



Effects of Persistent Childbirth Pain, Psychological and Pain Susceptibility on Postnatal Depression Scores

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Introduction

Postnatal depression (PND) affects about 10-15% women worldwide, resulting in significant morbidity and poor maternal and neonatal health outcomes, and is associated with long term psychological and social-economic impact [1]. Some evidence suggests that both psychological and biological factors may contribute to PND [2-3], including pain vulnerability and severity during childbirth, analgesic technique, psychological and genetic susceptibility.

Aim: To investigate the effects of persistent childbirth pain, psychological stress and pain vulnerability on postnatal depression scores.

Materials and Methods

We conducted a cohort study involving 200 healthy nulliparous term women who received epidural analgesia. Baseline psychological stress and pain vulnerability of the parturient was assessed using the Perceived Stress Scale (PSS) and the Pain Catastrophizing Scale (PCS) prior to delivery. A postnatal phone survey was conducted at 6 to 8 weeks to assess the presence of persistent childbirth pain and anxiety status, using pain questionnaire and the Spielberger State Trait Anxiety Inventory (STAI) respectively. Postnatal depression was evaluated using the Edinburgh Postnatal Depression Scale (EPDS). Generalized linear model for normal distribution was used to identify possible associations between pain, anxiety and stress with EPDS.

Results

138 women (69%) were included in the analysis. The incidence of postnatal depression (defined as EPDS score ≥ 12) after 4 weeks postpartum, was 5.8%.

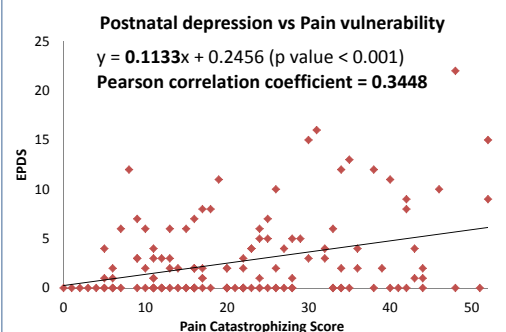


Figure 1. Correlation between EPDS and Pain Catastrophizing Score

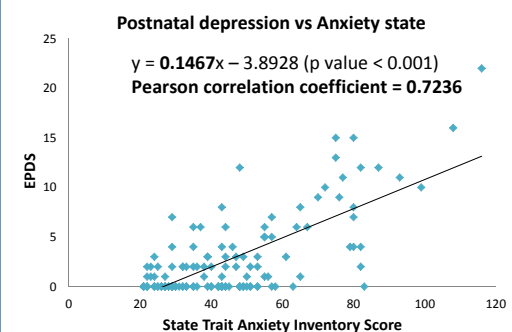


Figure 3. Correlation between EPDS and State Trait Anxiety Score

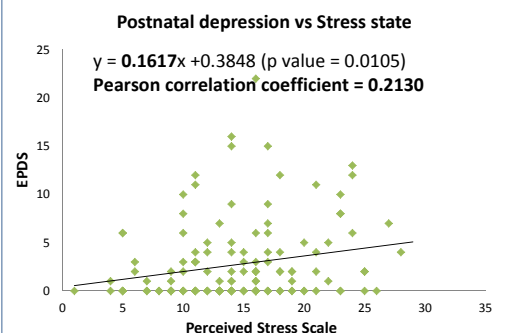


Figure 2. Correlation between EPDS and Perceived Stress Scale

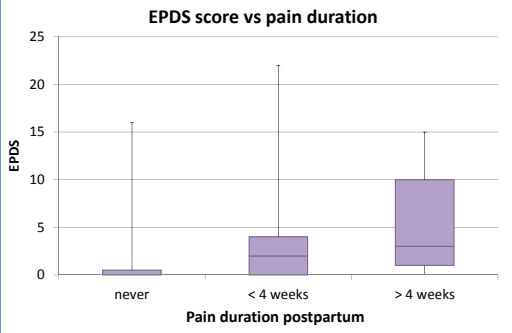


Figure 4. Comparison of EPDS between different pain durations

Results (cont'd)

Pain duration	N (%)	Mean score difference (95% CI)	p value
Never	40 (29.2)	-4.07 (-6.61 to -1.52)	0.0017
< 4 weeks	85 (62.0)	-2.44 (-4.82 to -0.06)	0.0448
> 4 weeks	12 (8.8)	Reference	

Table 1. Effect of pain durations on mean EPDS score

Conclusions

We concluded that greater pain vulnerability and stress state during intra-partum period, and longer duration of pain or higher anxiety during postpartum period are associated with higher Edinburgh Postnatal Depression Score. This supports the need to address pain comprehensively to lessen the risk of developing postnatal depression.

References

- [1] Ohayon MM. Epidemiology of depression and its treatment in the general population. Journal of psychiatric research. 2007;41(3):207-13.
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- [3] Ferber SG, Granot M, Zimmer EZ. Catastrophizing labor pain compromises later maternity adjustments. Am J Obstet Gynecol. 2005 Mar;192(3):826-31.

