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Perinatal Distress in Fathers: Toward a Gender-Based Screening of Paternal Perinatal Depressive and Affective Disorders

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INTRODUCTION

In Western society, with the gradual transition from the patriarchal family to the contemporary nuclear one (both parents work and contacts with the extended family are limited), fatherhood has been increasingly linked to more expectations and responsibilities in childcare and family life (Quilici, 2010; Biehle and Mickelson, 2012; Crespi and Ruspini, 2015). At biological level, neural plasticity and hormonal changes that occur in men may also increase the risk of psychological distress during the transition to parenthood (Poromaa et al., 2017; Baldoni, 2020). Research has clearly demonstrated that during the perinatal period the emotional states of mothers and fathers influence each other showing a significant correlation between paternal and maternal perinatal depressive disorders (Baldoni and Ceccarelli, 2010; Paulson and Bazemore, 2010; Musser et al., 2013).

Thus, in the last decades there has been an increased interest in men's perinatal mental health (Baldoni, 2010; Garfield, 2015; Gutierrez-Galve et al., 2015; Field, 2018). In this scenario, Paternal Perinatal Depression (PPND) is considered a specific condition that affects many fathers between pregnancy and the first year after childbirth. PPND is associated with maternal depression (Baldoni et al., 2009; Paulson et al., 2016) and adverse outcomes in children and adolescents, including externalizing and internalizing symptoms (Ramchandani and Psychogiou, 2009; Baldoni, 2016; Sweeney and MacBeth, 2016). Specifically, a longitudinal study on 12,884 fathers has confirmed the influence of PPND on the psychophysical development of children evaluated from birth to 7 years of life (Ramchandani et al., 2005, 2008), with an increase, more significant in males, in emotional and behavioral control problems at 21 and 42 months and childhood psychiatric disorders and oppositional behaviors at 7 years.

Other studies (Baldoni et al., 2009, 2011) conducted with the CARE-Index (Crittenden, 1979–2007) documented the influence of depression and poor paternal sensitivity on the psychomotor development of infants (assessed with the Bailey scales).

Two recent metanalyses showed a PPND prevalence in the word ranging from 10.4% (Paulson and Bazemore, 2010) to 8.4% (Cameron et al., 2016) and longitudinal studies found that pregnancy is the most sensitive period for the onset of symptoms in both men and women (Madsen and Juhl, 2007; Figueiredo and Conde, 2011). Therefore, the term *Paternal Perinatal Depression* (PPND) is gradually replacing *Paternal Post-partum/Post-natal Depression (PPD)*, to consider and identify the possible onset of depressive symptoms in fathers since the prenatal period (Baldoni, 2010; Cameron et al., 2016; Bruno et al., 2020). Although these terms are commonly used in research, these diagnoses are not even mentioned in the current DSM-5. The manual only specifies the criteria for a major depressive episode "with peripartum onset" referring to the mother only, which is defined as the most recent episode occurring during pregnancy as well as in the 4 weeks following delivery.

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Anyhow, fathers are not usually the focus of the prevention and screening of perinatal affective disorders, and PPND remains underestimated and undertreated compared to maternal depression. A possible explanation is that men tend to show a less clear clinical picture than women do and thus the use of screening questionnaires developed for mothers may be not appropriate. Given that perinatal depression risks and psychological responses differ significantly based on gender (Habib, 2012), it would be useful to rethink perinatal psychological disorders considering the wide array of paternal affective symptoms and the limitations of current tools developed to assess maternal depression. Hence, the aim of this opinion article is to emphasize the need to consider male-specific responses to perinatal distress following an integrative and gender-based perspective. Secondly, we have commented on the limits of research on PPND based on current self-reported measurements.

PATERNAL PERINATAL DEPRESSION: A COMPLEX CLINICAL PICTURE

Expression of PPND differ from that of *Maternal Perinatal Depression* (MPND) in terms of intensity and clinical picture, even if time of onset, and duration can be similar.

Owing to psychosocial influences, males tend to display emotional suffering through externalizing and behavioral symptoms rather than typically depressive-like responses (Baldoni, 2016; Seidler et al., 2016). In fact, compared to MPND, PPND may occur along with other disorders whose symptoms may overlap or mask it (Abramowitz et al., 2001; Goodman, 2004; Baldoni, 2010, 2016; Martin et al., 2013; Madsen, 2019; Bruno et al., 2020). The most common are anxious disorders, abnormal illness behavior, behavioral acting outs, and addictions. Given the frequent comorbidities, we proposed (Baldoni, 2016) to replace the term PPND with *Paternal Perinatal Affective Disorder* (PPAD) using a more comprehensive definition to encompass the broad range of depressive equivalents associated with male psychological perinatal distress. Accordingly, considering these different areas, an appropriate assessment of fathers should start from early prenatal period (Baldoni, 2010, 2016).

Depressive Symptoms

Perinatal depressive symptomatology in fathers is generally milder and less defined than in mothers. It may consist in vague experience of depressed mood, restlessness, irritability, loss of interest, attention difficulties, reduced work output, social isolation, withdrawal from close relationship, loss of or increased appetite, loss of sexual desire and insomnia. Clinicians can often underestimate most of these symptoms, excepting for depressed mood, considering them as manifestations that normally occur during the perinatal period.

Anxious Symptoms

Starting from the prenatal period a relation between depressive and anxious symptomatology has been observed in fathers (Fletcher et al., 2006; Wee et al., 2015; O'Brien et al., 2017; Chen et al., 2019). Anxiety disorder (GAD, panic attacks, PTSD) may be even more frequent than typical depressive symptoms in men (Wynter et al., 2013). Recent findings showed a prevalence ranging from 4.1 to 16% before childbirth and a stable course across the perinatal period (Leach et al., 2016). In an Australian study (Matthey et al., 2003), among 196 fathers, 9.7% met DSM-IV criteria for anxiety disorder, and only 1% met criteria of depression. In this regard, the definition *Perinatal Mood Disorder* has been proposed to consider both anxious and depressive symptoms as crucial targets of the screening practice.

Abnormal Illness Behavior

Illness behavior refers to the way people react to their own body functioning in terms of health or illness. This aspect is crucial given that the expression of physical distress has been associated with PPND (Danielsson and Johansson, 2005) and research highlighted the presence of hypochondria, somatization, or functional medical syndromes in partners of depressed mothers (Baldoni et al., 2009; Martin et al., 2013). These disorders may overlap with a *Couvade syndrome* (Trethowan and Conlon, 1965; Baldoni, 2016) e.g., the manifestation in the father of somatic complains, female behaviors, and pregnancy concerns that rarely take on significant psychopathological value.

Anger Attacks and Behavioral Acting Outs

The scientific community has recognized the need to assess behavioral *acting outs* and *loss of impulse-control* in the screening of PPND (Martin et al., 2013; Madsen, 2019). Anger attacks, violence, compulsive physical, or sexual activities, extra-marital relations, fugues from home or at work may accompany or mask a depressive symptomatology (Baldoni, 2016). Furthermore, it is necessary to consider the higher suicidal risk in depressed males (Innamorati et al., 2011), which could often be manifested through suicidal equivalents (e.g., unnecessarily exposure to serious danger, practicing harmful, or risk-taking activities).

Addictions

Males during perinatal period tend to report higher rates of substance use (alcohol, smoking, or drugs) or other addictions (e.g., gambling, compulsive use of computer, smartphone, or internet) (Baldoni, 2016; Madsen, 2019). This response generally constitutes an attempt to control dysregulated mental states and somatic functions that accompany them. Distressed fathers can use these behaviors to calm down, get excited, overcome boredom, or distraction (Baldoni, 2016).

SELF-REPORTED MEASURES FOR THE SCREENING OF AT-RISK FATHERS

Although gender-related differences in the expression of perinatal affective disorders have been sufficiently recognized (Baldoni, 2010; Martin et al., 2013), little attention has been paid to the assessment of these problems in males (Psouni et al., 2017). Usually research and screening are based almost exclusively on self-report tools that only consider symptoms associated with maternal perinatal depression. Currently, only the *Gotland Male Depression Scale* (GMDS; Zierau et al., 2002), the *Masculine Depression Scale* (Magovcevic and Addis, 2008), and the *Male*

Depression Risk Scale (MDRS-22; Rice et al., 2013) are the specific tools to assess male symptomatology, but they have not been developed for the perinatal period. The well-known *Edinburgh Post-natal Depression Scale* (Cox et al., 1987), developed for mothers, has been validated in fathers also (Matthey et al., 2001; Edmondson et al., 2010; Lai et al., 2010; Loscalzo et al., 2015) using lower cut-off scores to detect major depression and anxiety disorders in the latter. However, there is still no agreement on the optimal cut-off scores for depression and anxiety, which vary across studies. Although an elevated level of sensitivity was found with a cut-off of 12, it has been suggested that EPDS may not be appropriate for mild-minor depression and anxiety disorder (Massoudi et al., 2013). Moreover, the well-established two-factor structure of the EPDS in mothers (depression and anxiety) was not replicated in any of the studies on fathers (Matthey, 2008; Massoudi et al., 2013; Loscalzo et al., 2015). Given the different factorial structure, previous research suggested not using the EPDS to screen for anxiety disorder in fathers (Matthey, 2008). According to a recent metanalysis (Cameron et al., 2016), studies based on EPDS used multiple cut-offs to determine depression generating little comparable results and the authors pointed out the need to standardize cut-off scores to produce a more consistent literature. In addition, other studies used two different questionnaires to assess perinatal depression in fathers providing contradictory results. In particular, in a Japanese study (Nishimura and Ohashi, 2010) the CES-D (*Center for Epidemiological Study Depression Scale*) (cut-off $\geq$ 16) and the EPDS (cut-off $\geq$ 9), revealed different findings (7.5% of fathers exceeding the CES-D cutoff, whereas 11.6% the EPDS cut-off). In a Danish study (Madsen and Juhl, 2007) it was estimated that 5% of men assessed by EPDS reported post-natal depression, but using the GMDS the average dropped to 3.4%. Notably, 20.6% of the at-risk fathers in this sample exceed the cut-off value only on the GMDS. Similarly, Carlberg et al. (2018) found that EPDS and GMDS were associated with different risk factors and prevalence of PPND, suggesting that a significant number of at-risk fathers would not be detected by one instrument alone. It is plausible that the two questionnaires cover different aspects of paternal perinatal distress. In fact, a recent study (Psouni et al., 2017) revealed that a combination of the two measures showed higher sensitivity than EPDS alone. It is also interesting to note that a specific subgroup of fathers only exhibits externalizing depressive equivalents without conventional symptoms.

Recently, a team of researchers developed the *Perinatal Assessment of Paternal Affectivity* (PAPA) (Baldoni et al., 2016a,b, 2018) a new self-report questionnaire for the screening of affective symptoms in fathers. This tool is based on recent research on perinatal affective disorders and assesses different dimensions of paternal affective suffering: anxiety, depression, irritability/anger, couple and relational difficulties, somatic complaints, risky behaviors, and addictions (smoking, alcohol, drugs, gambling, internet abuse, physical or sexual compulsive, and risky behavior) considering also some ethnic and socio-cultural factors.

CONCLUSION

Contemporary research has highlighted the need to assess perinatal distress using gender-specific tools for mothers and fathers (Walsh et al., 2020). It is essential to develop new instruments to evaluate a broad range of depressive equivalents increasing the sensitivity and specificity of the screening (Matthey et al., 2001; Baldoni, 2016; Baldoni and Giannotti, 2017; Psouni et al., 2017; Madsen, 2019). Currently, a diagnosis of *Paternal Perinatal Affective Disorder* (PPAD) may reflect a more integrated and inclusive perspective to evaluate men's mental health during the perinatal period. This approach may help in reducing sex disparities and mother-centered bias in the screening practice of the perinatal affective disorders. An appropriate screening of at-risk fathers should constitute an essential prerequisite for perinatal health services, given the impact of psychological distress on maternal health, family adaptation, and child development.

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All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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