue of Postpartum PTSD: Unrealistic images/perceptions of what birth and motherhood should be driven by popular media/culture (similar to the propagation of unrealistic body images for women); the very high tech and invasive medical environment where many women in high income settings give birth; and

advances in neonatal care and NICU care that have changed the way we treat and care for premature babies.

Dr. Moore: A question that is often asked is whether women have too high expectations of achieving a natural or drug-free birth, contributing to them being traumatized when birth does not go as expected. The answer to this is complex, but research studies point towards it not being the case. Firstly, women's expectations are found, on average, to be similar to their experiences. That is, if a woman has broadly positive expectations, she is more likely to have a positive experience. Secondly, if unrealistic expectations were linked to PTSD, we might expect to find more trauma responses in first time mothers. This has been found, but subsequent analysis suggests it is due to the higher rate of intervention in these women. Finally, one study looked at this question directly and found that a difference between expectations and experience in the level of pain, length of labor, medical interventions, and level of control was not associated with PTSD symptoms. However, a difference between expected support from healthcare professionals and the level of care experienced was predictive of PTSD symptoms. Women don't seem necessarily to be traumatized by the events of birth not happening as they expected, but are more affected when they do not receive the care they expect.

For many women I meet there is a real lack of honest conversations about the process of birth, and my sense is many women enter their labor emotionally unprepared for what might happen and have high expectations of what they want to happen, which may or may not be realistic.

I think there is a much greater need for midwives and obstetricians to have repeated conversations with women about birth and listen to

women's fears, hopes, and preferred choices.

The issue that comes up time and time again here is a lack of continuity of care and that women often see a different midwife at each visit, which means that these discussions don't happen.

I personally encourage women to think in depth about their birth and the choices they may or may not like, whilst grounding any discussion in the reality of what might happen.

I personally think if women can afford it and would like it, that using an independent midwife or doula can be really beneficial and help provide a constant support and advocate throughout pregnancy and birth.

In 2013, Youngblut et al looked at parent health and functioning 13 months after infant or child NICU/PICU death. Parents (176 mothers, 73 fathers) of 188 deceased infants/children were recruited from 4 NICUs, 4 PICUs, and state death certificates 2 to 3 weeks after death. Data on parent physical health (hospitalizations, chronic illness), mental health (depression, PTSD, alcohol use), and functioning (partner status, employment) were collected in the home at 1, 3, 6, and 13 months after death. Thirteen months after infant/child death, 72% of parents remained partnered, 2 mothers had newly diagnosed cancer, alcohol consumption was below problem drinking levels, parents had 98 hospitalizations (29% stress related) and 132 newly diagnosed chronic health conditions, 35% of mothers and 24% of fathers had clinical depression, and 35% of mothers and 30% of fathers had clinical PTSD. More Hispanic and black mothers than white mothers had moderate/severe depression at 6 months after infant/child death and PTSD at every time point.

Lefkowitz et al looked at the prevalence of PTSD and depression in parents of infants in the NICU, identifying 86 mothers and 41 fathers

who completed measures of acute stress disorder (ASD) and of parent perception of infant medical severity 3-5 days after the infant's NICU admission (T1), and measures of PTSD and Postpartum Depression (PPD) 30 days later (T2).

35% of mothers and 24% of fathers met ASD diagnostic criteria at T1, and 15% of mothers and 8% of fathers met PTSD diagnostic criteria at T2. PTSD symptom severity was correlated with concurrent stressors and family history of anxiety and depression. Rates of ASD/PTSD in parents of hospitalized infants are consistent with rates in other acute illness and injury populations, suggesting the relevance of traumatic stress in characterizing parent experience during and after the NICU.

There is a wealth of excellent resources online for parents with babies in the NICU/Special Care Baby Unit (SCBU), such as Bliss, Headspace Perspective, and Tommy's. These all offer a wealth of practical advice, including telephone support and local groups or buddy schemes.

Dr. Jain: What psychological interventions work for Postpartum PTSD? What about preventative measures (e.g. identifying high risk women or screening programs) or debriefing interventions?

Dr. Moore: There isn't a standardized screening program as of yet in the UK. We screen women in our service but they only represent a minority of women. One also wonders how a woman may feel about being identified as "high risk" for developing perinatal trauma, and care would need to be taken to fully explain this risk in a nonthreatening or frightening way.

Psychological interventions that work in the postnatal period include the usual trauma focused psychotherapies, like cognitive behavioral therapy

(CBT) and eye movement desensitization and reprocessing (EMDR), and Compassion Focused therapy approaches are also frequently used.

Debriefing can be used and can help some women but not all—it very much depends on who is doing the debriefing and how it is done. Studies into the efficacy of debriefing have not identified any clear link with it leading to reduced maternal morbidity, and formal debriefing is not recommended. In 2011, Professor Ayers from City University, a leading expert in this area, found that 46 women with PTSD who had formal debriefing had reduced PTSD over time and a greater reduction in symptoms overall than women who had not been debriefed. Debriefing also led to reduction in negative appraisals but did not affect symptoms of depression. Therefore, results suggest that providing debriefing as a treatment to women who request or are referred to it may help to reduce symptoms of PTSD.

In my service we have a specialized pathway of care for women with a prior traumatic birth or those at risk, which includes regular review and having these long detailed discussions about birth. We have a specialist team of midwives who co-work cases with us to give extra support and an obstetric lead who reviews women prior to birth.

We offer informal debriefing postnatally and really take time and care to listen to women's birth stories, and this is crucial. If needed we can then also add in specialist timely therapeutic interventions—we offer CBT, Compassion Focused Work, Yoga Therapy, Art Therapy, and Music Therapy in my service.

Dr. Jain: Finally, are there any biological or physiological factors associated with the act of giving birth itself (e.g. hormonal shifts, changes in adrenaline, cortisol, serotonin, or dopamine) that may be implicated in increasing vulnerability for developing PTSD during that particular life event?

Dr. Moore: That's a very complex question that we don't yet fully understand the answer to. There is as of yet little research on the specific area of perinatal PTSD, and we have to try to piece together what we know about the etiology of PTSD along with the large evidence base for depression after birth related to hormonal shifts.

Of course I am sure your readers will know the existing literature purely relating to PTSD that suggests that lower baseline cortisol at the time of a psychological trauma may facilitate over-activation of the central CRH-NE cascade, resulting in enhanced and prolonged stress responses which could then be accentuated by poor regulation of GABA, serotonin, and NPY. Altered norepinephrine and stress hormone activity may be involved in learning and extinction. This mixture of elevated noradrenergic activity and relative hypocortisolism may lead to the enhanced encoding of traumatic memories and the lack of inhibition of memory retrieval, both of which then trigger the re-experiencing phenomena in PTSD.

My own interest lies more in the role of the HPA axis in pregnancy and after birth. Much of the literature relates to depression, but there are studies now focusing on PTSD. It is likely that prenatal hormones are both markers of risk and causal factors in the development of postpartum depression.

During pregnancy the maternal hypothalamic-pituitary-adrenal axis undergoes dramatic alterations, due in large part to the introduction of the placenta, a transient endocrine organ of fetal origin.

Models are suggested, such as those by Professor Vivette Glover, where the positive feedback loop involving the systems regulating the products of the HPA axis results in higher prenatal levels of cortisol and placental corticotrophin-releasing hormone. Greater elevations in placental corticotrophin-releasing hormone are related to a disturbance in the

sensitivity of the anterior pituitary to cortisol and perhaps to decreased central corticotrophin-releasing hormone secretion. Secondary adrenal insufficiencies of a more extreme nature may predict an extended postpartum hypothalamic-pituitary-adrenal refractory period, which in turn would represent a risk factor for the development of postpartum depression

During pregnancy we see a rapid rise in plasma estrogen and progesterone, coupled with a very large increase in plasma corticotrophin-releasing hormone (CRH), and an increase in cortisol. Levels of all these hormones drop rapidly at birth, as do serotonin levels. We can also assume that for most women, adrenaline levels will be raised for some of their birth experience.

We also need to add into this discussion the literature on the role of estrogen, and its role in fear conditioning and fear extinction. Estrogen calms the fear response in healthy women and, as illustrated by the work of Kelimer Lebron-Milad, the same is true for women suffering from PTSD. The higher the estrogen was in their blood when they trained on a fear-extinction task, the less likely women were to startle.

Progesterone is also known to have antiglucocorticoid properties and thus interfere with the HPA axis reactivity to stress. Studies have demonstrated a higher neuroendocrine response to stress (i.e., higher cortisol levels after ACTH administration) in women during the luteal phase of the menstrual cycle, indicating that the negative feedback of the HPA axis may be somewhat affected.

Further research is needed to understand the impact that changes in sex hormone levels may have on subjects' behavioral and neuroendocrine ability to respond to stress. It could be plausible that abrupt changes in hormone levels (such as that observed in the immediate postpartum period) would alter not only the HPA axis response to a stressful event,

but also the negative feedback necessary to avoid potential damages induced by prolonged exposure to "stress hormones."

How all these strands connect is not yet fully understood, but to my mind women entering labor are subject to momentous physiological and psychological changes over a rapid time frame, which to some can lead to the development of their perinatal PTSD.

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