The role of self-esteem instability in the development of postnatal depression: A prospective study testing a diathesis-stress account

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A B S T R A C T

Background and objectives: Understanding vulnerability factors involved in the development of postnatal depression has important implications for theory and practice. In this prospective study, we investigated whether self-esteem instability during pregnancy would better predict postnatal depressive symptomatology than level of self-esteem. In addition, going beyond former studies, we tested the possible origin of this instability, examining whether day-to-day fluctuations in self-esteem could be explained by fluctuations in mood state, and whether this day-to-day self-esteem reactivity would predict postnatal depressive symptoms.
Methods: 114 healthy never-depressed women were tested during the late second or third trimester of their gestation (Time 1) and at 12 weeks after delivery (Time 2). Day-to-day levels of self-esteem and depressed mood state were assessed at Time 1. At Time 2, postnatal depressive symptoms were assessed.
Results: The results show that, after controlling for initial depressive symptomatology, age and socio-economic status, postnatal depressive symptomatology at 12 weeks after childbirth could be predicted by self-esteem instability and not level of self-esteem. In addition, multi-level analyses demonstrated that these changes in day-to-day levels of self-esteem are associated with changes in day-to-day levels of depressed mood state and that those subjects with greater prenatal self-esteem reactivity upon depressed mood report higher levels of depressive symptoms post-partum.
Limitations: We used paper and pencil day-to-day measures of state self-esteem, which can be subject to bias.
Conclusion: These results provide evidence for a diathesis-stress account of postnatal depression, highlighting the importance of a multi-dimensional view of self-esteem and the predictive role of self-esteem instability.

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1. Introduction

Although childbirth is generally assumed to be a positive event, the transition to motherhood may be associated with emotional distress. There has been a wealth of research documenting the negative reactions of women to childbirth (Ogrodniczuk & Piper, 2003). Approximately 10—19% of all childbearing women will experience a postnatal depressive disorder during the first 3 months after childbirth (Gavin et al., 2005; Ohara & Swain, 1996). Clinically, postnatal depression — although comparable to an episode of major depressive disorder — has become an important and distinct category in its own right (Oates, 2003). It usually develops within 4—8 weeks after childbirth, can last for up to 12 months, and has been associated with detrimental effects for both mother and child (Grazioli & Terry, 2000; Whiffen, 1992). Until rather recently, it was assumed that postnatal depression was caused mainly by hormonal factors. But there is a growing consensus that *hormonal factors* are important for the onset of low mood in the first weeks after delivery, whereas *psychosocial factors* — such as self-esteem, childcare stress, prenatal anxiety and life stress — may play a more prominent role in the onset

of postnatal depression (Ohara & Swain, 1996; Robertson, Grace, Wallington, & Stewart, 2004).

To date, within the context of psychosocial factors, diathesis-stress models of depression are thought to provide the most comprehensive account of why some women experience high levels of postnatal depression symptoms (Honey, Bennet, & Morgan, 2003; Honey, Morgan, & Bennet, 2003). Diathesis-stress models are psychological theories that explain behaviour through the interaction of hereditary vulnerability with precipitating environmental events. The greater the diathesis or vulnerability, the less stress is needed to trigger certain behaviour. Conversely, greater life stressors are needed to produce particular results when vulnerability is lower. The core of the cognitive diathesis-stress model of vulnerability for depression is that, in confrontation with stressful life events, latent negative or depressogenic self-schemas containing dysfunctional attitudes about the self become activated in a way that is automatic, repetitive, unintended and difficult to control (Clark, Beck, & Alford, 1999). This leads to specific negative cognitions (automatic thoughts), including negative views of oneself, resulting in sadness and other depressive symptoms (Beck, 1987; Beck, Rush, Shaw, & Emery, 1979; Clark et al., 1999). In the absence of stressful life events, these negative schemas remain latent and do not directly bias the information processing system (Haaga, Dyck, & Ernst, 1991).

In trying to create a basis for understanding vulnerability, Teasdale (1983) focused on the reciprocal relation between depressed mood and negative thinking. In his view, the major difference between never-depressed individuals and formerly depressed individuals (who are considered to be vulnerable to depression) is not the nature of their thoughts when their moods are fine, but rather what comes to mind when they are feeling sad. He has called this the "*Differential Activation Hypothesis*" (Teasdale, 1983, 1988) of cognitive vulnerability to depression. This terminology indicates that sad moods are likely to re-activate thinking styles associated with previous sad moods (Segal, Teasdale, & Williams, 2001). 'Differential activation' means that the thought patterns that become activated are more negative in individuals that are vulnerable to depression. According to network models of interconnectedness (Bower, 1981), core elements reflecting the self may become represented with a high degree of interconnection with neighbouring elements as a consequence of repeated exposure. Thus, activation of only one element can lead to the activation of a whole 'depressogenic network'. Linkages between depressive memory nodes and negative concepts are strengthened by previous episodes of depression, so that there is a greater probability that negative self-schemas will be activated by a sad mood state (Teasdale, 1983). Whereas depressed mood may initially provoke depressive thinking, this negative self-cognition (e.g., low self-esteem) can feed back upon mood, thus creating a vicious circle that results in a new episode of depression (Roberts & Monroe, 1994). In this scenario, depression is intensified and maintained by a vicious affective-cognitive circle in which negative self-cognitions and dysphoric mood act on each other. In line with this theoretical framework, it has been argued that cognitive factors (such as self-esteem) may play an important role in the aetiology of postnatal depression (Grazioli & Terry, 2000).

The concept of 'self-esteem' refers to a person's global evaluation or liking of him/herself in affective — negative or positive — terms (Rosenberg, 1986). However, self-esteem is only one component of the self-concept, which Rosenberg defines as "the totality of the individual's thoughts and feelings with reference to himself as an object" (Rosenberg, 1986, p. 125). To date, however, there are few studies specifically investigating the impact of self-esteem on postnatal depression from a diathesis-stress point of view. Fontaine and Jones (1997) assessed the predictive utility of

self-esteem for postnatal depression and found that self-esteem appears to be related to differential susceptibility to depression in the early postpartum period. In a meta-analysis, Beck (2001) found self-esteem (in 6 studies), alongside several other significant predictors of postnatal depression, to be the predictor with the highest effect sizes ($r = .45-.47$). Jomeen and Martin (2005) used the Culture Free Self-esteem Inventory to investigate self-esteem and mental health during early pregnancy and found that only the personal dimension of self-esteem showed a predictive value for anxiety and depressive symptomatology during pregnancy. Milgrom et al. (2008) performed a large prospective study ($N = 44,333$) of antenatal factors for postnatal depression. Using multivariate modelling, they found that (amongst other variables) the level of daily hassles, perfectionism, and antenatal emotional problems proved to be independent risk factors. Furthermore, the authors link perfectionism to self-esteem, arguing that self-esteem may reflect broader characteristics such as those associated with perfectionism (e.g. Church, Brechman-Toussaint, & Hine, 2005). Perfectionism is often characterized by striving for, and achieving, high standards (Shafran, Egan, & Wade, 2010). Not achieving the high standards may result in distress and lower levels of self-worth. This might explain why some women are vulnerable to the often unremitting, inflexible and unpredictable stressors of parenthood.

In these studies, however, self-esteem is conceptualized as a trait-like phenomenon. Yet, theory and research suggest that the nature of self-esteem is considerably more complex (Franck & De Raedt, 2007; Roberts & Monroe, 1994; Zeigler-Hill et al., 2013). An important facet of self-esteem protects against the deleterious consequences of negative experiences such as failure (Zeigler-Hill et al., 2013) — and this view of self-esteem has been called the "stress-buffering model of high self-esteem" (Zeigler-Hill, Clark, & Beckman, 2011). Consequently, the exclusive focus on self-esteem as a trait-like phenomenon is problematic, because this conception provides only an incomplete picture of the role that self-esteem plays in psychological and interpersonal functioning, especially concerning (vulnerability to) depression. In fact, it has been proposed that self-esteem is a heterogeneous construct that includes both fragile, defensive or maladaptive and secure or adaptive components (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Kernis et al., 2005; Zeigler-Hill, 2006). According to this theoretical account, individuals with fragile high global self-esteem have self-views that are easily challenged by daily events as a result of unconscious self-doubts. Such vulnerability may engender a need for constant validation, and thus defensiveness arises when positive self-views are challenged. Secure high self-esteem, on the other hand, reflects positive attitudes towards the self that are stable, realistic, and more resistant to threat. In this perspective, a growing body of empirical studies has been investigating lower levels of self-esteem as causal factors for depression (Roberts & Monroe, 1999) and suggesting that daily fluctuations in self-esteem might be a more important indicator of vulnerability to depression (Butler, Hokanson, & Flynn, 1994; Franck & De Raedt, 2007; Hayes, Harris, & Carver, 2004; Kernis, Cornell, Sun, Berry, & Harlow, 1993; Roberts & Kassel, 1997).

'Self-esteem instability' can be defined as fluctuations in self-esteem over time in reaction to daily stressors and mood changes (Kernis et al., 1993). Unstable self-esteem is indeed reflected by fragile, vulnerable feelings of self-worth that are influenced by the vicissitudes of either externally or self-generated potentially self-relevant events (Kernis et al., 2005). Individuals with unstable self-esteem often see experiences as relevant to their sense of self, resulting in greater reactivity to such events (Greenier et al., 1999). It seems as if their self-esteem must be continuously defended against perceived threats and is, therefore, constantly 'on the line' (Kernis, Paradise, Whitaker, Wheatman, & Goldman, 2000).