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Brief report

The role of adult attachment style, birth intervention and support in posttraumatic stress after childbirth: A prospective study

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ABSTRACT

Background: There is converging evidence that between 1% and 3% of women develop posttraumatic stress disorder (PTSD) after childbirth. Various vulnerability and risk factors have been identified, including mode of birth and support during birth. However, little research has looked at the role of adult attachment style in how women respond to events during birth. This study prospectively examined the interaction between attachment style, mode of birth, and support in determining PTSD symptoms after birth.

Method: A longitudinal study of women ($n=57$) from the last trimester of pregnancy to three months postpartum. Women completed questionnaire measures of attachment style in pregnancy and measures of PTSD, support during birth, and mode of birth at three months postpartum.

Results: Avoidant attachment style, operative birth (assisted vaginal or caesarean section) and poor support during birth were all significantly correlated with postnatal PTSD symptoms. Regression analyses showed that avoidant attachment style moderated the relationship between operative birth and PTSD symptoms, where women with avoidant attachment style who had operative deliveries were most at risk of PTSD symptoms.

Limitations: The study was limited to white European, cohabiting, primiparous women. Future research is needed to see if these findings are replicated in larger samples and different sociodemographic groups.

Conclusions: This study suggests avoidant attachment style may be a vulnerability factor for postpartum PTSD, particularly for women who have operative births. If replicated, clinical implications include the potential to screen for attachment style during pregnancy and tailor care during birth accordingly.

1. Introduction

Research suggests childbirth can be traumatic for some women, with evidence that between 1% and 7% of women report PTSD in relation to childbirth, and more women report symptoms but do not fill all diagnostic criteria (Alcorn et al., 2010; Ayers and Pickering, 2001). Postpartum PTSD is highly comorbid with depression (White et al., 2006) and there is evidence it impacts on the couple's relationship (Iles et al., 2011), parent–baby bond (Parfitt and Ayers, 2009), and possibly child development (Parfitt et al., in press). Research on the etiology of postpartum PTSD has identified a range of vulnerability, risk and protective factors during and after birth, such as previous psychiatric problems, history of trauma, severe complications during birth, women's subjective experiences of birth, and support (Andersen et al., 2012). These are similar to risk factors found in other populations, which suggests some comparability between postpartum PTSD and PTSD following other events. However, childbirth involves some unique aspects, including the physiological processes of labour and birth, and that birth occurs in a particular social context – usually in hospital – where women are supported by a birth partner and healthcare professionals.

Charuvastra and Cloitre (2008) proposed a social ecological framework of PTSD, where a person's attachment style and a history of child abuse or adversities moderate how they respond to trauma. This is thought to occur by altering a person's expectations of support and compromising their ability to regulate emotions. Attachment was defined by Bowlby (1969) as the relationship a child has with their caregiver, which is biologically driven to maximize protection and security. Attachment behaviours include stress responses and exploratory behaviour and are shaped by cognition, affect, and interaction with the caregiver. Early attachment provides an 'internal working model' that guides relational behaviour and expectations as an adult, and forms the basis for

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adult romantic attachments (Rholes and Simpson, 2004). Attachment styles can be secure or insecure. Insecure attachment styles that have been proposed include anxious, avoidant, fearful, unresolved, ambivalent, disorganized, preoccupied and dismissing. Factor analysis has identified anything from one to four attachment types (Armour et al., 2011) and the majority of research focuses on anxious and avoidant styles.

There is significant evidence to support the social ecology model of PTSD; meta-analyses show poor support is associated with PTSD (Brewin et al., 2000; Ozer et al., 2003). Adult attachment style is also associated with mental health. Population studies show disordered attachment styles are more prevalent in people with psychological disorders (Bakermans-Kranenburg and Van Ijzendoorn, 2009). Similarly, attachment style has been associated with PTSD in various populations (Armour et al., 2011). However, evidence is inconsistent on which type of disordered attachment style is most predictive of PTSD. This is partly due to differences in how attachment style has been conceptualized and measured.

Attachment style and its interaction with social support and event severity are highly relevant to postpartum PTSD but little research has examined this. In one study of 212 couples, postpartum PTSD was associated with anxious attachment style (Iles et al., 2011). Studies of postpartum depression have also found that insecure attachment plays a role in the maintenance of depression after birth (McMahon et al., 2005). This suggests attachment style is important in postpartum mental health and provides preliminary evidence it may influence PTSD responses to birth. A number of issues remain. First, birth differs from other traumatic stressors in that it is only traumatic for some women. Women who have high levels of intervention or complications during birth are at greater risk of PTSD (Andersen et al., 2012). The severity of events in birth should therefore be taken into account when looking at the relationship between attachment style and PTSD. Second, the support received (or not) during birth may be important in traumatic stress responses to birth. For example, Ford and Ayers (2011) found that support during birth interacted with birth intervention to predict PTSD three months after birth.

The current study examines the interaction between women's attachment style, severity of birth, and support during birth in postpartum PTSD. Because birth is not traumatic for most women, we propose that attachment style will be associated with PTSD only in women who have severe complications or interventions during birth.

2. Method

This research formed part of the Journey to Parenthood study (Parfitt and Ayers, 2012), a prospective longitudinal study of 76 women and 65 of their partners. Inclusion criteria were that couples were expecting their first baby, were cohabiting, fluent in English and over 18 years old. Participants completed questionnaires in late pregnancy (>30 weeks gestation) and three months postpartum. The pregnancy questionnaire included measures of demographic characteristics and attachment style. The postpartum questionnaire included measures of PTSD, support during birth and birth outcomes. Response rates were 90% in pregnancy and 77% postpartum. Comparison of participants who completed the study with participants who only completed part of the study found no difference on demographic or other variables, with the exception that participants who did not complete all time-points were more likely to be of a non-white European origin (χ^2 (1)=5.66, p=.02).

Only women who completed the postpartum PTSD questionnaire were included (n=57; 75%). Women were aged 25–46 years (mean 33.20 years, SD=5.03); the majority were white European (89.6%). Many were educated to university level (41.1%). Personal income was $<$£20,000 a year for 49% of women, and $>$£40,000 for 6%. For the majority of women (80%) the pregnancy was planned and the time it took to conceive ranged from 1 to 120 months (mean 13 months, SD 24.7). Six percent of women had fertility treatment and none reported previous stillbirth, although 16.7% had experienced miscarriage. During birth, there were higher levels of assisted and caesarean births than UK norms (vaginal birth 41.1%, assisted vaginal birth 21.4%, emergency caesarean 32.1%, elective caesarean 5.4%), which may be because women were primiparous.

Ethical approval was gained from the NHS Local Research Ethics Committee. Women were recruited through community and hospital antenatal clinics or classes, and local advertisements. Eligible women were given an information sheet and asked to participate. If they agreed, they were given consent forms and the first set of questionnaires which were completed at the time or taken home. Volunteers who responded to adverts were sent information, consent forms and the first set of questionnaires to complete and return via prepaid mail. Hospital records were checked to ascertain when women gave birth. The second set of questionnaires was sent eight weeks after birth.

2.1. Measures

Adult attachment style was measured using the Adult Attachment Questionnaire (Simpson et al., 1996) which has subscales of avoidant attachment (i.e. negative views of others, tendency to avoid/withdraw from intimacy in relationships; α=.83) and ambivalent–anxious attachment (i.e. negative self-views regarding relationships, excessive preoccupation with abandonment, loss and partners' levels of commitment; α=.79). Complications/intervention during birth was measured using type of birth i.e. women who had operative births (assisted vaginal deliveries or caesarean sections, n=34) compared to those who had spontaneous vaginal deliveries (n=23). Birth support was measured using the support subscale of the Support and Control in Birth questionnaire (Ford et al., 2009; α=.90). PTSD was measured using the PTSD Diagnostic Scale (Foa et al., 1997) in relation to childbirth. The re-experiencing, avoidance, and hyper-arousal symptoms subscales follow DSM-IV symptom criteria and were combined to provide a total PTSD symptom score (α=.89).

2.2. Analyses

Data screening identified a multivariate outlier so this participant was removed prior to analyses. PTSD scores were not significantly associated with demographic variables (age, ethnicity, marital status, level of education) with the exception of personal income (r=−.33, p=.02). Controlling for personal income in multivariate analyses did not alter the pattern of results so is not reported further.

3. Results

PTSD was significantly correlated with avoidant attachment style (r=.35, p=.008), mode of birth (r=.41, p=.002) and birth support (r=−.27, p=.04) but not ambivalent–anxious attachment (r=.23, p=.09). Ambivalent–anxious attachment style was therefore not entered into subsequent regression analyses. Hierarchical multiple regression analysis was used to explore (i) whether attachment, birth type and birth support influenced mothers' PTSD scores and (ii) whether attachment moderated any impact of birth type or birth support on PTSD (see Table 1).