THE UNIVERSITY OF
WARWICK

University of Warwick institutional repository: http://go.warwick.ac.uk/wrap

A Thesis Submitted for the Degree of DClinPsych at the University of Warwick

http://go.warwick.ac.uk/wrap/4506

This thesis is made available online and is protected by original copyright.

Please scroll down to view the document itself.

Please refer to the repository record for this item for information to help you to cite it. Our policy information is available from the repository home page.

Psychological Trauma following Childbirth

by

Dawn Bailham

A thesis submitted in partial fulfilment of the requirements of the degree of Doctor of Clinical Psychology

Coventry University, School of Health and Social Sciences and
University of Warwick, Department of Psychology
May 2001

Table of Contents

List of Tables

Chapter 2: Brief Report: The Factor Structure and the Clinical Utility of the Perception of Labour and Delivery Scale

List of Figures

Acknowledgements

I would like to express my gratitude to Jill Simpson and Dr Helen Brittain, my clinical supervisors who helped me gain access to participants and advised me on the clinical issues of conducting research in this area. My thanks also go to Rosalind Talbot for her assistance in acquainting me with obstetric and midwifery staff and gaining access to participants. It is hoped that the findings from these studies will guide staff in the detection of PTSD in women following childbirth, as well as influence the development of future services. I would also like to thank Dr Stephen Joseph, my academic supervisor for his advice and feedback on the drafts of the enclosed papers; and guidance on the theoretical issues related to PTSD. I would also like to express my gratitude to Dr Delia Cushway for her support, guidance and useful feedback on the papers. Finally I would also like to thank Dr Tony Lawrence for his guidance on statistical analysis.

In addition I would also like to express my gratitude to Anne Farr and Chris Sedgewick, midwifery managers and Mr Jackson, for their assistance in helping me to gaining access to participants.

Declaration

The thesis was conducted under the academic supervision of Dr Stephen Joseph and clinical supervision of Jill Simpson and Dr Helen Brittain. Dr Stephen Joseph advised me on the design of the study and the questionnaire measures. He also helped me to conduct the factor analysis that is cited in chapter two. I recruited all participants either through antenatal clinics or with the assistance of community Midwives and apart from the collaboration of the above people the thesis is my own work. The authorship of papers from the study will be shared with the above people. This thesis has not been submitted to any other university.

The literature review is being prepared for publication in Clinical Psychology Review (Bailham & Joseph, in preparation) (see Appendix 1), the brief paper is being prepared for publication in the Journal of Reproductive and Infant Psychology (Bailham & Joseph, in preparation) (see Appendix 2). The main paper is being prepared for publication in the British Journal of Clinical Psychology (Bailham, Joseph & Lawrence, in preparation) (Appendix 3). Finally the review paper is being prepared for submission to Clinical Psychology Forum (Bailham & Cushway, in preparation) (Appendix 4).

Summary

The aim of this study was to assess risk factors to PTSD following childbirth incorporating a longitudinal design. Since the introduction of DSM-IV (APA, 1994) there has been an awareness in the literature that women can develop PTSD following childbirth. The first study in this thesis provides a comprehensive review of the literature in this area and the clinical implications of the disorder. The aim of the second study was to investigate the factor structure of a questionnaire measure (PLDQ) that has been used in past studies to assess women's perceptions of labour and delivery. The findings from this study indicate that the PLDQ consists of three internally reliable factors that can assess a woman's perception of pain, staff support/care and fear during labour and delivery. The scale can differentiate among women on these factors according to type of delivery.

The aim of the third paper was to assess risk factors to PTSD across time in the antenatal period, appraisal factors during delivery with the PLDQ, and maintenance factors in the postnatal period. There is an absence of studies in the literature that assess risk factors to PTSD over time. The results of this study indicate that postnatal depression (PND) and a negative appraisal of staff support and care during labour and delivery can predispose women to PTSD at 5 – 8 weeks following delivery. At 10 –14 weeks the relationship between PTSD and PND was still consistent. The clinical implications of the research are discussed for screening women at risk of PTSD following childbirth, assessment of a woman's appraisal of a difficult labour and delivery and the provision of support in the postnatal period.

Posttraumatic Stress Disorder following Childbirth: a Literature Review

Following case reports of women who developed posttraumatic stress disorder (PTSD) following childbirth, a range of empirical studies from different countries have been published over the last ten years investigating the prevalence and aetiology of the disorder (Beech & Robinson, 1985; Ballard, Stanley & Brockington, 1995; Ryding, Wijma & Wijma, 1998; Czarnocka & Slade, 2000).

PTSD following childbirth has only been recognised as a disorder in the last few years, because of changes in the definition of a traumatic event within certain diagnostic classification systems. In the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (APA, 1994) criterion A, which describes the nature of a traumatic event was revised. It moved away from defining an event outside the range of usual human experience to an event in which the person witnessed or confronted serious physical threat or injury to themselves or others. The changes in criterion also acknowledge that an individual's emotional responses at the time of the trauma including; fear helplessness or horror can contribute to PTSD. The revision of criterion A moved away from situational factors to incorporate the individual's appraisal, or subjective interpretation of an event as being traumatic. Prior to this many health professionals were reluctant to accept that women could experience PTSD following childbirth (Moleman, Van der Hart & Van der Kolk, 1992; Ralph & Alexander, 1994).

The aim of this paper is to provide a review of the developing literature on the relationship between the experience of difficult childbirth and the development of PTSD. First we will discuss diagnostic classification and theoretical models of PTSD. Secondly we will outline the clinical presentation of PTSD and what is known about its prevalence in women who undergo childbirth. We will then discuss risk factors to the development of PTSD including childbirth related, individual, and social psychological factors. Finally we will discuss the clinical implications of PTSD for the woman's mental health and her relationship with her child.

Diagnostic Classification and Psychosocial Models of Posttraumatic Stress Disorder

Since PTSD was first recognised as a distinct diagnostic disorder in DSM-III in 1980 (APA, 1980), it has been associated with a number of traumatic life events. These events have included natural disasters, combat in veterans, criminal victimisation, sexual assault and rape, and childhood sexual abuse (Lima, Pai, Lozano & Sanatcruz, 1991; Kulka, Schlenger, Fairbank, Hough, Jordan, Marmar & Weiss, 1990; Davis & Friedman, 1985; Pynoos & Nader, 1988; Rothbaum, Foa, Riggs, Murdock & Walsh, 1992; Wolfe, Sas & Wekerle, 1994).

DSM (APA, 1994) categorises PTSD symptoms into three groups for clinical diagnosis; (1) Re-experiencing of the traumatic event including intrusions, dreams and re-experiencing emotions associated with the trauma. (2) Avoidance of stimuli associated with the trauma and numbing of emotional responsiveness e.g. avoiding thoughts and feelings about the trauma, avoiding activities associated with the trauma, and emotional changes such as detachment from others. (3) The third and last category includes symptoms of hyperarousal such as difficulty sleeping, concentrating, irritability, and excessive startle responses. According to DSM-IV (APA, 1994) the minimum period for diagnosis is one month after the event.

Consistent with changes in knowledge regarding PTSD, diagnostic classification has evolved and often changed with different editions. In recent years DSM criterion A., which outlines the definition of a traumatic event has undergone a number of changes. DSM-III-R (APA, 1987) specified criterion A as an event that was 'outside the range of human experience', however this required modification because the occurrence of the disorder was increasingly being found following experiences that were within the range of human experience. PTSD has been associated with traumatic medical procedures, miscarriage, and other gynaecological procedures (Shavlev, Schreiber, Galai & Melmed, 1993; Kessler, Sonnega, Bromet Hughes & Nelson, 1995; Fisch & Tachmore, 1989). DSM-IV (APA, 1994) resulted in a change in definition, incorporating both objective and subjective appraisal factors.

Theoretical models of PTSD have also changed consistently as clinical understanding of the disorder has evolved. Many theories adequately explain how trauma can affect information processing and the mechanisms underlying symptoms but cannot explain the role of individual differences or psychosocial factors in PTSD (Foa & Kozak, 1986; Foa, Steketee & Rothbaum, 1989; Foa & Riggs, 1993; Horowitz, 1976; 1986; Creamer, Burgess & Pattison, 1992). This is pertinent to our understanding because not everyone exposed to trauma will develop PTSD (McFarlane, 1990). According to Rachman's emotional processing model of PTSD a number of predisposing factors can buffer an individual's response to a traumatic event including; personality, mood, feelings of control over the event, the predictability of the traumatic event, the individuals level of efficacy and ability to express emotion. In addition there are factors that are likely to contribute to distress following exposure to trauma including cognitive and behavioural avoidance, inability to talk about events, and feelings of having no control over the traumatic event (Rachman, 1980).

Green & Wilson (1985) also emphasise individual differences and psychosocial factors in their theory. They propose that two factors in particular contribute to psychological processing following exposure to trauma: past psychological problems and environmental factors such as social support. These factors can protect a person following trauma or they can be detrimental to adaptation depending on the individuals past history and available resources. Joseph, Williams & Yule (1997) present a theory that is an extension of the psychosocial model; they propose that exposure to trauma

results in difficulty processing emotional reactions and the representation of the trauma. The representation of the trauma is held temporarily in memory awaiting integration with other pre-existing memories, it consists of both conscious and unconscious elements that form the intrusive memories commonly found in PTSD. The intrusive memories are influenced by individual factors such as past experience, personality, assumptions, and the components of the traumatic event that were perceived to have been most threatening. The presence of intrusions leads to further cognitive processes called appraisals. The appraisal of the intrusion can be based on more subjective factors unique to the individual or more general universal objective interpretations of threat. For instance, certain trauma situations would be universally judged as uncontrollable or unpredictable by most people whilst others are based on more subjective factors unique to certain individuals past experience.

The changes in DSM diagnostic criteria and theoretical models of psychosocial factors are relevant to PTSD following childbirth; most women can experience difficult or traumatic childbirth without experiencing psychological difficulties. However, there are women for whom the experience can evoke extreme feelings of helplessness and horror that can predispose them to psychological difficulties consistent with symptoms of PTSD.

Posttraumatic Stress Disorder following Childbirth

Although reports of PTSD following difficult childbirth have only appeared since the inclusion of PTSD as a separate diagnostic entity within DSM, historically childbirth has always been associated with pain and punishment (Raphael-Leff, 1991). Melzack (1993) found that 60% of first time mothers and 45% multiparous women (more that one pregnancy and labour) reported experiencing extremely severe pain. The majority of these women indicated that the pain that they experienced during childbirth was the most severe pain they had ever experienced in their lives.

The clinical manifestation of PTSD following difficult childbirth was first recognised in the late 1970's, when two French obstetricians identified symptoms in a group of ten women undergoing obstetric care over a two-year period (Arizmendi & Affonso, 1987; Beech & Robinson, 1985). They found that PTSD was most likely to occur following invasive labours. The women reported experiencing insomnia and nightmares particularly in later pregnancies. There have been similar reports of prolonged nightmares and stress reactions following deliveries (Arizmendi et al 1987; Beech et al 1985). However the first reports documenting PTSD as defined by the American Psychiatric Association have only appeared more recently. Ballard, Stanley & Brockington (1995) report four case studies of women with PTSD presentations 48 hours following childbirth. In each case the women experienced post-natal depression and in two cases there were marked

mother/infant attachment problems. The consequences of PTSD can have detrimental effects on maternal wellbeing, relationships and parenting.

The Clinical Presentation of Posttraumatic Stress Disorder

Maternal Wellbeing

Research in the area of PTSD following childbirth has focussed primarily on the incidence and risk factors associated with the disorder. There is an absence of literature that examines the clinical presentation of the disorder, such as maternal psychological health, and the woman's relationship with significant others primarily the infant.

Fones (1996) reports the case of Mrs T, a Chinese woman of 40 years who presented with intrusive memories of the painful labour she experienced nine years earlier. She experienced anxiety, panic symptoms and intrusions consistent with DSM-IV criteria for PTSD of the chronic type. Although her relationship with her son developed well Mrs T was reported to have become cold and distant to her partner. Mrs T found that during the first year following delivery she could not have a sexual relationship with her partner. When she did resume a sexual relationship she was extremely anxious about accidentally conceiving despite the use of contraception. The behaviour Mrs T demonstrated towards her partner was consistent with DSM-IV criteria of avoidance of stimuli associated with the trauma. In fact Mrs T's sexual difficulties and intrusions did resolve markedly following the surgical procedure tubal ligation to prevent further pregnancies. Three months after

the surgery Mrs T no longer experienced symptoms of PTSD and her difficulties resolved.

There is evidence that avoidance behaviour is common in PTSD following childbirth; many women request planned caesarean sections in attempt to prevent being re-traumatised by childbirth (Ryding, 1991; Ryding, 1993). Tokophobia is now recognised as an unreasoning dread of childbirth, and secondary tokophobia can occur following traumatic childbirth (Hofberg & Brockington, 2000). The fear of childbirth can be so extreme that women with a history of traumatic labour may request termination if they accidentally conceive (Goldbeck-Wood, 1996). Ryding (1993) found that women who requested elective sections had previous traumatic labours that involved severe pain or difficulties gaining assistance during labour. In addition there were other women who requested planned caesareans because they feared the loss of their babies. These women had past experiences of birth complications or they had experienced a prior frightening emergency caesarean section in earlier pregnancies. In one prospective study it was found that amongst a sample of 28 first-time mothers who requested elective caesarean section with subsequent births, all of them recalled traumatic memories of previous childbirth experiences. In fact 50% of this sample of women had experienced emergency caesarean sections with their previous deliveries (Ryding, Wijma & Wijma, 1997).

There are case reports of women who have symptoms consistent with DSM-IV criteria for re-experiencing (Arizmendi et al, 1987; Beech et al, 1985). In

addition to intrusions other symptoms such as nightmares have been reported. O'Driscoll (1994) cites the case of a woman who could not resume a sexual relationship with her partner following a traumatic birth because any form of sexual activity resulted in her re-living and re-experiencing the pain and distress she experienced during her traumatic labour

Sjogren (1997) interviewed women with an extreme fear of childbirth including both first-time mothers and women who had undergone earlier childbirth. The women's anxiety over the delivery was related to lack of trust of obstetric staff, fears of their own incompetence, fear of death to themselves or their infant, fear of pain and loss of control. A significant association was found between previous complicated delivery and fear of death. A planned caesarean section may reduce the risk of further trauma and the feeling of a lack of control, but surgical deliveries themselves may have detrimental affects on a woman's postnatal psychological adjustment. In fact caesarean deliveries are more likely to be associated with maternal mortality and morbidity (Shearer, 1991). Stein (1999) compared predictors of adjustment in women undergoing caesarean or normal deliveries. The authors concluded that women who underwent surgical deliveries experienced greater feelings of loss, grief, failure and lower levels of self-esteem. Even if a woman does not develop PTSD following a difficult birth, it is possible that the experience could make a woman vulnerable to PTSD subsequent to other traumatic events in her life.

Relationship between Mother and Infant

In addition to the negative consequences for maternal wellbeing PTSD following difficult childbirth can affect the early relationship between mother and child. There are case reports that indicate that women with the disorder may experience difficulty breastfeeding, and bonding with their babies (Reynolds, 1997). Consistent with DSM-IV criteria for persistent re-experiencing of the trauma; the child could be a reminder of the traumatic delivery and elicit re-experiencing of the event in the woman. Alternatively a woman may seek to avoid the child because of its association with the traumatic birth. One case report highlights how one woman with PTSD following childbirth became very irritable and detached from her children, and often felt fearful of them (Weaver, 1997). It is then possible that PTSD symptoms could have a detrimental affect on the early relationship between a woman and her baby. In extreme cases this could lead to maternal neglect and could raise concerns for the need for child protection interventions.

In addition there are other forms of avoidance behaviours that could result in parenting difficulties such as emotional numbing. This refers to a collection of symptoms found in PTSD diagnostic classification systems, which reflect difficulties in emotional expression. Emotional numbing is assessed in relation to three separate diagnostic criteria: 'diminished interest in significant activities', 'feelings of detachment or estrangement from others' and 'restricted range of affect'. It is not clear why the symptoms develop following trauma but a number of tentative theories have been proposed. One explanation is that the symptoms may occur because of avoidance strategies

to environmental and experiential reminders of the original trauma. The individual may suppress their emotional responses as a result of avoidance strategies (Keane, Fairbank, Caddell, Zimering & Bender, 1985). Emotional numbing may also occur secondary to the release of endogenous opiods; this occurs as a conditioned fear response and results in the person being almost tranquillised and appearing detached and withdrawn (Pitman, Van der Kolk, Orr & Greenberg, 1990). An alternative explanation is that people with PTSD use excessive cognitive, emotional and behavioural effort to cope with the symptoms of hyperarousal and reactivity that their emotional resources become depleted. This results in a lack of responsiveness to stimuli and a reduction in hedonic responses (Foa, Zinbag, Rothbaum, 1992; Litz, 1992).

It is possible that some women following a traumatic labour in the postnatal period may experience symptoms of emotional numbing, which could be misdiagnosed as postnatal depression. In similar ways to postnatal depression emotional numbing could have a detrimental affect on the early mother infant relationship. A woman could present with symptoms such as maternal disengagement. This is characterised by the mother's lack of emotional responsiveness to the child's behaviour; demonstrated by a lack of communication and difficulty interacting appropriately with the infant (Field, Healy, Goldstein & Guthertz, 1990; Goodman & Brumley, 1990). Other symptoms of PTSD, such as increased arousal could lead a woman to become more irritable, critical, and anxious with her child. Lovejoy, Graczyk, O'Hare & Neuman (2000) conducted a meta-analysis of 46 observational studies

examining the effects of maternal depression on parenting behaviour. The authors conclude on the basis of their findings that the most likely factors associated with parenting difficulties are irritable, critical and coercive parenting. They found that parenting difficulties were not necessarily a consequence of maternal depression but more likely to be due to more general maternal psychological distress, and this was particularly disruptive with younger children because they are more dependent on the parent initiating interactions (Lovejoy et al, 2000).

The evidence suggests that the clinical presentation of PTSD can have detrimental effects on maternal mental health that can have implications for relationship difficulties and long-term consequences for child development.

The Relationship between Posttraumatic Stress Disorder and Postnatal Depression

Past research highlights the close relationship between PTSD and depression. It is often the most common co-morbid psychological disorder to present with PTSD (Green, Lindy & Grace, 1985). It is not uncommon for women with PTSD to also present with postnatal depression (PND) (Reynolds, 1997). The literature indicates that PND is a difficult concept to define; some researchers indicate that it is a distinct disorder that occurs within the postpartum period. Whilst others suggest that there is no difference between PND and other forms of depression that occur outside the postpartum period (Whiffen, 1992). PND is now thought to be a heterogeneous disorder with a number of

contributory factors including psychosocial and cognitive factors (Warner, Appleby, Whitton & Faragher, 1997; Elliott, Leverton, Sanjack, Turner, Cowmeadow, Hopkins & Bushnell, 2000; Grazioli & Terry, 2000). It is likely then that some women will present with symptoms characteristic of PND as a result of PTSD following a difficult birth whilst others will not (Pfost, Stevens & Lum, 1990; Whiffen, 1992).

It is possible that the close relationship between PTSD and PND is due to considerable similarities between the two disorders in DSM diagnostic classification systems. For instance DSM-IV (APA, 1994) criteria for PTSD consists of symptoms such as 'marked diminished interest in significant activities', 'feelings of detachment and estrangement from others', 'restricted range of affect'. It also includes symptoms such as 'sense of foreshortened future', 'difficulty in staying or falling asleep', 'difficulty in concentrating'. These symptoms correspond with depressive symptoms such as 'loss of interest and pleasure', 'social withdrawal', 'loss of affect', 'hopelessness', as well as guilt which is often present in both disorders (Mulhearn & Joseph, 1996). Therefore self-report measures that assess symptoms of depression will correspond with measures of PTSD, and hence the relationship between the two disorders becomes apparent.

The effects of emotional numbing maybe misdiagnosed as PND because of the extreme overlap in presentation and diagnostic classification of the disorders. Emotional numbing could have similar detrimental effects on the early relationship between the woman and her baby. Studies that have looked

at the parenting behaviour of depressed women in interactions with their babies indicate that they demonstrate diminished emotional involvement, impaired communication, are less responsive to the child, and demonstrate less synchrony with their infants (Weismann & Paykel, 1974; Field, Healy, Goldstein & Guthertz, 1990). The children of depressed mothers are at an increased risk of developing psychiatric problems and behavioural disturbances and they have also been found to have social and achievement deficits (Anderson & Hammen, 1993). It has also been found that the children of depressed women continue to have significant adjustment difficulties even when the disorder remits (Billings & Moos, 1986). These findings highlight the importance of the prevention of psychological distress in new mothers as opposed to treatment and cure when distress is evident.

Despite the close relationship between PND and PTSD the relationship between the two disorders is not always complementary. Czarnocka & Slade (2000) in their prospective study found that some women presented with depression alongside PTSD but others did not. Despite the close relationship between depression and PTSD it is likely that some women with PTSD will not be identified because the relationship between the two disorders although closely linked is not symmetrical. For instance Czarnocka Slade (2000) found that in the eight women they identified as experiencing full PTSD symptoms only 6 (75%) had elevated scores indicative of depression on the Edinburgh Postnatal Depression Scale (EPDS). They express concern that currently only PND is measured in the postnatal period with the EPDS. Czarnocka & Slade (2000) suggests that it is possible that 5250 women a

year following delivery could be fully symptomatic with a presentation of PTSD but remain undetected because they are not experiencing PND.

Lyons (1998) conducted a study assessing PTSD in a group of first time mothers, and she found an association between PND and PTSD. However the distribution of scores on the Edinburgh Postnatal Depression Scale (EPDS: Cox, Holden & Sagovsky, 1987) and the Impact of Event Scale (IES: Horowitz, Wilner & Alvarez, 1979) were quite different. The EPDS is a screening instrument for depression commonly used in clinical and research settings. The IES is a self-report measure that assesses intrusions and avoidance symptoms in PTSD. Lyons (1998) concludes that PND and PTSD can coexist but this is not always the case.

PND is now commonly thought to be a heterogeneous disorder; some women may present with depression in a more enduring form that also occurs outside the postpartum period, whilst in others PND may be caused by underlying social or cognitive factors (Warner et al, 1997). As a result of the overlap between the two disorders in clinical settings women with PTSD may experience misdiagnosis. It is possible then that some women can present with symptoms not unlike depression because of a traumatic birth and will then be treated for depression without addressing the underlying causes of the distress. Women with symptoms of PTSD may in fact contribute to the heterogeneity of PND.

The symptom overlap between PTSD and PND is a concern; each disorder has different maintaining factors, and will respond to different forms of psychological intervention. There will of course be women who have PTSD who will not present with PND, and they will remain undetected. Therefore the differentiation of both disorders through screening and early detection is of extreme clinical importance to reduce psychological distress and prevent the detrimental effects of difficulties in early parenting.

INCIDENCE AND TIME COURSE OF PTSD IN WOMEN FOLLOWING CHILDBIRTH

Menage (1993) conducted a retrospective cross-sectional study with 500 volunteer participants that she recruited from advertisements in magazines and newspapers. She examined the incidence of PTSD symptoms in women that had obstetric and gynaecological procedures. From the total 500 participants approximately 20% describe undergoing an obstetric and/or gynaecological procedure at least one month earlier that they rated as being very distressing or terrifying, and out of the range of normal experience. Menage then re-contacted the 100 women who had experienced the distressing procedures and asked them to complete the PTSD interview (Watson, Juba, Manifold, Kucak & Anderson, 1991) that asked about prior trauma. In response 30 respondents were identified with scores that fulfilled the diagnostic criteria for PTSD according to DSM-III-R (APA, 1987). It is difficult to generalise Menage's findings to the general population because

respondents that took part in the research were highly selected i.e. through advertisements in magazines and newspapers in the U.K.

In order to assess this question of generalizability other research has attempted to obtain representative samples. Wijma, Soederquist & Wijma (1997) conducted a cross-sectional study with Swedish women who had given birth over a one-year period. They used a very large sample of 1,640 women and assessed the prevalence of PTSD symptoms in relation to the women's cognitive appraisal of the delivery. From the total sample of 1,640 women 28 were identified as having a PTSD profile following the delivery. The authors found that a PTSD profile was most highly associated with a history of receiving psychiatric/psychological counselling, a negative appraisal of the delivery, nulliparity, and having negative contact with delivery staff. In this study the authors classified women as experiencing PTSD if they fulfilled the full diagnostic criteria of DSM-IV, rather than looking at PTSD symptoms dimensionally. It is likely that some women in the non-PTSD group were experiencing some degree of PTSD symptoms but were excluded because their symptoms did not fulfil the diagnostic criteria. The woman's appraisal of the delivery including feelings of fear for herself and her baby were highlighted in this study. The potential fear of injury to the baby as well as themselves is an important concern in many women during labour (Czarnocka & Slade, 2000; Moleman,et al, 1992; Ryding, 1993). The fear of losing their babies has been found to be an important contributory factor to PTSD in mothers of premature infants (Affleck, Tennan & Rowe, 1991). The concept of fear is recognised in the development of PTSD; the

formation of a fear network is prevalent in theories of PTSD (Lang, 1977; 1985; Foa & Kozak, 1986; Foa, Steketee & Rothbaum, 1989; Foa & Riggs, 1993).

Although interest in PTSD following childbirth is fairly recent there has been recognition for some time that PTSD can occur in the parents of children born premature who require admission to a neonatal intensive care. Affleck, et al (1991) conducted a longitudinal study with 114 mothers who gave birth to premature infants at 6 and 18 months after the child's birth. Many of the women spoke of painful memories of the childbirth and the infant's hospitalisations. According to the IES many reported symptoms of intrusions and avoidance. The women described themselves as living in constant fear that their babies could die.

Waldenstrom (1999) collected longitudinal data on 1111 women before and after labour, they found that a negative birth experience was associated with having little perceived control over events, lack of support from the woman's midwife, anxiety, pain, and being a first time mother. Other factors were also identified that led to a negative perception of the labour including induction of labour, caesarean section, and instrumental delivery. Unfortunately the authors did not measure PTSD symptoms or depression at any stage of the study. Creedy, Shochet & Horsfall, (2000) conducted a prospective longitudinal study with a large sample of women in Australia (n=499). They found that when they measured PTSD symptoms four to six weeks after delivery one in three women described an aspect of the labour and delivery

that was traumatic. From the sample 28 women (5.6%) described symptoms consistent with DSM-IV criteria for acute posttraumatic stress disorder.

Czarnocka et al (2000) conducted a prospective study with a large sample of women who underwent normal spontaneous vaginal deliveries (n = 264). Women were selected that had undergone a 'normal' spontaneous vaginal delivery of a healthy baby irrespective of parity (whether this was their first or subsequent child). From the total sample 3% (eight participants) had symptoms consistent with DSM-IV (APA, 1994), although a further 64 (24.2%) were partially symptomatic experiencing some clinically significant symptoms such as hyperarousal, avoidance, or intrusions. The results indicate that 27% just over a quarter of women who underwent 'normal' deliveries, and delivered healthy babies experienced some clinically significant symptoms of PTSD.

The results of these studies, conducted in several parts of the world suggest that the incidence of clinical symptoms of PTSD is not uncommon in women in the immediate months following childbirth. These studies have provided interesting information about prevalence of PTSD following childbirth amongst larger samples of women, and have indicated potential risk factors to the disorder.

AETIOLOGICAL FACTORS IN THE DEVELOPMENT AND MAINTENANCE OF PTSD

A number of risk factors for PTSD following difficult childbirth have been identified from the literature including feelings of control over events that occur in the delivery room, pain and long complicated labours (Ballard et al, 1995). Lack of information, and failure to be listened to by medical and midwifery staff are frequently cited as risk factors in the literature for emotional disorders in the postpartum period (Oakley, 1980; Thune-Larsen & Moller-Pedersen, 1988; Loos & Julius, 1989; Green, 1990; Menage, 1993).

Individual Factors

Lyons (1998) conducted a small scale study with a sample of 42 first time mothers who were interviewed shortly after birth for ratings of pain during labour, personality characteristics, feelings of control, and fear of physical harm and death (Lyons, 1998). The women were then followed up again one month later and asked to complete measures of perceived social support, as well as the EPDS and the IES. The author found that the association between feelings of control during the delivery, ratings of negative pain descriptors and IES scores were highly correlated. She concluded that feeling in control during the labour and delivery and knowing what to expect were important protective factors against the development of PTSD. In her sample of women 95% said that they were happy with the antenatal preparation they received; however 45% felt that the experience of labour and delivery was worse than

they had expected. In total 30% of the women said they had experienced unexpected medical interventions, and it was these women who were more likely to experience PTSD symptoms following delivery. An individual's feelings of predictability and controllability of a traumatic event have been found to be important factors in the development of PTSD (Foa et al, 1986; 1989; 1993).

A woman's perception of events that occur during delivery appear to be important to her emotional adjustment, this will be influenced by her expectations, personality characteristics and coping in stressful events. Czarnocka et al (2000) found that women with symptoms of PTSD were more likely to feel that they had little control during the labour, higher ratings of trait anxiety, and greater fear during the labour for their babies and their own wellbeing. Symptomatic women felt less well supported by their partner and staff, and less informed about what was happening. In addition women reporting PTSD symptoms were more likely to attribute blame to themselves and staff for any problems that occurred and were less able to cope with what was happening. Czarnocka et al (2000) found that trait anxiety differentiated the groups presenting with PTSD symptoms and those without, and was closely associated with scores on the PTSD measures. The authors suggest this may reflect a vulnerability factor to the development of PTSD.

The personality trait of neuroticism has been found to be an important risk factor to PTSD. In fact it is has been suggested that it may play a more important contributory role to the development of PTSD than the degree of

exposure to the trauma (McFarlane, 1989). Lyons (1998) found that women with higher 'neuroticism' scores on the Eysenck Personality Inventory selected more negative pain descriptors of their experience of labour than women with lower scores. She tentatively concludes that extraversion may be a protective factor against PTSD following childbirth. There is evidence that previous traumatic life experiences may render women vulnerable to experience childbirth as traumatic (Reynolds, 1997). It is recognised in the diagnostic criteria that people with a history of PTSD may relive the original traumatic experience if they encounter a similar experience (DSM, APA, 1994). Wijma et al (1997) recommend on the basis of their findings that screening women for pre-existing traumatic life events prior to delivery would be beneficial as a potential risk factor to PTSD after childbirth.

Childbirth-related Risk Factors

The literature suggests that invasive procedures may increase the risk of trauma to women during childbirth. Creedy et al (2000) found a relationship between the level of obstetric intervention and PTSD symptoms, as well as antipathy with the care received from staff during the intrapartum period. It appears therefore that invasive procedures may be viewed as increasing the risk of trauma, and hence PTSD. It has been suggested tentatively that obstetric procedures such as emergency caesarean section can increase the risk of postpartum psychological difficulties (Gottlieb & Barrett 1986).

Ryding, Wijma & Wijma, (1997) conducted interviews with 26 women who had undergone emergency caesarean section to assess them for the presence

of PTSD according to DSM-III-R (APA, 1987) criteria. The initial interviews were conducted a few days following the birth and then up to one to two months after the delivery. A total of 19 women that participated in the study found the caesarean section traumatic at one to two months after the delivery. Thirteen women had PTSD reactions but none met the full diagnostic criteria of DSM-III-R for post-traumatic stress disorder. According to the authors the symptoms the women reported were more conducive with the criteria for 'adjustment disorder'. This is a diagnosis that incorporates part A and B of the DSM diagnostic criteria for PTSD.

It has been suggested that emergency caesarean section is likely to be associated with postpartum emotional difficulties, because of the unpredictability of the procedure. However women that undergo other forms of instrumental delivery may also be at risk of PTSD reactions. An instrumental delivery refers to an assisted vaginal delivery by either forceps or ventouse extraction, with an unplanned episiotomy. An episiotomy is a surgical incision made to the perineum under local anaesthetic to enable forceps to be entered into the vagina and birth canal. These procedures are usually performed at the end stage of labour when the baby has entered the birth canal, but cannot be delivered normally. MaClean, McDermott & May (2000) conducted a study with 40 women that had recently given birth by one of four obstetric procedures; spontaneous normal delivery, induced vaginal delivery, instrumental vaginal delivery, or emergency caesarean section. The author's measured PTSD symptoms using the IES six weeks post delivery. Although there were no significant differences between the four groups on the

IES scores, women that had instrumental deliveries were more likely to rate the labour as extremely distressing compared to the other three groups. The study was based on a small number of participants in each group so the authors have reported their findings tentatively. MaClean et al (2000) conclude that women who have instrumental deliveries can perceive the birth experience as more traumatic than women that have caesarean sections or normal deliveries.

Ryding, Wijma & Wijma (1998) compared the incidence of PTSD in four groups of women undergoing normal delivery, instrumental delivery, elective caesarean section, and emergency caesarean section. They found that at one month after the delivery both the emergency caesarean section and instrumental delivery groups were more likely to experience symptoms of PTSD. The findings indicate that women can perceive labour as traumatic irrespective of the type of obstetric procedure that is conducted, although invasive procedures such as emergency caesarean section or instrumental delivery are more likely to be perceived as traumatic. Therefore it appears that the woman's perception of unpredictability, and uncontrollability are the most important factors.

Social Support

Social support is a complex construct; it can be conceptualised as the provision of either: advice/information, tangible assistance or emotional support. The latter has been found most useful following a crisis when a person's wellbeing has been threatened, and is commonly referred to as crisis

support. Lyons (1998) found that psychosocial risk factors associated with PTSD following childbirth included an absence of personal support, and stressful life events. In addition she found a link between perceived social support and scores on the IES. Social support has been closely linked to outcome following trauma, people with higher levels of social support are likely to report lower levels of PTSD symptoms (Joseph, Andrews, Williams & Yule, 1992; Joseph, Yule, Williams & Andrew, 1993; Joseph, Williams & Yule, 1997).

Support in the Antenatal Period

Quine, Rutter & Gowan (1993) conducted a longitudinal study with pregnant women before and after delivery to examine factors that aid the transition to motherhood. They found that women who felt most supported prior to delivery experienced less pain during the birth and felt more satisfied with the experience and motherhood. Collins, Dunkel-Schetter, Lobel & Scrimshaw (1993) conducted a longitudinal study with women throughout pregnancy and into the early postpartum period. They found that women who experienced more prenatal support made better progress in labour and delivered healthier babies. They found that informational and instrumental support was most important in predicting progress in labour and infant outcome.

Support during Labour and Delivery

Social support involves the reciprocal interaction of mutual assistance between two people, however in health care settings support is usually unidirectional. For instance support in health care settings is provided by a

caregiver usually a health professional and delivered to a recipient in the role of a patient (Hodnett, 2000). A recent idea that has evolved from the U.S is the concept of a 'doula'. A 'doula' is a woman who is independent of childbirth health professionals and provides emotional and practical support to pregnant women throughout labour and after childbirth. Kitzinger (1998) advocates the use of such a system and provides evidence that in the U.S. the presence of a doula has been found to decrease the rate of caesarean sections by 50%, reduce the length of labour by 25% and reduce the incidence of forceps delivery by 40%. The Cochrane Database of Systematic Reviews highlights how continuous caregiver support during labour from a female caregiver in the form of a midwife or doula (trained layperson) can have a number of beneficial effects for both mother and infant (Hodnett, 2000). Fourteen trials were reviewed involving 5000 women. The results indicate that the continuous presence of a caregiver reduced the likelihood of medication for pain, operative vaginal delivery, caesarean section, and led to better baby apgar (a universal assessment of a baby's condition at birth).

It is likely then that a woman who is experiencing a difficult, painful labour will cope better if she receives emotional support during the event and into early motherhood. Social support is clearly important during pregnancy childbirth and early motherhood as supportive relationships increase a woman's feelings of psychological wellbeing, perceived personal control and lead to more positive affective responses. However, it is also important to assess a woman's perception of what she feels is supportive and who is best in providing that support e.g. partner, doula, midwife or friend. A woman's

perceptions of support will be dependent on a woman's personality characteristics, and situational factors, as well as the caregiver's ability to provide the necessary support (Collins & di Paula, 1997). The evidence suggests that a woman receiving adequate levels of support will perceive changes due to pregnancy as less stressful (Norbeck & Anderson, 1989).

The literature suggests that an absence of support during labour and delivery could predispose a woman to feel more afraid if she experiences a traumatic delivery. It is clear that adequate support will enable a woman to feel more in control of events, and possibly have a more positive effect on her perception of events. The support may come from a partner, family member or 'a doula'. Alternatively support could be seen as the provision of information and explanations by medical and midwifery staff for invasive procedures. It is important that the support given during labour and delivery is consistent with the woman's individual needs, and that it takes account of situational factors.

Social support and Emotional Expression

Emotional expression is likely to be important following a difficult childbirth experience. A woman is likely to continue to reappraise the event after it has occurred and this will influence her meaning of the experience. If she perceives the birth as traumatic the coping strategies she adopts could determine whether she successfully integrates the traumatic memory representation of the birth, or whether she continues to experience difficulties. For instance worrying and rumination could lead to emotional suppression that could exacerbate intrusions (Wegner, Shortt, Blake & Page, 1990; Clark,

Ball & Pape, 1991). Alternatively other forms of coping such as support seeking, disclosure, and emotional expression could also influence meaning and appraisal of the traumatic event. This form of coping is more likely to lead to successful adaptation according to the literature in this area (Joseph, Dalgleish, Williams, Thrasher, Yule & Hodgkinson, 1997).

Kennedy-Moore, Greenberg & Wortman (1991) propose a process model that highlights the cognitive-evaluative steps present in both expression and non-expression of emotions. The first step in the model involves pre-reflection of the stimulus that evokes the emotions; this is largely perceptual and is associated with physiological changes in the body prior to cognitive and emotional processing. The second stage of the model involves a conscious perception of the emotion and recognition of its impact in relation to physiological changes. At the third stage the cognitive processing of the affective response occurs drawing upon internal and contextual cues to enable the person to recognise the emotion. When a person reaches the fourth stage they will draw upon their pre-existing beliefs and goals relating to emotional experience. At the fifth and final stage an evaluative process occurs whereby a person will scan their present social context and if it is consistent with their beliefs about emotional expression they will disclose their feelings to a supportive person in their environment. The stages of the model are interactive and do not necessarily follow an orderly path from one stage to the next, disruptions at different stages of emotional processing could lead to non-expression and implications for the individuals psychological wellbeing (Kennedy-Moore & Watson, 1999).

The two latter stages of the model are likely to be important in psychological adjustment following difficult childbirth. At stage 4 a person may have a global negative attitude towards emotional expression due to rigidly held beliefs, and as a consequence strong avoidance strategies. In certain situations such a strategy may be adaptive for the individual but if they generalise it to all situations and they are ambivalent about emotional expression it may become maladaptive (King & Emmons, 1990). For instance a person may feel that they want to express how they feel but find themselves in conflict because they do not want to appear vulnerable or to hurt others. A disruption at stage 5 is likely to be due to a person's fear that if they express their emotions they will be viewed negatively. For instance they may lack a supportive partner, relative or friend to express their feelings to, or alternatively past learning experiences may render the person to feel that they may be judged negatively. It is also important to remember that a person's cultural background will also influence their tendencies to disclose emotions. Toukmanian & Brouwers (1998) suggest that there are cultural differences in the expression of emotions and disclosure amongst people of different cultures; people from western cultures are generally more emotionally expressive in a number of different contexts than people from eastern cultures.

Crisis Support following Delivery

In recent years there has been a growth in the development of 'after-care trauma services' for women who have experienced a traumatic birth, this has occurred as a result of government initiatives (Audit Commission, 1997). A

number of articles and published books have advocated the benefits of such services (Friend, 1996; Smith & Mitchell, 1996; Charles, 1997; Abbott, Bick & McArthur, 1997). The service is offered during the postnatal period and involves a woman voluntarily seeking a consultation with a midwife. It is not a counselling service but involves the midwife clarifying why procedures were conducted and answering any questions the woman may have. The service can result in a referral to clinical psychology services if this is consistent with the woman's needs (Charles & Curtis, 1994). It has been noted that survivors of trauma often have a strong need to talk about their experiences to an empathic listener following a traumatic event (Raphael, 1986). Hence these services appear to be important to allow women to express any concerns or distress that they experienced during delivery, especially women who have few other sources of support. The provision of such services is a positive move towards the recognition that women can experience PTSD following childbirth however as yet there has been no systematic review of the benefits of these services.

Implications for primary prevention and clinical practice

At present there is no way of routinely screening postnatal women for PTSD. This is alarming because out of every 700,000 births that occur each year, it is possible that 21,000 women a year may be affected by symptoms of PTSD in the early postnatal period (Slade, 1996, Czarnocka et al, 2000). The vast majority of these women will remain undetected unless health professionals are taught to detect the early signs of PTSD.

The literature based on prospective and retrospective accounts of PTSD following childbirth indicate that there are risk factors that health professionals could screen for in the antenatal period. Health professionals would find it useful to enquire about a woman's past obstetric history including miscarriage, termination, and stillbirth, as well as her perception of these events. Sensitively enquiring about past stressful life events and trauma and how the woman has coped with these will be informative; for instance has she ever experienced a traumatic event that led her to experience nightmares, recurrent thoughts, and avoid thinking about the event. It will be particularly important to enquire about past experiences of traumatic childbirth and the woman's perception of these events and how she coped after the event (Reynolds, 1997). Importantly a woman's expectations and perceptions of control regarding the labour and delivery should be assessed in the antenatal period, as well as her anxieties regarding childbirth.

During the delivery good communication, information, and pain relief are essential to ensure that a woman has a high level of control over events. In addition it is important that her wishes for support are respected whether that support is her partner, a doula, a relative or a friend. This will also help with her feelings of control. Continuous caregiver support has been found to increase levels of satisfaction with the experience of labour and delivery and personal control (Hodnett, 2000).

If there are signs that a woman is re-experiencing a past traumatic event during her labour, for instance if she becomes very withdrawn, screams out of

control, or refuses an internal examination this could be an indicator of re-traumatization. Memories of past sexual abuse could be triggered by certain procedures occurring during childbirth (Crompton, 1996). If a woman becomes very distressed during childbirth this should be dealt with sensitively by encouraging the woman to verbalise what she is feeling, and support her in validating her experience (Reynolds, 1997).

However signs of PTSD may not be evident until early in the postnatal period, and may in fact be apparent on postnatal wards. If a woman has little desire to care and interact with her baby, is very anxious and restless, has episodes of irritability, or complains of excessive pain these could be signs that a woman is experiencing some degree of PTSD. If any of these signs are evident it is important to ask the woman about her perception of the delivery. For instance, did she fear for her life or her babies at any time, did she feel helpless and out of control, and is she experiencing any flashbacks or nightmares about the experience.

Conclusions

Changes in DSM-IV criterion A have resulted in a recognition that PTSD can occur following childbirth. More recent theoretical models of PTSD acknowledge the role of individual differences and the influence of psychosocial factors; which can help explain why some women experience PTSD following a difficult experience of childbirth whilst others do not. There are now a number of prevalence studies conducted in different countries that indicate that PTSD following childbirth it is not uncommon.

Following on from case study reports there is evidence of women presenting with clinical symptoms consistent with DSM-IV criteria of avoidance, re-experiencing and increased arousal. These symptoms have clear implications for maternal wellbeing, relationships with significant others, and disruption in early mother-infant relationships. The literature indicates that there is a relationship between PTSD and PND, and this may occur because of symptom overlap between the two disorders. However, some women can present with PTSD without depression, but as yet there is no means of screening these women in the postnatal period. It is likely that some women could possibly be misdiagnosed with depression, when the underlying causes and appropriate interventions are quite different.

A number of risk factors to PTSD following childbirth have been identified prior to delivery and afterwards including individual factors such as stressful life events, a woman's perception of the birth, feelings of control, social support, emotional expression and level of intervention. There is a need for

longitudinal research studies to assess risk factors that may contribute to PTSD over time. For instance, psychosocial factors that could be assessed in the antenatal period or appraisal factors of the delivery. Following the birth it is important to assess a woman's perception of the birth and the impact this has had on her psychologically; her appraisal of threat to her own physical wellbeing and her baby's, the level of pain she experienced and support she received from staff.

REFERENCES

Abbott, H., Bick, D., & Mc Arthur, C. (1997) Health afterbirth cited in Henderson, C. & Jones, K. (eds) Essential midwifery. Mosby. London.

Affleck, G., Tennen, H., & Rowe, J. (1991) Infants in Crisis: How Parents Cope with Newborn Intensive Care and it's Aftermath. New York: Springer

American Psychiatric Association (1980) Diagnostic and Statistical Manual of Mental Disorders (3rd edition, revised), American Psychiatric Association, Washington D.C.

American Psychiatric Association (1987) Diagnostic and Statistic Manual of Mental Disorders (3rd edn revised). Washington DC: American Psychiatric Association.

American Psychiatric Association (1994) Diagnostic and Statistic Manual of Mental Disorders (4th edn). Washington, D.C: American Psychiatric Association.

Anderson, C.A., & Hammen, C.L. (1993) Psychosocial outcomes of unipolar depressed, bipolar, medically ill and normal women: A longtitudinal study. Journal of Consulting and Clinical Psychology, 61, 448-454.

Arizmendi, T.G., & Affonso, D.D. (1987) Stressful events related to pregnancy postpartum. Journal of Psychosomatic Research, 31, 743-756.

Audit Commission (1997) First Class Delivery:Improving Maternity Services in England and Wales. Audit Commission Publications, Abingdon

Ballard, C.G., Stanley, A.K., & Brockington, I.F. (1995) Posttraumatic stress disorder (PTSD) after childbirth. British Journal of Psychiatry 166, 525-528.

Beech, A.B., & Robinson, J. (1985) Nightmares following childbirth. British Journal of Psychiatry, 147, 586.

Billings, A.G., & Moos, R.H. (1986) Children of parents with unipolar depression: A controlled 1-year follow-up. Journal of Abnormal Child Psychology, 14, 149-166.

Charles, C. (1997) When the dream goes wrong – posttraumatic stress disorder. Midwives, 11 (1317) 250-252.

Charles, J. & Curtis, L. (1994) Birth Afterthoughts. Midwives 107: 266-268.

Clark, D.M., Ball, S., & Pape, D. (1991) An experimental investigation of thought suppression. Behaviour Research and Therapy, 29, 253-257.

Collins, N.L., Dunkel-Schetter, C., Lobel, M. & Scrimshaw, S.C.M (1993) Social support in pregnancy: Psychosocial correlates of birth outcomes and

postpartum depression. Journal of Personality and Social Psychology, 65 (6), 1243-1258.

Collins, R.L. & DiPaula, A. (1997) Personality and the provision of support cited in Pierce, G., Lakey, B., Sarason, I.G.& Sarason, B.R. Sourcebook of Social Support and Personality. Plenum Press, New York.

Creamer, M., Burgess, P. & Pattison, P. (1992) Reaction to trauma:A cognitive processing model. Journal of Abnormal Psychology, 101, 452-459.

Creedy, D.K., Shochet, I.M., & Horsfall, J. (2000) Childbirth and the development of acute trauma symptoms: Incidence and contributing factors. Birth Issues in Perinatal Care 27 (2) 104-111 June.

Crompton, J. (1996) Post-traumatic stress disorder and childbirth. British Journal of Midwifery 4 (6) 290-293 & 4 (7) 354-356, 373

Cox, J.L., Holden, J.M., & Sagovsky, R. (1987) Development of the 10-item Edinburgh postnatal depression scale. British Journal of Psychiatry, 150, 782-786.

Czarnocka, J. & Slade, P. (2000) Prevalence and predictors of post-traumatic stress symptoms following childbirth. British Journal of Clinical Psychology, 39, 35-51.

Davis, R.C., & Friedman, L.N. (1985) The emotional aftermath of crime and violence. In C.R. Figby (ED), Trauma and its Wake: The Study and Treatment of Post-Traumatic Stress Disorder. Brunner/Mazel, New York.

Elliott, S.A., Leverton, T.J., Sanjack, M., Turner, H., Cowmeadow, P., Hopkins, J. & Bushnell, D. (2000) Promoting mental health after childbirth: A controlled trial of primary prevention of postnatal depression. British Journal of Clinical Psychology, 39, 223-241.

Field, T., Healy, B., Goldstein, S., & Guthertz, M. (1990) Behaviour-state matching and synchrony in mother-infant interactions of nondepressed versus depressed dyads. Developmental Psychology, 26, 7-14.

Fisch, R.Z & Tachmore, O. (1989) Iatrogenic post-traumatic stress disorder. Lancet, 2, 1397.

Foa, E.B. & Kozak, M.J. (1986) Emotional processing of fear exposure to corrective information. Psychological Bulletin, 99, 20-35.

Foa, E.B. & Riggs, D.S. (1993) Posttraumatic stress disorder in rape victims. In Oldham, J., Riba, M.B. & Tasman, A. (Eds) American Psychiatric Press Review of Psychiatry, 12. Washington, D.C. American Psychiatric Press.

Foa, E.B., Steketee, G. & Rothbaum, B.D. (1989) Behavioural/cognitive conceptualisation of posttraumatic stress disorder. Behaviour Therapy, 20, 155-176.

Foa, E., Zinbag, R., & Rothbaum, B. (1992) Uncontrollability and unpredictability in post-traumatic stress disorder: An animal model. Psychological Bulletin, 112, 218-238.

Fones, C. (1996) Posttraumatic stress disorder occurring after painful childbirth. Journal of Nervous and Mental Disease, 184 (3) 195-196.

Friend, B (1996) Thoughts after birth. Nursing Times, 92 (36) 24-25.

Goldbeck-Wood, S. (1996) PTSD may follow childbirth. BMJ, 313, 774.

Goodman, S.H. & Brumley, H.E. (1990) Schizophrenic and depressed mothers relational deficits in parenting. Developmental Psychology, 26, 31-39.

Gottlieb, S.E., & Barrett, D.E. (1986) Effects of unanticipated cesarian section on mothers infants and their interaction in the first month of life. Journal of Developmental Behaviour Pediatrics, 7, 180-185.

Grazioli, R. & Terry, D.J. (2000) The role of cognitive vulnerability in the prediction of postpartum symptomatology. British Journal of Clinical Psychology, 39, 329-347.

Green, B.L., Lindy, J.D. & Grace, M.L. (1985) Posttraumatic stress disorder: Towards DSM-IV. Journal of Nervous and Mental Disease, 173, 406-411.

Green, B.L., & Wilson, J.D. (1985) Conceptualising posttraumatic stress disorder a psychosocial framework. In Figley, C.R. (Ed) Trauma and it's Wake: The Study and Treatment of Posttraumatic Stress Disorder. Brunner/Mazel, New York.

Green, J.M. (1990) Who is unhappy after childbirth ? Antenatal and intrapartum correlates from a prospective study. Journal of Reproductive and Infant Psychology, 8, 175-183.

Hodnett, E.D. (2000) Caregiver support for women during childbirth. The Cochrane Database of Systematic Reviews, 4, 1-22.

Hofberg, K., & Brockington, I. (2000) Tokophobia: an unreasoning dread of childbirth. British Journal of Psychiatry, 176, 83-85.

Horowitz, M.J. (1986) Stress Response Syndromes (2nd ed) Northvale, NJ, Jason Aronson.

Horowitz, M.J., Wilner, N., & Alvarez, W. (1979) Impact of event scale: A measure of subjective stress. Psychosomatic Medicine, 41, 209-218.

Horowitz, M.J. (1976) Stress Response Syndromes. New York: Jason Aronson.

Joseph, S., Andrews, B., Williams, R., & Yule, W. (1992) Crisis support and psychiatric symptomatology in adult survivors of the Jupiter cruise ship disaster. British Journal of Clinical Psychology, 31, 63-73.

Joseph, S.A., Brewin, C.R., Yule, W., & Williams, R. (1991) Causal attributions and psychiatric symptoms in survivors of the Herald of Free Enterprise disaster. British Journal of Psychiatry, 159, 542-546.

Joseph, S., Dalgleish, T., Williams, R., Thrasher, S., Yule, W., & Hodgkinson, P., (1997) Attitudes towards emotional expression and post-traumatic stress in survivors of the Herald of Free Enterprise disaster. British Journal of Clinical Psychology, 36, 133-138.

Joseph, S., Williams, R. & Yule, W. (1997) Understanding posttraumatic stress: A psychosocial perspective on PTSD and treatment. Chichester: Wiley

Joseph, S., Yule, W., Williams, R. & Andrews, B. (1993) Crisis support in the aftermath of disaster: A longtitudinal perspective. British Journal of Clinical Psychology, 32, 177-185.

Keane, T.M., Fairbank, J.A., Caddell, J.M., Zimering, R.T. & Bender, M.E (1985) a behavioural approach to assessing and treating post-traumatic stress disorder in Vietnam veterans. In C.R. Figley (Ed.) Trauma and its Wake Brunner/Mazel, New York.

Kennedy-Moore, E. & Watson, J.C. (1999) Expressing Emotion – Myths, realities, and therapeutic strategies. The Guildford Press

Kennedy-Moore, E., Greenberg, M.A., & Wortman, C.B. (1991) Varieties of Nonexpression: A Review of Self-Report Measures of Emotional Control. Paper presented at the meeting of the American Psychological Association, San Franciso, CA.

Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M. & Nelson, C.B. (1995) Posttraumatic stress disorder in the national co-morbidity survey. Archives of General Psychiatry, 52, 1048-1060.

King, L.A., & Emmons, R.A. (1990) Conflict over emotional expression: Psychological and physical correlates. Journal of Personality and Social Psychology, 58, 864-877

Kitzinger, S. (1998) cited in Mouatt, K. Labours of love. Nursery World, 12-13.

Kitzinger, S. (1992) Birth and violence against women. In: Roberts, H. (Ed) Woman's Health Matters. Routledge, London.

Kulka, R.A., Schlenger, W.E. & Fairbank, J.A., Hough, R.L., Jordan, B.K., Marmar, C.R. & Weiss, D.S. (1990) Trauma and the Vietnam War Generation: Report of findings from the National Vietnam Veterans Readjustment Study. Bruner/Mazel New York.

Lang, P.J. (1977) Imagery in therapy: An information processing analysis of fear. Behavior Therapy, 8, 862-886.

Lang, P.J. (1985) The cognitive psychophysiology of emotion: fear and anxiety. In Tuma, A.H. & Maser, J.P. (Eds) Anxiety and the Anxiety Disorder, 131-170. Hillsdale, Erlbaum, N J.

Lima, B.R., Pai, S., Lozano, J., & Santacruz, H. (1991) The stability of emotional symptoms among disaster victims in a developing country. Journal of Traumatic Stress, 3, 497-506.

Litz, B. (1992) Emotional numbing in combat-related post-traumatic stress disorder: A critical review and reformulation. Clinical Psychology Review, 12, 417-432.

Loos, C. & Julius, L. (1989) The clients view of hospitalization during pregnancy. Journal of Obstetric, Gynaecological and Neonatal Nursing. January/February, 52-56.

Lyons, S. (1998) A prospective study of posttraumatic stress symptoms 1 month following childbirth. Journal of Reproductive and Infant Psychology, 16 (2-3), 91-105.

Lovejoy, M.C., Graczyk, P.A., O'Hare, E. & Neuman, G. (2000) Maternal depression and parenting behaviour; A meta-analytic review. Clinical Psychology Review, 120 (5) 561-592.

MaClean, L.I. & McDermott, M.R. & May, C.P. (2000) Method of delivery and subjective distress: women's emotional responses to childbirth practices, Journal of Reproductive and Infant Psychology, 18 (2) 153-162.

McFarlane, A.C. (1989) The aetiology of post-traumatic morbidity: predisposing, precipitating and perpetuating factors. British Journal of Psychiatry, 154, 221-228.

McFarlane, A.C. (1990) Vulnerability to posttraumatic stress disorder. In Wolfe, M.E. & Mosnaim, Posttraumatic Stress Disorder: Etiology, Phenomenology and Treatment. American Psychiatric Press, Washington D.C.

Melzack, R. (1993) Labour pain as a model of acute pain. Pain, 53, 117-120.

Menage, J. (1993) Post-traumatic stress disorder in women who have undergone obstetric and/or gynaecological procedures. Journal of Reproductive and Infant Psychology, 11, 221-228.

Moleman, N., Van der Hart, O., & Van der Kolk, B.A (1992) The partus stress reaction: a neglected etiological factor in post-partum psychiatric disorders. Journal of Nervous and Mental Disease, 180, 271-272.

Mulhern, G. & Joseph, S. (1996) Psychological Perspectives on Stress and Trauma from Disaster to Political Violence. The British Psychological Society – Northern Ireland Branch

Muran, E.M., & Motta, R.W. (1993) Cognitive distortions and irrational beliefs in posttraumatic stress, anxiety, and depressive disorders. Journal of Clinical Psychology, 49 (2) 166-176.

Norbeck, J.S. & Anderson, N.J. (1989) Psychosocial predictors of pregnancy outcomes in low income black, hispanic, and white women. Nursing Research, 138, 204-209.

O' Driscoll, M. (1994) Midwives, childbirth and sexuality. British Journal of Midwifery 2 (1) 39-41.

Oakley, A. (1980) Women Confined: Towards a Sociology of Childbirth. Martin Robertson, Oxford.

Pfost, K., Stevens, M. & Lum, C. (1990) The relationship of demographic variables, antepartum depression and stress to postpartum depression. Journal of Clinical Psychology, 46, 588-592.

Pitman van der Kolk, Orr & Greenberg (1990) cited in Litz, B.T., Schlenger, W.E., Weathers, F.W., Caddell, J.M., Fairbank, J.A. & LaVange, L.M. (1997) Predictors of emotional numbing in posttraumatic stress disorder. Journal of Traumatic Stress, 4, 607-618.

Pynoos, R.S., & Nader, K. (1988) Psychological first aid and treatment approach for children exposed to community violence: research implications. Journal of Traumatic Stress, 5, 455-476.

Quinne, L., Rutter, D.R. & Gowan, S. (1993) Women's satisfaction with the quality of birth experience: a prospective study of social and psychological predictors. Journal of Reproductive and Infant Psychology, 11, 107-113.

Rachman, S. (1980) Emotional processing. Behaviour Research and Therapy, 18, 51-60.

Ralph, K., & Alexander, J. (1994) Borne under stress. Nursing Times, 90 (12) 28-30.

Raphael, B. (1986) When disaster strikes. Hutchinson, London.

Raphael-Leff, J. (1991) Psychological Processes of Childbearing. Chapman & Hall.

Reynolds, J.L. (1997) Posttraumatic stress disorder after childbirth: the phenomenon of traumatic birth. Canadian Medical Association Journal, Mar 156 (6), 831-5.

Rothbaum, B.O., Foa, E.B., Riggs, D.S., Murdock, T., & Walsh, W. (1992) A prospective examination of post-traumatic stress disorder in rape victims. Journal of Traumatic Stress, 5, 455-476.

Ryding, E.L. (1991) Psychosocial indications for caesarian section: a retrospective study of 43 cases. Acta Obstetrica Gynaecology Scandinavica, 70, 47-9.

Ryding, E.L. (1993) Investigation of 33 women who demanded a caesarian section for personal reasons. Acta Obstetrica et Gynaecologica Scandinavica, 72, 280-285.

Ryding, E.L., Wijma, B & Wijma, K. (1997) Posttraumatic stress reactions after emergency caesarian section Acta Obstetrica Gynaecologica Scandinavica, 76, 856-861.

Ryding, E.L., Wijma, K., & Wijma, B. (1998) Psychological impact of emergency casarian section in comparison with elective casarian section, instrumental and normal vaginal delivery. Journal of Psychosomatic Obstetrics and Gynecology, 19 (3), 135-144.

Sjogren, B. (1997) Reasons for anxiety about childbirth in 100 pregnant women. Journal of Psychosomatic Obstetrics & Gynaecology, 18 (4), 266-72.

Slade, P. (1996) Antenatal preparation. In Niven, C.A. & Walker, A. (Eds), Conception, Pregnancy and Birth (pp. 101-113). Oxford: Butterworth-Heinemann.

Shalev, A.Y., Schreiber, S., Galai, T., & Melmed, R.N (1993) Post-traumatic stress disorder following medical events. British Journal of Clinical Psychology, 32, 247- 253.

Shearer, E. (1991) Cesarean section: medical costs and benefits. Social Science and Medicine, 37, 1223-1231.

Smith, J.A., & Mitchell, S (1996) debriefing after childbirth: a tool for effective risk management. British Journal of Midwifery, 4 (11) 581-586.

Stein, D.R. (1999) Diminished control and unmet expectations: Testing a theory of adjustment to caesarian delivery (childbirth satisfaction). Dissertation Abstracts International: Section B The Sciences and Engineering, 60, (6-B), 3015.

Thune-Larsen, K.B., & Moller Pedersen, K. (1988) Childbirth experience and postpartum emotional disturbance. Journal of Reproductive and Infant Psychology, 6, 229-240.

Toukmanian, S.G., Brouwers, M.C. (1998) Cultural aspects of self-disclosure and psychotherapy. Cited in Kazarian, S.S. & Evans, D.R. Cultural Clinical Psychology: Theory, Research and Practice. Oxford University Press.

Waldenstrom, U. (1999) Experience of labor and birth in 1111 women – Journal of Psychosomatic Research, 47 (5) 471-482. Nov.

Warner, R., Appleby, C., Whitton, A., & Faragher, B. (1997) Attitudes toward motherhood in postnatal depression: Development of the maternal attitudes questionnaire. Journal of Psychosomatic Research, 43, 351-358.

Watson, C.G., Juba, M.P., Manifold, V., Kucak, T. & Anderson, E.D (1991) The PTSD interview: rationale description, reliability, and concurrent validity of a DSM-III based technique. Journal of Clinical Psychology, 47 (2) 179-89.

Weaver, J. (1997) Childbirth: preventing posttraumatic stress disorder. Professional Care of Mother and Child, 7 (1) 2 – 3.

Wegner, D.M., Shortt, J.W., Blake, A.W., & Page, M.S. (1990) The suppression of exciting thoughts. Journal of Personality and Social Psychology, 58, 409-418.

Weismann, M.M., & Paykel, E.S. (1974) The Depressed Woman: A Study of Social Relations. Chicago: University of Chicago Press.

Whiffen, V.E. (1992) Is postpartum depression a distinct diagnosis ? Clinical Psychology Review, Vol 12, p.p. 485-508.

Wijma, K., Soderquist, J. & Wijma, B. (1997) Posttraumatic stress disorder after childbirth; A cross sectional study. Journal of Anxiety Disorders, 11 (6) 587-597.

Wolfe, D.A., Sas, L., & Werkerle, C. (1994) Factors associated with the development of post-traumatic stress disorder among child victims of sexual abuse. Child Abuse and Neglect, 18, 37-50.

Brief Report: The Factor Structure and the Clinical Utility of the Perception of Labour and Delivery Questionnaire

The changes in DSM-IV (APA, 1994) diagnostic classification for posttraumatic stress disorder (PTSD) now allows for more subjective or individual appraisal factors in the definition of what constitutes a traumatic event. Criterion A of the diagnostic criteria now defines a traumatic event as witnessing or experiencing an event which involves actual or threatened death, or an event involving risk of serious physical injury to self or another. It also considers the person's feelings at the time of the event including feelings of fear, helplessness or horror. Following on from changes in diagnostic criteria it is now recognised that PTSD can occur in women following difficult childbirth and that this can impact on maternal wellbeing in the postpartum period (Ballard, Stanley & Brockington, 1995; Lyons, 1998; Wijma, Soederquist & Wijma, 1997; Czarnocka & Slade, 2000). The impact of the disorder also has important implications for the woman's relationship with her child and partner (Weaver, 1997).

Despite invasive procedures being implicated in traumatic childbirth in the literature it is now apparent that a woman's perception of events occurring during delivery is more predictive of PTSD reactions than the type of labour (Ryding, Wijma & Wijma, 1998; Czarnocka et al, 2000; Creddy, Shochet & Horsfall, 2000). In particular a woman's perception of control during delivery has been implicated as an important risk factor (Lyons, 1998; Waldenstrom, 1999; Czarnocka et al, 2000). In the childbirth literature the assessment of

control has frequently been measured in relation to satisfaction, coping and pain (Brewin & Bradley, 1982; Slade, MacPherson, Hume & Maresh, 1993; McCrea & Wright, 1999). However the concept of control itself maybe difficult to measure as a single concept. It is likely to be multidimensional, incorporating factors such as personal control, support and control in relation to health professionals and significant others. Although there is increasing interest in PTSD following childbirth very few studies have used objective scales to measure the woman's perception of the labour and delivery in relation to the traumatic event itself.

One study that has attempted to measure a woman's appraisal of the labour and delivery in relation to PTSD is the Wijma Delivery Expectancy /Experience Questionnaire (W-DEQ). The scale was originally developed to measure fear of childbirth (Wijma, Wijma & Zar, 1998). The 33 items comprising the scale were derived from clinical experience and assess intensity of emotions and cognitions before and after delivery. The scale can be administered in the last trimester of pregnancy to assess a woman's expectancies of labour and delivery as well as the actual experiences after childbirth. The items of the W-DEQ were developed to assess feelings and cognitions across the different stages of childbirth e.g. during labour and then delivery. Therefore the W-DEQ is more relevant to normal childbirth, and is less applicable to women who have invasive deliveries such as emergency or elective caesarean section.

Czarnocka & Slade (2000) conducted a large-scale study examining prevalence and predictive factors in PTSD following normal childbirth. To measure the traumatic event itself and the woman's perception of the experience of childbirth they developed a 24- item scale called the Perception of Labour and Delivery Questionnaire (PLDQ). The items of the PLDQ are based on a woman's perceptions of threat to herself and her baby, feelings of helplessness, and fear consistent with DSM-IV diagnostic criteria. Therefore the items measure aspects of labour and delivery that are considered to be associated with a woman's negative appraisal of delivery based on past literature in the area of PTSD following childbirth. For instance the items measure severity of pain, amount of distress associated with childbirth, satisfaction and confidence with coping, preparation for procedures, and fear for self and baby. In addition the items also assess level of support received from partner and staff; a woman's feelings of control and information received from staff, as well as the woman's personal feelings of responsibility for any difficulties experienced.

The PLDQ is also adaptable and can be applicable for women that undergo unexpected invasive procedures and elective caesarean, because each item asks about the concepts in relation to both labour and delivery. Each of the items can therefore be adapted to be applicable to labour and/or delivery for women that do not have labours i.e. elective caesarean section. However, at present there is no psychometric data available on the factor structure of the scale. Czarnocka et al (2000) conducted an item analysis of the questionnaire to present their findings.

The aim of this study is to determine the factor structure of the PLDQ in a sample of women undergoing childbirth irrespective of type of delivery, and explore what the individual items are measuring. It is hoped that the refined questionnaire could be used as an objective measure of the woman's perception of childbirth, and could be used clinically to assess a woman's perception of difficult childbirth and hence screen for PTSD.

Method

Measure

The Perception of Labour and Delivery Questionnaire (PLDQ: Czarnocka & Slade, 2000) is a 24-item scale developed to assess traumatic childbirth-related experiences (see Table 1). Respondents are requested to rate each item on a 10 - point scale ranging from (1=not at all to 10= extremely). The individual items in the scale ask respondents about their experience in relation to labour and delivery. The women who had planned caesarean sections and did not experience a labour were asked to complete the items in relation to their experience of the delivery only to ensure validity.

Participants

108 women participated in the study. The mean age of the sample of participants was 30 years (range 17- 40 years). Of these women 44.4% were primagravida (first pregnancies) and 55.6% were multigravida (women with one or more child). The women had undergone different types of delivery; 60.7% had a normal delivery, 15% emergency caesarean section, 16.8%

planned caesarean section and 7.5% had instrumental deliveries (forcep or ventouse extraction). The overall rate for both emergency and elective combined is slightly higher in this study than the national average (24-26%). This possibly occurred because the caesarean rate for one of the hospitals included in the study was elevated (31%) during the six month period of recruitment.

Procedure

The PLDQ (see appendix 5) was administered to women in the postnatal period as part of a larger longitudinal research study assessing risk factors associated with PTSD following childbirth. The data from the larger study will be published as a separate report (Bailham & Joseph, in preparation). Respondents were recruited by two methods; either hospital based care (where the women had most contact with an obstetrician), or community based midwifery care (the woman's antenatal care was provided by a midwife) to derive a representative sample of women. The hospital based care women were likely to have an increased risk of pregnancy and labour complications either because of difficulties in past deliveries or in the present delivery e.g. breech presentation. The community-based women were seen to be low risk, likely to deliver normally, of which some would be home confinements. The women were initially recruited to the study in the last trimester of pregnancy (mean 36 weeks). Following delivery at 5- 8 weeks postpartum (mean 6 weeks) the women were sent a copy of the perceptions of

labour and delivery questionnaire by post and asked to complete it returning it in a S.A.E to the researcher.

Results

Factor Analysis

Item 25 was eliminated from the analysis because only 21 respondents had answered this question. The item asked 'how closely was your birth plan followed during your labour and delivery (you may not have had a birth plan if so please leave blank)'. It was not routine practice at either of these two hospitals for women to complete birth plans.

A principal components factor analysis with varimax rotation was conducted on the remaining 23 items of the PLDQ. Initially six factors were identified with eigenvalues above 1 (see appendix 6). The scree plot identified three factors above the marked elbow, and this can be seen in figure I.

- insert Figure I-

The first three factors explained 50% of the variance. The rotated component matrix for these 3 factors indicated seven items had loadings of above .5 on factor 1, four items had loadings above .5 on factor 2, and four items had loadings of above .5 on factor 3. According to this analysis factor 1 appeared to be measuring control, staff support, coping, satisfaction, information, as well as being prepared and listened too. Therefore it was felt appropriate to label this factor 'staff support/care'. Factor 2 measured pain and distress (pain). Whilst factor 3 consisted of four items that measured fear for self and

baby (fear). The internal reliabilities of the computed scales were found to be satisfactory with Cronbachs alpha = .81, .87 and .78 respectively for factors 1, 2 and 3 (see appendix 7). The 23 items of the PLDQ and their corresponding factor loadings can be seen in table I.

-insert table I -

The factors are also supported by qualitative accounts; participants were asked to state the most stressful event during labour and delivery (see appendix 10). With respect to labour 23% of women gave responses that were classified as being related to pain and exhaustion, 11% had concerns about their baby's wellbeing, and 10.6% anxiety about invasive procedures. The most stressful aspect of delivery reported was again pain and exhaustion 22.2%, concerns about baby 13.9%, and unexpected invasive procedures/surgery 9.3%. The qualitative responses given by the women are closely related to factors 2 & 3, pain/distress and fear for baby. Anxiety about invasive procedures and unexpected invasive procedures is likely to be related to factor 1 because anxiety will be related to staff support, control and coping.

Table II illustrates the correlations between the three factors of pain, fear, and staff support/care. A significant negative correlation was found between fear and staff

- insert table II -

support/care -.377 at p <0.01 level. There was no association between pain and fear, but a significant negative correlation between pain and staff support/care -.253, p < 0.01 level.

Type of Delivery and Comparisons in Appraisal Factors

To illustrate that the factors of the PLDQ can discriminate between groups of women undergoing different types of delivery a further analysis was conducted. This analysis examined the difference in mean scores between women who underwent different types of delivery. Due to small numbers in the instrumental delivery group these women were grouped with the emergency section group collectively as the group that underwent 'unexpected procedures'. The women in the instrumental group had either an assisted delivery such as forceps, ventouse following a labour, or emergency caesarean section. Amongst the women in this group 16 had emergency caesarean sections; of which 31 % had epidural anaesthesia, 31 % had general anaesthetics, and 38 % of women had both epidural and general anaesthetic. The mean length of labour was 13 hours (range 3 – 24 hours) prior to the caesarean section. Amongst the elective caesarean group 57% had epidurals, 23% had general anaesthetic, and 19% had both epidural and general anaesthetic. From the latter 'elective caesarean' group 2 women had general anaesthetics with the surgical procedure because of unsuccessful attempts with epidurals; both these women described the experience traumatic. The mean and standard deviations for the three factors can be seen in table III

- insert Table III -

The mean scores for women in the three groups were compared with a one-way anova and a scheffe post hoc test (appendix 8). A scheffe post hoc test is recommended as a conservative test of difference between means; reducing the chance of type 1 errors and suitable for use with unequal group numbers (Bryman & Cramer, 1999). The results of the analysis can be seen in table IV.

- insert Table IV -

On the pain factor there was a significant difference between the three groups F (2,103) = 30.18, $p < 0.01$ level. The women who had normal deliveries and unexpected procedures experienced higher levels of pain. In relation to fear there was no significant difference between the three groups at F (2,104) = 4.51, $p > 0.05$ level. On factor scores for staff support there was no significant difference between the three groups F (2,99) = 3.850, $p > 0.05$ level

Discussion

The outcome of this study indicates that the PLDQ consists of three internally reliable factors; which could be clinically useful in evaluating a woman's appraisal of difficult childbirth. In addition the factor scores can discriminate between appraisals of pain, fear and staff support/care in women undergoing different types of delivery. This is the only study to date that has reported on the factor structure of the PLDQ.

It is recommended that factor analysis should be conducted on a sample of five respondents per variable and on a minimum of 100 respondents (Gorsuch, 1983; Bryman & Cramer, 1999). This analysis falls slightly short of five respondents per variable, but does fulfil the requirements of a minimum sample. Therefore replication of the study would be useful with a larger sample of participants.

The comparison of mean scores between the three groups reflects interesting findings; for instance perceptions of pain do not appear to be related to fear. This is consistent with past research that women's ratings of pain during labour are not necessarily related to their perception of achievement or pleasantness of the birth (Salmon, & Drew, 1992). The first factor of the PLDQ appears to be measuring concepts that could be described as control. It encompasses feelings of personal control, coping, staff support and provision of information. The concept of control has been found to be important in predisposing women to PTSD following

childbirth (Czarnocka & Slade, 2000; Lyons, 1998). This factor was negatively correlated with both ratings of fear and pain, and therefore supports the factors' validity in the assessment of control.

Interestingly women that underwent elective caesarean sections reported higher scores on the fear factor than women who had unexpected procedures, or normal deliveries. There is often an assumption amongst medical professionals that elective caesarean section is more controlled, better for the infant and hence less traumatic. However, this is an assumption that is not borne out by the comparison of mean scores amongst the three groups in this study. The risk of maternal mortality is 2 to 4 times higher and morbidity is 5-10 times higher following a caesarean birth compared to normal delivery (Shearer, 1991). Alternatively the elevated fear score for women undergoing elective caesarean may reflect different psychological processes occurring because of the nature of the delivery. For instance a woman may have felt more fearful of the elective caesarean because she was anxious about surgery. There may have also been additional factors that increased the women's perception of fear such as concerns for the babies' health that may have warranted a surgical delivery. The majority of women that had elective or emergency caesareans had epidural anaesthesia and were therefore awake during the procedure and possibly more anxious. Past research (Salmon et al, 1992) indicates that caesarean section is associated with greater feelings of distress and less fulfilment and control than other modes of delivery.

This study provides interesting insights into how appraisal factors could be assessed in studies that examine risk factors to PTSD following childbirth. The

way in which an individual interprets and assimilates a traumatic event will determine outcome and the development of PTSD (Feinstein & Dolan, 1991). The importance of early screening for PTSD following childbirth cannot be underestimated; figures have been quoted that the possible projected incidence could be as high as 21, 000 women a year in the UK experiencing symptoms of the disorder (Czarnocka & Slade, 2000). The factor structure of the PLDQ indicates that it could be a clinically useful tool for assessing a woman's perception of her labour and/or delivery, identifying women who could be at risk of PTSD.

Table I. The principal components analysis with varimax rotation of the 23 items of the Perception of Labour and Delivery Scale

Items	Factors		
	1	2	3
1. Overall, how pleasurable was your experience of labour and delivery ?	.37		
2. At its worst how severe was your pain during labour and delivery ?		.89	
3. On average how severe was your pain during labour and delivery ?		.90	
4. How distressing did you find the pain you experienced ?		.85	
5. In general how distressing did you find the overall experience of labour and delivery ?		.64	
6. How satisfied were you with the way you coped during your labour and delivery ?	.53		
7. How prepared did you feel during your labour and delivery ?	.51		-.33

Items	Factors		
	1	2	3
8. At its worst how fearful did feel for yourself during your labour and delivery ?		-.39	.61
9. At its worst how fearful did you feel for your baby during your labour and delivery ?			.79
10. On average how fearful did you feel for yourself during labour and delivery ?			.71
11. On average how fearful did you feel for your baby during labour and delivery ?			.79
12. How unexpected were the procedures that you experienced during your labour and delivery ?	-. 46		.39
13. How confident did you feel about being able to cope during your labour and delivery ?		-.41	
14. How supportive were staff during your labour and delivery ?	.67		

Items	Factors		
	1	2	3
15. How supportive was your partner/other relative during your labour and delivery ?	46		
16. How much did you feel in control of what was happening during your labour and delivery ?	.58		-.44
17. How well-informed did you feel about the progress of your labour and delivery ?	.69		
18. How much did you feel that your wishes and views were listened to by staff during your labour and delivery ?	.72		
19. How much was your experience of labour and delivery worse than you had expected ?	-.47		.48
20. How much was your experience of labour and delivery better than you had expected ?	.38		-.44
21. How far did you feel responsible for any difficulties you experienced ?	-.30		

Items	Factors		
	1	2	3
22. How far did you feel staff were responsible for any difficulties you experienced ?	-.49		
23. On the whole do you feel that you coped as well with your labour and delivery as others would have if they had been in your position ?	.58		

Only correlations above .3 displayed

Table II – Correlations between the three factors of the PLDQ

Factors	Fear	Staff	Pain
Fear		-.377**	.046
Staff	-.377**		-.253**
Pain	.046	-.253**	

** 0.01 level of significance

Table III. Means and standard deviations for women according to type of delivery for pain, fear, and staff support/care

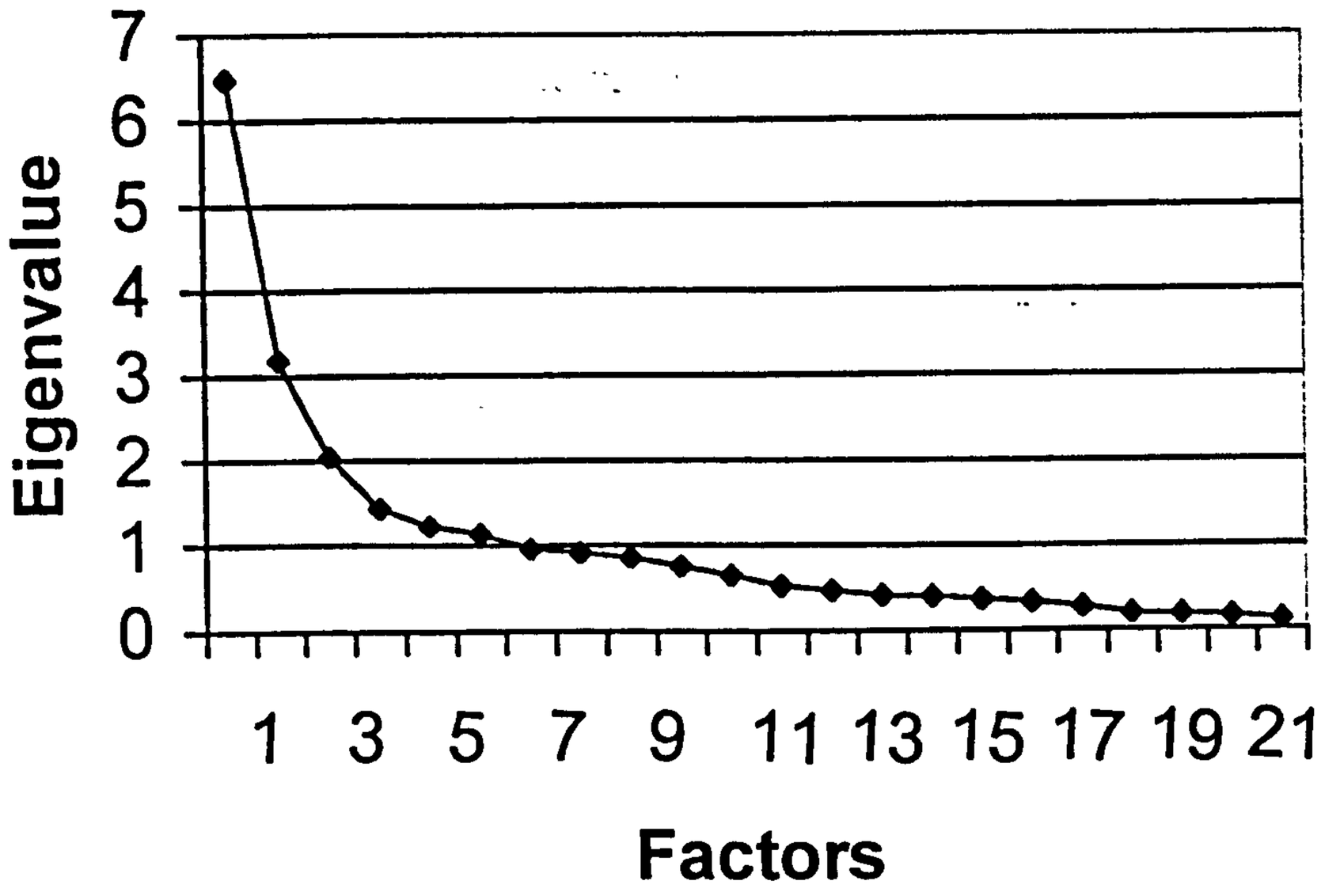
TYPE OF DELIVERY	NUMBER IN GROUP	FEAR		PAIN		STAFF SUPPORT/CARE	
		Mean	S.D	Mean	S.D	Mean	S.D
Normal delivery	65	15.98	7.27	26.04	7.75	56.90	9.93
Elective caesarean	18	21.11	9.94	9.44	4.68	51.52	9.45
Unexpected Procedures	24	20.45	8.41	22.62	10.32	50.83	11.86

Table IV Scheffe Post Hoc Significance Levels for the three factors of the PLDQ

POST HOC SIGNIFICANCE LEVELS FOR THE THREE FACTORS	Normal Delivery	Elective Caesarean
Unexpected Procedures	Fear .070 Pain .208 Staff .056	Fear .967 Pain .000 * Staff .978
Elective Caesarean	Fear .061 Pain .000 * Staff .172	

*** Significant at less than < 0.01 level of significance**

Figure I. Scree plot demonstrating the six factors and corresponding eigenvalues



References

American Psychiatric Association (1994) Diagnostic and Statistic Manual of Mental Disorders (4th edn). Washington, D.C: American Psychiatric Association.

Bailham, D.B.R., & Joseph, S. (2001) Posttraumatic stress disorder following childbirth: A longtitudinal study assessing risk factors (in preparation).

Ballard, C.G., Stanley, A.K., & Brockington, I.F. (1995) Posttraumatic stress disorder (PTSD) after childbirth. British Journal of Psychiatry 166, 525-528.

Brewin, C. & Bradley, C. (1982) Perceived control and the experience of childbirth. British Journal of Clinical Psychology, 21, 263-269.

Bryman, A., & Cramer, D. (1999) Quantitative Data Analysis with SPSS Release 8 for Windows – A Guide for Social Scientists. Routledge, London.

Creedy, D.K., Shochet, I.M., & Horsfall, J. (2000) Childbirth and the development of acute trauma symptoms: Incidence and contributing factors. Birth Issues in Perinatal Care 27 (2), 104-111 June.

Czarnocka, J. & Slade, P. (2000) Prevalence and predictors of post-traumatic stress symptoms following childbirth. British Journal of Clinical Psychology, 39, 35-51.

Feinstein, A. & Dolan, R. (1991) Predictors of post-traumatic stress disorder following physical trauma: an examination of the stressor criterion. Psychological Medicine, 21, 85-91.

Gorsuch, R.L. (1983) Factor Analysis. Hillsdale, NJ: Lawrence Erlbaum.

Lyons, S. (1998) A prospective study of posttraumatic stress symptoms 1 month following childbirth. Journal of Reproductive and Infant Psychology, 16 (2-3), 91-105.

McCrea, B.H. & Wright, M.E. (1999) Satisfaction in childbirth and perceptions of personal control in pain relief. Journal of Advanced Nursing, 29 (4), 877-884.

Ryding, E.L., Wijma, K., & Wijma, B. (1998) Psychological impact of emergency casarian section in comparison with elective casarian section, instrumental and normal vaginal delivery. Journal of Psychosomatic Obstetrics and Gynecology, 19 (3), 135-144.

Salmon, D. & Drew, N.C. (1992) Multidimensional assessment of women's experience of childbirth: relationship to obstetric procedure, antenatal preparation and obstetric history. Journal of Psychosomatic Research, 36 (4), 317-327.

Shearer, E. (1991) Cesarean section: medical costs and benefits. Social Science and Medicine, 37, 1223-1231.

Slade, P., MacPherson, S.A., Hume, A. & Maresh, M. (1993) Expectations, experiences and satisfaction with labour. British Journal of Clinical Psychology, 32, 469-483.

Waldenstrom, U. (1999) Experience of labor and birth in 1111 women – Journal of Psychosomatic Research, 47 (5), 471-482. Nov.

Weaver, J. (1997) Childbirth: preventing posttraumatic stress disorder. Professional Care of Mother and Child.

Wijma, K., Soederquist, J. & Wijma, B. (1997) Posttraumatic stress disorder after childbirth: A cross-sectional study. Journal of Anxiety Disorders, 11 (6), 587-597.

Wijma, K., Wijma, B. & Zar, M. (1998) Psychometric aspects of the W-DEQ; a new questionnaire for the measurement of fear of childbirth. Journal of Psychosomatic Obstetrics Gynaecology, 19, 84-97.

Posttraumatic Stress Disorder following Childbirth: A longitudinal study assessing risk factors

There is now a growing body of evidence that women can experience posttraumatic stress disorder (PTSD) following childbirth, and this can occur following normal childbirth as well as labours involving invasive procedures (Wijma, Soederquist & Wijma, 1997; Waldenstrom, 1999; Lyons, 1998; Czarnocka & Slade, 2000). This can have serious consequences for maternal wellbeing and is likely to have detrimental affects on the woman's relationship with her child (Reynolds, 1997; Weaver, 1997). Many women can experience traumatic childbirth without developing symptoms of PTSD, whilst a minority are significantly affected by the experience. It appears then that there are individual differences between women that interact with a difficult experience of childbirth, and predispose some women to PTSD.

According to the integrative model of PTSD individual differences in the appraisal of a traumatic event can determine whether a person will develop symptoms of PTSD (Joseph, Williams & Yule, 1997). The cognitive representation of a traumatic event will be affected by past experience and personality and this can affect the degree of intrusions, re-experiencing and hyperarousal symptoms experienced. The presence of intrusions will influence an individual's appraisal of a trauma, as well as their perception of threat at the time of the event. For instance, there are events such as major disasters that are universally considered to be traumatic but some people can develop PTSD following events where threat is more subjective e.g. medical procedures,

childbirth. The appraisal of an event incorporates the individual's meaning of the trauma and is more dependent on past experience and personality, as well as existing beliefs about the self, the world and others (Beck, 1976; Hollon & Kendall, 1980). For instance, a person who has experienced a number of difficult life events is likely to appraise a traumatic car accident differently to a person who has not had similar experiences. The person's appraisal and beliefs at the time of the car accident will be influenced by past experiences of feeling helpless and fearful. If the person is trapped in the car and feels that their physical wellbeing is threatened, this appraisal will interact with past experiences possibly exacerbating their chances of developing PTSD.

In summary the integrative theory of PTSD emphasises the role of psychosocial factors in the development of PTSD following trauma. Therefore past life experience and personality will influence the individual's appraisal of an event as traumatic; this will then affect emotional state and underlying beliefs about self, others and the world and influence coping. This theory is also consistent with changes in criterion A, DSM-IV (APA, 1994) diagnostic criteria for posttraumatic stress disorder. Criterion A, now allows for a more subjective definition of a trauma dependent on individual interpretation of threat and feelings of helplessness or horror.

Stressful Life Events, Personality and Appraisal as Risk Factors to PTSD following Childbirth

Stressful life events and personality factors have been implicated in predisposing women to PTSD reactions after childbirth (Menage, 1993; Lyons, 1998; Matthey, Silove, Barnett, Fitzgerald & Mitchell, 1999). Menage (1993) in a study looking at past obstetric and gynaecological trauma found that women who reported symptoms of PTSD were more likely to report a past history of prior baby loss, and past trauma. Matthey & Silove, et al (1999) conducted a study with a small self selected sample of Cambodian women who had recently migrated to Australia and explored the relationship between past trauma and PTSD after childbirth. They found that women who had experienced five or more traumatic events prior to the birth of their babies were more at risk of anxiety and PTSD. They reported a dose-response effect in relation to prior traumatic events.

Personality

The personality trait of neuroticism has been implicated as a risk factor in PTSD following childbirth (Lyons, 1988). The concept of 'neuroticism' itself is controversial; some personality theories have advocated it as an enduring personality trait that is not influenced by external factors (Eysenck, 1970). Whilst others advocate the influence of past experience and the environment in shaping personality.

It has been suggested that prior difficult life experiences will influence a person's personality rendering them vulnerable to PTSD following a traumatic event (Joseph et al, 1997).

Clark, Watson & Mineka (1994) suggest that an individual's personality may make them susceptible to stressful life events that will increase their level of neuroticism. This can then render the person more vulnerable to anxiety and PTSD following stressful or traumatic life events. It is also possible that a person who has experienced a number of stressful life events will report a higher level of trait neuroticism in response to these events irrespective of their underlying personality. Therefore there appears to be a strong association between past psychological difficulties, stressful life events, personality and the trait of neuroticism. It appears that the interaction of these variables could predispose a person to PTSD following a difficult life experience.

Appraisal Factors

A woman's appraisal of the events surrounding the labour and delivery will affect her perception of threat and hence her risk of developing PTSD. A woman's perception of threat will be exacerbated by fear of injury to herself and her baby, as well as other factors such as feelings of control, level of obstetric intervention, and staff support (Czarnocka & Slade, 2000; Ryding, Wijma & Wijma, 1997). Her feelings of control during labour and delivery are likely to be influenced by both personal control over events, and the level of support she receives from staff. If a woman is given information about procedures and progress, and she feels that staff will listen to her she will feel more in control of events (Oakley,

1980; Thune Larsen & Moller-Pedersen, 1988; Loos & Julius, 1989; Green, 1990; Kitzinger, 1992; Menage, 1993). Creedy, Shochet & Horsfall (2000) conducted a prospective longitudinal study assessing risk factors to PTSD following childbirth. They found that women who were dissatisfied with their care during delivery were more likely to experience trauma symptoms in the postnatal period.

The Role of Maintenance Factors in PTSD following Childbirth

An important component of the psychosocial model of PTSD is coping and maintenance factors e.g. avoidance strategies and emotional expression (Joseph et al, 1997). Williams (1989) proposes a cognitive behavioural theory of PTSD outlining how chronic PTSD may be maintained following a traumatic life event. The theory incorporates the concept of dysfunctional assumptions from cognitive theories of emotional disorders (Beck, 1976). Williams (1989) proposes that if a person holds negative attitudes to emotions particularly the expression of these emotions they will have a tendency to use avoidance strategies (behavioural, cognitive and emotional) to block the emotional processing of the traumatic memory. There is evidence that dysfunctional attitudes to emotional expression in survivors of trauma are associated long-term with symptoms of PTSD. A relationship was found between attitude to emotional expression and the acceptance of crisis support, people with a negative attitude to emotional expression received less social support (Dalgleish, Joseph, Thrasher, Tranch & Yule, 1996).

Emotional Expression

Emotional expression (EE) itself can be defined as the process whereby internal experience is linked to the outside world through observable verbal and non-verbal behaviour that communicates or symbolise to others our emotional experience (Kennedy-Moore & Watson, 1999). There is an increasing body of evidence advocating the beneficial effects of emotional expression on physical and psychological wellbeing (Pennebaker, 1989, 1996).

Kennedy-Moore, Greenberg & Wortman (1991) propose that the relationship between emotional expression and wellbeing can be complicated by other factors. Thus, a person may have difficulty expressing their emotions for a number of reasons; e.g. personal values, the social context may influence their behaviour, or they may lack a confidante. A person may have a global negative attitude towards EE due to rigidly held beliefs, and as a consequence strong avoidance strategies. In certain situations such a strategy may be adaptive for the individual but if they generalise this strategy to all situations it can become maladaptive.

EE has implications for women following traumatic childbirth. The woman's willingness to express her feelings after the event and the availability of supportive others e.g. partner, friends, family or health professionals could have implications for her ability to integrate representations of the traumatic event. It is recognised that when a person expresses strong intense negative emotions others may find this overwhelming and aversive (Pennebaker, 1993). Therefore if a person is confronted with negative reactions from others when they try to express their feelings they are likely to feel rejected, embarrassed and unlikely to repeat

the behaviour. A woman's willingness to express her feelings following traumatic childbirth and the availability of a confidante to listen to her is likely to influence her ability to resolve the trauma.

Clinical case studies of posttraumatic stress disorder following childbirth indicate that the disorder can have adverse effects on a woman's relationships with her partner and long-term mental health (Fones, 1996). It is unclear how the disorder can impact on a woman's relationship with her child; clinical case studies indicate that it could result in attachment difficulties and a woman experiencing difficulty in parenting her child (Lyons, 1998; Weaver, 1997).

Aims of the Present Study

The aim of the present study is to identify factors that could predispose women to be at risk of PTSD following childbirth. Past studies in this area have assessed PTSD either prospectively or retrospectively. There has been only one other prospective longitudinal study that assessed risk factors to PTSD across the latter stages of pregnancy, labour and into the postnatal period. Creedy, Shochet & Horsfall (2000) found that dissatisfaction with care during labour and delivery and obstetric intervention were more likely to predispose women to PTSD following childbirth. They found that antenatal variables did not contribute to the development of PTSD. However they failed to assess a number of psychosocial factors in the antenatal period that could according to the literature contribute to the development of PTSD.

The aim of this study is to assess risk factors to PTSD following childbirth in the antenatal period (stressful life events, psychological problems, depression) during labour and delivery (a woman's appraisal of staff support and care, fear and pain) and postnatal period (depression, avoidance and emotional expression). This study will assess these factors across time at 5 – 8 weeks and again at 10 – 14 weeks. The study will also assess whether avoidance coping is predicted by a negative attitude to emotional expression and a negative appraisal of delivery at 5 – 8 weeks, and if this leads to an increase in PTSD symptoms at 12 weeks. Finally this study will also assess whether there is any association between maternal attitudes and PTSD. .

Hypotheses

1. Higher levels of posttraumatic stress across time will be associated with stressful life events, depression, neuroticism, attitudes to emotional expression, and appraisal of delivery. Figure I illustrates the relationship between these variables and PTSD.

- insert Figure I -

2. Higher levels of cognitive and behavioural avoidance coping at 5 – 8 weeks (time 2) will be associated with a negative appraisal of delivery, and negative attitude to emotional expression and will result in increased PTSD symptoms

at 12 weeks (time 3). This hypothesis will attempt to test Williams (1989) cognitive behavioural theory of PTSD. This relationship is expressed in figure II.

- insert Figure II –

3. There will be a relationship between symptoms of posttraumatic stress disorder and maternal attitudes in the postnatal period.

Method

The design of the study is longitudinal, assessing PTSD following childbirth over time with postal questionnaires. Women were recruited to the study in the third trimester of pregnancy, and then followed up at two time points: 5-8 weeks following the birth of their babies, and then again at 10-14 weeks.

Measures

Table I illustrates the questionnaires completed by the women at the three time points.

- insert Table I -

Antenatal Period – time point 1: In addition to the measures cited below, women recruited to the study in the antenatal period were asked to provide demographic details such as: age, parity, occupation, marital status (see Appendix 9).

1. *The Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden & Sagovsky, 1987)*

The 10-item EPDS is a screening instrument used to detect depression in the early post-natal period. It has convergent validity with clinical depression

diagnosed with Research Diagnostic Criteria and psychiatric interviews (Endicott & Spitzer, 1978; Cox, Holden & Sagovsky, 1987). The split-half reliability of the EPDS is 0.88 and demonstrates reliability over time (Cox et al, 1987; Cox & Holden, 1994). The EPDS has been validated and quite extensively used with women to assess emotional wellbeing in the antenatal period (Murray & Cox, 1990; Boyce, 1990; Dragonas, Thorpe & Golding, 1992).

2. List of Threatening Events (LTE; Brugha & Cragg, 1990)

The questionnaire version was used in this study listing twelve life events and respondents were asked to indicate whether they had experienced any of these events in the past 12 months. This questionnaire has been found to have high test-retest reliability over a six month period with reliability coefficients for most items > 0.78. The scale also has concurrent validity with the Life Events and Difficulties Schedule (LED; Brown & Harris, 1978).

3. Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1991)

The 12-item neuroticism subscale of the EPQ-R was used in this study. The EPQ-R has proven reliability and validity as a measure of personality, and the neuroticism subscale has an internal reliability coefficient of 0.80 with female participants (Eysenck et al, 1991).

4. Past Psychological Problems

All participants were asked if they were at present receiving or if they had in the past experienced any psychological problems that required counselling, medical

or psychological intervention. The responses were then coded as dichotomous variables of yes or no.

Postnatal Period Time-point 2: The Participants were asked to complete the following measures at 5-8 weeks in the postnatal period (See Appendix 10).

1. Perception of Labour and Delivery Scale (PLDS:Czarnocka & Slade, 2000)

Respondents were asked to rate their perceptions of different aspects of the labour and delivery on a scale of 1 to 10. The factor structure of this scale has been reported in a separate study (Bailham & Joseph, in preparation). The scale consists of 3 internally reliable factors assessing staff support/care, pain and fear for self and baby; the Cronbach alpha coefficients were .81 for staff support/care, .87 for pain and distress and .78 for fear for self and baby.

2. Attitudes to Emotional Expression Scale (AEE; Joseph, Williams, Irwing & Cammock, 1994)

The AEE assesses both cognitive and behavioural aspects of emotional expression and has been found to have convergent validity with the Ambivalence over Emotional Expression Scale (AEQ; King & Emmons, 1990). A higher score on the scale indicates greater ambivalence towards emotional expression. The AEE has been found to have convergent validity with the personality measure NEO Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992), and is significantly associated with neuroticism scores (Laghai & Joseph, 2000). The questionnaire used in this study was the 4- item shortened version of the AEE, it

has been found to have adequate internal reliability for research purposes with a Cronbach alpha of 0.74.

3. Emotional Expressivity Scale (EES; Kring, Smith & Neale, 1994)

The EES is a 17-item self-report measure of emotional expression that has been used with undergraduate samples and community samples of respondents to assess emotion expression. The scale itself is highly internally reliable with a Cronbach alpha of .91, with a test-retest correlation coefficient of .90. The ESS demonstrates convergent validity with other measures of emotional expression, for instance it is significantly correlated with measures of emotional expression, intensity of affective responses, and the display of both positive and negative emotions. In addition it has criterion-related validity with laboratory based direct observation measures of emotional expression with college students and community residents

4. Crisis Support Scale (CSS; Joseph, Andrews, Williams & Yule, 1992)

Is a 6 – item scale that measures perceptions of support following a traumatic event, it was developed from the Crisis Support Instrument (Andrews & Brown, 1988; Brown, Andrews, Harris, Adler & Bridge, 1986). The scale has been found to be a reliable measure of support over time, and have good predictive validity of later symptoms of psychopathology (Joseph, Yule, Williams, Andrews, 1993; Dalgleish, Joseph, Thrasher, Tranch & Yule, 1996).

Postnatal Period (Time-point 3, 10-14 weeks):

The following measures were administered to participants at 10 – 14 weeks: EPDS (Cox et al, 1987), and the dependent variables PDS (Foa, Riggs & Gershuny, 1995), IES (Horowitz et al, 1979), and in addition (Appendix 11):

1. *Maternal Attitude Questionnaire (MAT: Warner, Appleby, Whitton & Faragher, 1997)*

This is a 14- item self-report measure that assesses maternal cognitions related to role change, expectations of motherhood and self as a mother in women in the postnatal period. The measure has been found to have concurrent validity with scores on the EPDS and the Revised Clinical Interview Schedule. The MAQ also demonstrates good internal consistency with a coefficient of .84, and test re-test reliability when mean scores are compared over time.

The Dependent Variables (Time point 2, 5-8 weeks & time point 3, 10-14 weeks)

1. *The Impact of Event Scale (IES: Horowitz, Wilner, & Alvarez, 1979)*

This is a 15 – item scale that assesses the occurrence of intrusions and avoidance in PTSD symptoms following a traumatic event. It is the most widely used measure of PTSD symptoms. The intrusion and avoidance factors have good internal reliability (0.78 and 0.82 respectively) and the scale has adequate test re-test reliability (Horowitz, 1979; Joseph et al, 1997). Women will be asked to complete this measure in relation to the labour at the two postnatal time points.

2. *Post-traumatic Diagnostic Scale (PTDS; Foa, Riggs, Dancu, & Rothbaum, 1993;Foa, Riggs & Gershuny, 1995)*

The scale used in this study was adapted from the 49 item PDS. This measure of PTSD gives information regarding the number of PTSD symptoms and severity, assessing avoidance, re-experiencing and hyperarousal consistent and consists of a 17-item scale measuring these symptoms consistent with DSM-IV criteria (APA, 1994). In this study the scale has been used to assess severity of PTSD symptoms only. The respondents were asked to answer the questions in relation to 'their recent experience of childbirth'. They were asked to indicate if they or their babies had been physically injured, or whether they felt in danger during the labour and delivery. In addition whether they felt that their life or their baby's life was in danger at any time during the labour and delivery. The PDS has been found to have convergent validity with the Structured Clinical Interview for Diagnosis with a kappa of .65, and other measures of psychopathology (Foa, Cashman, Jaycox & Perry, 1997). The internal consistency of the three clusters of avoidance, re-experiencing and hyperarousal demonstrate good reliability coefficients between .84 and .92, and test re-test reliability over time (kappa .74).

Participants

Women were recruited to the study in the third trimester of pregnancy (mean 37 weeks, S.D. 4.79). All participants recruited were aged above 16 years with English as their first language. Women were recruited irrespective of past obstetric history and parity. The age range of the women was 16 – 42 years (mean 30 years, S.D. 4.79). To ensure that women who had subsequent stillbirths

were not contacted in the postnatal period regular checks were made of hospital birth registers.

In total 141 women were recruited to the study, 110 women returned questionnaires at time point 2, 5-8 weeks post delivery (mean 6.4 weeks, S.D. 1.04), and 72 women returned questionnaires at time point 3, 10-14 weeks post delivery (12.65 weeks, S.D. 1.62). From this sample 65 (59.1 %) had normal deliveries, 21 (19.1%) had elective caesarean sections, and 24 (21.8%) had unexpected invasive procedures including emergency caesarean sections, forceps or ventouse assisted delivery. In total the sample consisted of an elevated caesarean rate (35%). This was possibly due to one of the study hospitals having an increased caesarean rate (31%) over the six-month recruitment period compared to the national rate of 20-25% (Kaufman, 2001). In total from this group of participants 19 (13.5%) reported past psychological problems such as depression, anxiety, prolonged bereavement reactions, and 91 (64.5%) had no past psychological difficulties.

The demographic data for women who took part in the study can be seen in table II. It is evident from the table that there were few differences in the demographic characteristics in relation to attrition. The women who initially took part in the study in the antenatal period did not differ to women who completed measures at time 2 & 3 with regard to age, marital status, socio-economic group and type of delivery.

Procedure

Initial Recruitment in the Antenatal Period: To obtain a representative sample, women were recruited from two separate NHS trusts using two different methods of recruitment:

Antenatal Outpatients: Respondents attending outpatient clinics were approached by the researcher and told about the purpose of the study; the aim was to investigate 'psychological changes following childbirth'. The potential respondents were asked to read an information sheet (Appendix 12), and if they were interested in taking part in the study to complete a consent form which they could return to the researcher (Appendix 13). The women who were recruited by this method were booked for consultant or shared care (consultant and midwife).

Community Midwives: Individual community midwives who provided midwifery services to the two hospitals were approached either individually or at meetings and asked for their assistance to recruit women to the study. They were informed about the rationale of the study and that the researcher was seeking a representative sample of pregnant women. They were informed that the aim of the study was to assess 'psychological changes following childbirth'.

The midwives were then asked to distribute packs to women in their care containing a cover note (Appendix 14) information sheets, consent forms, and stamped addressed envelopes addressed to the researcher at the 'Department of

Clinical Psychology'. If the women wished to participate in the study they were asked to return the consent form to the researcher in the enclosed stamped addressed envelope. The women recruited by this method were booked for shared or midwifery led care.

For both groups of respondents when consent forms were received by the researcher, the first set of antenatal questionnaires were sent to the woman with a S.A.E by post to her home when she reached the 34- 40 week stage of her pregnancy.

Postnatal Period (Time-point 2): The birth registers at both hospitals were regularly checked for the dates of deliveries of all women and whether the woman had progressed to full-term labour. When the actual dates of delivery for all participants were ascertained, at the 5^{th} – 8^{th} postnatal week the woman was sent the second pack of questionnaires which asked about the delivery, support, emotional expression, depression and symptoms of PTSD. With this questionnaire pack there was a S.A.E enclosed for return of post to the 'Department of Clinical Psychology'.

Postnatal Period (Time-point 3): Following the same format as above the women were then contacted again at the 10^{th}-14^{th} postnatal week. They were sent the third and last questionnaire pack, there was also a S.A.E enclosed for return of post. To counteract attrition at this stage an additional courtesy phone call was made to all women to enquire about progress, and as a reminder about questionnaires.

Results

The findings indicate that although a number of the women at 5- 8 weeks (n = 110) displayed clinically significant symptoms of PTSD on the IES, none reported symptoms above the 23.4 cut off point for the PTDS. This cut off score was used in the validation of the PTDS amongst 248 participants that had experienced a wide range of traumas (Foa et al, 1997). Although there are no strict cut off points for the intrusion and avoidance subscales of the IES to classify scores in this study the same categories were adopted that have been used in past studies in this area (Lyons 1988; Church & Vincent, 1986). The classification that was used in this study was as follows: 0-8 low distress, 9-19 medium distress and 20 + high distress for each subscale (Church et al, 1986). In total 26 (18.4%) women displayed avoidance symptoms and 37 (26.2 %) intrusive symptoms that could be classified as low distress. A further 16 (11.3%) had avoidance symptoms and 19 (13.5%) intrusive symptoms indicative of medium distress, and finally 3 (2.1%) had avoidance symptoms and 3 (2.1%) intrusive symptoms indicating high distress. From the total sample of participants 4 (3.6 %) women experienced clinically significant symptoms indicating high distress on the IES; 1 had a normal delivery, 2 had unexpected caesarean sections, and the last woman had an elective caesarean. Two of these women reported traumatic labours and deliveries with their first children.

The mean scores for participants on the PTSD measures across the two time points can be seen in tables III & IV. The mean scores are presented according to levels of distress as above.

- insert tables III & IV -

All women who demonstrated clinically significant symptoms of avoidance and intrusions on the IES had scores on the EPDS indicative of postnatal depression (PND). The cut off points for clinically significant symptoms of depression on the EPDS is a score of 12 or above (Cox et al, 1987). Tables V. & VI. illustrate the mean scores for depression (EPDS) at the two time points in relation to levels of distress on the avoidance and intrusion subscales of the IES.

- insert Table V & VI -

Table VII. illustrates the participants mean scores for the appraisal factors of labour and delivery, i.e. fear, pain and staff. The participant's scores are presented in terms of parity. As Table VII. illustrates there were few differences between participants on the appraisal factors irrespective of parity.

- insert Table VII

Hypothesis 1

The aim of the first hypothesis was to determine if there was an association between posttraumatic stress disorder following childbirth and the following variables: number of stressful life events, neuroticism, depression at time 1 & 2, appraisal of delivery (staff, fear and pain) and attitudes towards emotional expression. The mean scores for all the independent variables can be seen in Table VIII. In total 49 (35 %) of participants did not report any stressful life events, 27 (19%) reported 1 event, 24 (17%) reported 2 events and 10 (7%) participants had experienced three or more life events in the past 12 months.

- insert Table VIII –

To test this hypothesis variables from time 1 & 2 were correlated with the dependent measures of PTSD (IES & PTDS) at the two postnatal time points (2 &3). The variables with the highest correlations at $p = 0.01$ level or above were retained and entered into a forward selection stepwise regression. The significance level was set at this level to maximise predictive power, and reduce the risk of type 1 errors. This method of analysis was adopted because the study is exploratory and as yet there is insufficient evidence to conduct a hierarchical

regression analysis. The correlation matrix for the independent and dependent variables can be seen in table IX.

- insert Table IX -

As table IX illustrates a number of variables were highly correlated with the IES and PTDS at $p < 0.001$ level. The variables that were most significantly correlated with IES at the 0.001 level were PND, staff support/care, and attitude to emotional expression. The variables that were most significantly correlated with PTDS were stressful life events, PND, staff support/care, emotional expression (EES) and attitude to emotional expression (AEE). Following this the variables were regressed onto the dependent variables to determine the best predictors of PTSD.

A stepwise regression was conducted with the dependent variable (IES) at time 2. In this analysis the appraisal factor of staff explained 20 % of the variance in PTSD $F(1,93) = 23.95$, $p < .001$, followed by PND, this increased the variance to 30% $F(2,92) = 21.59$, $p < .001$. The remaining predictor attitude to emotional expression increased the variance further to 33% $F(3,91) = 16.41$, $p < .001$. The results of the regression analysis can be seen in table X (Appendix 15).

-insert table X-

In the stepwise regression with PTDS – time 2 as the dependent variable, the best predictor was PND – time 2 measured in the postnatal period explaining 23% of the variance in PTSD F (1,91) = 28.58, p < .001. The appraisal factor staff support/care was the second best predictor with both variables explaining 30 % of the variance F (2,90) = 20.42, p < .001. The last predictor was emotional expression (EES) that added a further 3% of variance F (3,89) = 15.962, p < .001 (Appendix 16). All three predictors, PND, staff appraisal, and emotional expression explained 33 % of the variance of PTSD according the PTDS. The results of the regression can be seen in table XI (Appendix 16).

- insert Table XI -

The final stepwise regression was conducted between PTDS scores at time 3, and the independent variables PND at time 3 and stressful life events. The results indicate that depression accounted for 21% of the variance F (1,69) = 19.74, p <0.001 level, followed by stressful life events that added a further 4 % to the variance F (2,68) = 12.734 p < 0.001 level. The results are show in table XII (Appendix 17).

- insert Table XII-

In summary the findings indicate that the best predictors of PTSD at 5 – 8 weeks in the postnatal period are PND and a negative appraisal of staff support during labour and delivery. The last predictor emotional expression explains a smaller amount of the variance in PTSD. When PTSD is measured at 10 - 14 weeks the best predictors of PTSD at 10 – 14 weeks is PND. The predictor variable of stressful life events appears to contribute to the variance of PTSD but to a far lesser extent than PND.

Hypothesis 2

The aim of the second hypothesis was to test if higher levels of cognitive and behavioural avoidance coping were associated with a negative appraisal of delivery, and a negative attitude to emotional expression; and if this would result in an increase in PTSD symptoms at time 3. To test this hypothesis the variables were correlated with scores on the avoidance subscale of the IES at time 2. These correlations can be seen in the matrix in table XIII (Appendix 18).

- insert Table XIII –

The variables that were most highly correlated at $p < 0.01$ with the avoidance subscale (IES) at time 2 were as follows: the appraisal of delivery factors of fear and staff, and finally attitude to emotional expression (AEE). The variables that were most highly correlated with avoidance at $p < 0.01$ were entered into a

stepwise regression analysis to ascertain the most highly statistically significant predictors of avoidance (IES) at time 2.

The results can be seen in Table XIV (Appendix 19). The appraisal factor of staff support/care during delivery explained 14 % of the variance of avoidance F (1,94) = 17.13, p < .001 whilst attitude to emotional expression added a further 3% of variance F (2,93) = 11.15, p < .001.

- insert Table XIV -

To test whether a higher level of avoidance coping at time 2 resulted in an increase in PTSD symptoms at time 3 women were classified according to high and low levels of avoidance coping (Church & Vincent, 1986). As a result of small numbers in the high avoidance group these participants were collapsed with the medium distress group to form two groups: low distress and medium to high distress. Unfortunately a number of women who were found to be high avoidance scores at time 2 did not return questionnaires and this led to uneven group sizes. In addition the distribution of group scores for PTDS symptoms at time 3 were very skewed, and would render the results of parametric statistical analysis questionable. The mean scores for women according to levels of avoidance coping; medium to high avoidance group (n = 10, mean 5.4, *s.d.3.3*) and low avoidance group (n = 22, mean 3.23, *s.d. 3.31*) were compared at time 3 with an

independent samples t-test and a Mann Whitney U test (Appendix 20). The results indicate that t (30) = 1.71, $p > 0.05$ level and according to the Mann Whitney U test U = 64, $p > 0.05$ level.

In summary a negative appraisal of staff support/care was the best predictor of cognitive and behavioural avoidance at 5 – 8 weeks. Attitude to emotional expression did contribute to the variance but to a far lesser extent that staff support/care. However with this sample of participants higher levels of avoidance symptoms did not lead to an increase in PTSD symptoms at 10-14 weeks when this group were compared to women low in avoidance coping.

Hypothesis 3

To test for a relationship between posttraumatic stress disorder and maternal attitudes in the postnatal period at time 3 a correlation matrix was constructed between the variables and can be seen in table XV (Appendix 21).

- insert Table XV –

Table XV shows that there were no significant correlations between the MAQ and PTDS factor scores of intrusions, avoidance and hyperarousal at $p < 0.01$ level. There were however a number of correlations significant < 0.05 level that can be seen in table XV. The Maternal attitude Questionnaire was associated with symptoms of hyperarousal and total PTDS scores.

In summary the results indicate that there is not a statistically significant association between maternal attitudes and the factor scores of the PTDS, that is intrusions, avoidance and hyperarousal.

Discussion

The findings indicate that the best predictors of PTSD at 5-8 weeks are PND, a negative appraisal of staff support and care, and to a lesser extent emotional expression. At 10 – 14 weeks following delivery the best predictor of PTSD is PND whilst stressful life events contributed marginally to the variance. The first hypothesis has been partially supported by these findings, although antenatal ratings of depression and personality characteristics were not significant predictors of PTSD.

The results indicate that the best predictor of cognitive and behavioural avoidance at 5 – 8 weeks was a negative appraisal of the delivery (low staff support/care), attitude to emotional expression also contributed marginally to the variance. Therefore the second hypothesis has only been partially supported by these findings. These findings fail to support the cognitive and behavioural theory of PTSD (Williams, 1989). Although there was a relationship between emotional expression and cognitive and behavioural avoidance the contribution of variance was small, and avoidance did not lead to an increase in symptoms of PTSD at 10 – 14 weeks. It may be that the association between avoidance and PTSD is more evident at periods of time considerably longer than 6 weeks apart. It is also possible that the relatively high dropout of women high on avoidance at time 3 contributed to the difficulty in identify a link between avoidance and later symptoms of PTSD in this study. The overall findings of the study highlight the importance of a woman's appraisal of events that occur during labour and delivery. A negative appraisal of staff support/care can predispose women to PTSD at 5 – 8 weeks in the postnatal period. The factor of staff support/care

assesses a woman's perception of support, coping, preparation and feelings of control. These results are consistent with Creedy et al (2000) who found that dissatisfaction with intrapartum care was associated with trauma symptoms.

The results indicate that there was no relationship between neuroticism and PTSD; there was a stronger relationship between stressful life events and PTSD than neuroticism. Roberts & Kendler (1999) found that neuroticism was the best predictor of vulnerability to major depression in women when compared to measures of self-esteem and stressful life events. Lyons (1998) suggests that a neurotic personality style could influence a woman's negative interpretation of her labour and delivery and coping style. In this study no relationship has been found between neuroticism and a negative appraisal of labour and delivery. These findings contradict past studies that promote neuroticism as an enduring trait predisposing a person to psychological difficulties.

The third hypothesis was not supported by the results. Although there was some association between maternal attitudes and PTSD scores, in particular hyperarousal, this relationship was not statistically significant at $p < .001$. The associations between maternal cognitions of role change and motherhood do appear to be as highly correlated with PTSD as they are with PND. This indicates that maladaptive cognitions may be important factors involved in the maintenance of symptoms in PTSD following childbirth, as they are known to be in PND (Elliott, Leverton, Sanjack, Turner, Cowmeadow, Hopkins & Bushnell, 2000; Grazioli & Terry, 2000). It is recommended that studies in the future that examine the relationship between PTSD and early parenting use a number of

measures that explore different aspects of the relationship between mother and baby, as well as maternal cognitions.

The results in this study are consistent with the past literature about the close relationship between PTSD and PND. It is possible that these similarities arise in the two disorders because of symptom overlap in diagnostic criteria (Mulhearn & Joseph, 1996). Although it is possible for women to present with PTSD without PND this occurs less frequently. Therefore future research that is conducted in the area of PTSD following childbirth will need to consider the possible confounding effect of PND. The majority of women who experience PTSD will also present with clinical symptoms similar to PND. Therefore increased awareness of misdiagnosis is important because as the underlying causes of PTSD and PND are different hence treatment will also differ.

There are limitations to this study. Unfortunately, because of the time constraints of the study, it was difficult to contact all the women that completed questionnaires at time point 2 again at time 3. This resulted in a substantial reduction in the response rate at time 3. The study was also over-represented by a high rate of women that had caesarean sections both emergency and elective.

Conclusions

The results of this study have important clinical implications for screening women in the antenatal period. A routine assessment by midwives about a woman's history of recent stressful life events and past psychological problems could screen women at risk of PTSD following difficult childbirth. The assessment of a woman's appraisal of the delivery in terms of staff support and fear for self and baby could indicate which women are most at risk of psychological difficulties. The results of this study indicate that a woman's appraisal of staff support and care during delivery alongside PND is the best predictor of PTSD at 5 – 8 weeks.

The evidence from this study illustrates the importance of crisis support or 'after-care trauma' services. There has been a recent expansion in the provision of these services, this has occurred as a result of government initiatives in the U.K (Audit Commission, 1997). Although the effectiveness of these services has not been systematically reviewed it is likely that they will be beneficial to some women who lack other sources of support within their social network. The findings of this study indicate that negative appraisals of labour and delivery, as well as difficulties in emotional expression are associated with symptoms of PTSD after childbirth. The results of this study provide some evidence for the need for after-care trauma services. These services will be important to women who wish to express their concerns about a difficult birth especially if the service can objectively listen and support women who feel that they received little support and care from staff during delivery. The recognition that PTSD can occur following childbirth is important as it is been suggested that the future increase in

caesarean section rates both in the U.K and internationally could contribute to an increase in the incidence of this disorder (Kaufman, 2001).

TABLE I. SELF-REPORT MEASURES COMPLETED BY WOMEN AT THE THREE TIME POINTS

ANTENATAL PERIOD (mean 37 weeks) Time 1	POSTNATAL PERIOD (mean 6.4 weeks) Time 2	POSTNATAL PERIOD (mean 12.6 weeks) Time 3
1. Edinburgh Postnatal Depression Scale (EPDS) 2. List of Threatening Events (LTE) 3. Eysenck Personality Questionnaire (EPQ) 4. Past Psychological Problems (dichotomous variable Y/N)	1. Edinburgh Postnatal Depression (EPDS) 2. Perception of Labour and Delivery Questionnaire (PLDQ) 3. Emotional Expressivity Scale (EES) 4. Attitudes to Emotional Expression (AEE) 5. Crisis Support Scale (CSS) ***Dependent Variables:*** **1. Impact of Event Scale (IES)** **2. Posttraumatic Diagnostic Scale (PTDS)**	1. Edinburgh Postnatal Depression (EPDS) 2. Maternal Attitudes Questionnaire (MAQ) ***Dependent Variables:*** **1. Impact of Event Scale (IES)** **2. Posttraumatic Diagnostic Scale (PTDS)**

Table II. Demographic data for women who completed questionnaires at time points 1, 2 & 3

	Women who completed Questionnaires at time 1 (antenatal) n = 141 **mean 37 weeks**	Women who completed questionnaires at time 2 (postnatal 5 - 8 weeks) n = 110 **mean 6.4 weeks**	Women who competed Questionnaires at time 3 (postnatal 10 – 14 weeks) n=72 **mean 12.6 weeks**
Age			
Mean	29.7 years	30 years	30 years
Median	30 years	30 years	30 years
Range	16 – 41 years	17 – 40 years	19 – 40 years
Marital Status			
Single	14 (10%)	8 (7.2 %)	5 (6.9%)
Married	103 (73.6%)	83 (74.8%)	55 (76.4%)
Separated	1 (0.7%)	1 (0.9%)	1 (1.4%)
Co-habiting	22 (15.6%)	19 (17.1%)	11 (15.3%)
Ethnic Group			
Causasian	73 (98.1%)	103 (98.1%)	69 (98.6%)
Asian	2 (1.9%)	2 (1.8%)	1 (1.4%)
Socio-economic Group			
I	20 (14.2%)	16 (14.4 %)	13 (18.1%)
II	36 (25.5%)	24 (21.6%)	16 (22.2%)
III	29 (20.6%)	25 (22.5%)	12 (16.7%)
IV	21 (14.9%)	20 (18%)	14 (19.4%)
No Occupation	28 (19.9%)	20 (18%)	14 (19.4%)
Houseperson	7 (5%)	6 (5.4%)	3 (4.2%)
Type of Delivery			
Normal labour		65 (59.1%)	39 (54.2%)
Unexpected procedures e.g. forceps, caesarean		24 (21.8%)	18 (25.4%)
Elective caesarean		21 (19.1%)	14 (19.4%)
Parity			
Primigravida (first child)	67 (47.5%)	50 (45.9%)	35 (48.6%)
Multigravida (other children)	74 (52.5%)	60 (54%)	37 (51.4%)

Table III. Mean PTSD scores across time for participants classified according to levels of distress on IES avoidance subscale at time 2 &3

Level of Distress on Avoidance Subscale (IES)	IES total Score time 2	IES total Score time 3	PTDS Score time 2	PTDS Score time 3
Low	9.3 *(s.d.5.8)* *n = 26*	4.7 *(s.d. 5.3)* *n = 21*	4.31 *(s.d.3.4)* *n = 26*	3.4 (s.d. 3.3) *n = 21*
Medium	22.1 *(s.d. 6.6)* *n = 16*	12.9 *(s.d. 10.5)* *n = 9*	7.2 *(s.d. 2.3)* *n = 16*	4.9 *(s.d. 3.1)* *n = 9*
High	45.6 *(s.d.5.5)* *n = 3*	31.0 (.) *n = 1*	12.3 *(s.d. 6.6)* *n = 3*	10.0 (.) *n = 1*

Table IV. Mean PTSD scores across time for participants classified according to levels of distress on IES intrusion subscale

Level of distress on Intrusion Subscale (IES)	IES total Score time 2	IES total Score time 3	PTDS Score time 2	PTDS Score time 3
Low	7.6 *(s.d. 6.8)* *n = 37*	3.0 *(s.d.4.3)* *n = 27*	3.9 *(s.d. 3.9)* *n = 37*	3.6 *(s.d. 3.9)* *n = 27*
Medium	21.5 *(s.d.10.4)* *n = 19*	11.6 *(s.d. 11.5)* *n = 14*	7.1 *(s.d. 4.0)* *n = 19*	4.1 *(s.d. 3.4)* n = 14
High	32.0 *(s.d. 19)* *n = 3*	.00 (.) *n = 1*	6.7 *(s.d. 3.2)* *n = 3*	1.0 (.) *n = 1*

Table V. Comparison of Mean Scores for Depression (EPDS) and Levels of Distress on Avoidance Subscale of the IES (Cut off score above 12)

Level of Distress on Avoidance Subscale (IES)	**EPDS Total Score (Time 1)**	**EPDS Total Score (Time 2)**	**EPDS Total Score (Time 3)**
Low	8.5 *(s.d. 4.4)* *n = 26*	7.1 *(s.d. 4.0)* *n = 26*	5.0 *(s.d. 3.5)* *n = 21*
Medium	8.1 *(s.d 5.5)* *n = 16*	8.5 *(s.d. 4.8)* *n = 15*	6.5 *(s.d. 4.8)* *n = 9*
High	10.6 *(s.d. 6.6)* *n = 3*	20.0 *(s.d. 1.4)* *n = 2*	16.0 *(.)* *n = 1*
No Distress	8.0 *(s.d. 4.3)* *n = 69*	6.2 *(s.d. 4.4)* *n = 65*	4.9 (s.d. 3.9) *n = 40*
Total	**8.2 *(s.d. 4.5)*** ***n = 114***	**7.0 *(s.d. 4.7)*** ***n = 108***	**5.3 *(s.d. 4.09)*** ***n = 71***

Table VI. Comparison of Mean Scores for Depression (EPDS) and Levels of Distress on Intrusion Subscale of the IES (Cut off score above 12)

Level of Distress on Intrusion Subscale (IES)	**EPDS Total Score (Time 1)**	**EPDS Total Score (Time 2)**	**EPDS Total Score (Time 3)**
Low	8.0 *(s.d. 4.3)* *n = 37*	6.7 *(s.d. 3.8)* *n = 36*	4.8 *(s.d. 3.1)* *n = 27*
Medium	9.9 *(s.d. 5.3)* *n = 19*	10.1 *(s.d. 5.4)* *n = 18*	7.7 *(s.d. 4.5)* *n = 14*
High	10.3 *(s.d. 3.2)* *n = 3*	14.3 *(s.d. 4.0)* *n = 3*	8.0 *(.)* *n = 1*
No Distress	7.2 *(s.d. 4.1)* *n = 51*	5.6 *(s.d. 4.3)* *n = 51*	4.8 *(s.d. 4.4)* *n = 29*
Total	**8.0 *(s.d. 4.4)*** ***n = 110***	**6.9 *(s.d. 4.7)*** ***n = 108***	**5.4 *(s.d. 4.09)*** ***n = 71***

Table VI1. Illustrating the mean scores in relation to parity of appraisal factors of delivery and labour, staff, pain and fear

Appraisal Factor	Mean Scores for Primigravida (first-time mothers)	Mean Scores for Multigravida
STAFF	53.7 *(s.d. 9.9) n = 46*	55.0 *(s.d. 11.2) n = 57*
FEAR	18.2 (*s.d* 7.6) n = 48	17.8 *(s.d. 8.9) n = 60*
PAIN	22.7 *(s.d. 10.3) n = 48*	22.5 *(s.d. 9.9) n = 59*

Table VIII. Mean Scores and Standard Deviations for Independent Variables at time 1 & 2

INDEPENDENT VARIABLE	MEAN	STANDARD DEVIATION
STRESSFUL LIFE EVENTS (LTE)	1.0 (n = 110)	1.1
NEUROTICISM (EPQ)	5.1 (n = 111)	2.6
STAFF SUPPORT/CARE (PLDQ)	54.4 (n = 103)	10.7
EMOTIONAL EXPRESSIVITY (EES)	67.3 (n = 109)	13.9
ATTITUDE TO EMOTIONAL EXPRESSION (AEE)	9.3 (n = 105)	3.1
CRISIS SUPPORT SCALE (CSS)	30.5 (n = 110)	4.7

Table IX. Correlation matrix demonstrating associations between time 1 & 2 variables and the dependent variables; IES and PTDS measured at time 2 &3

INDEPENDENT VARIABLES	TIME 2		TIME 3
	IES	PTDS	PTDS
Time 1			
Stressful life events (LTE)	212 *(.027)*	.300** *(.001)*	.336* *(.004)*
Depression – time 1 (EPDS)	.153 *(.111)*	.245* *(.010)*	.183 *(.114)*
Neuroticism (EPQ)	.174 *(.069)*	.163 *(.088)*	.163 *(.088)*
Time 2			
Depression – time 2 (EPDS)	.428** *(.000)*	.471** *(.000)*	.243 *(.041)*
Staff support/care (PLDQ)	-.429** *(.000)*	-..386** *(.000)*	-.142 *(.256)*
Emotional Expressivity (ESS)	-.246* *(.010)*	-.338** *(.000)*	-.144 *(.233)*
Attitude to Emotional Expression (AEE)	.359** *(.000)*	.360** *(.000)*	.228 *(.065)*
Crisis Support Scale (CSS)	-.127 *(.187)*	-.244* *(.010)*	-.111 *(.355)*
Time 3			
Depression – time 3 (EPDS)			.474** *(.000)*

** Significant at 0.001 level of significance (two-tailed)

* Significant at 0.01 level of significance (two-tailed)

Table X. Stepwise multiple regression of predictors of PTDS scores on the IES – time 2

Variables	Adjusted R Square	Beta	T	Significance
STAFF SUPPORT	.20	-.324	-3.62	.000
EPDS 2	.30	.296	3.25	.000
AEE	.33	.193	2.10	.038

Table XI. Stepwise Multiple Regression of predictors of PTSD scores on the PTDS (time 2)

Variables	Adjusted R Square	Beta	T	Significance
EPDS 2	.23	.380	4.22	.000
STAFF SUPPORT	.30	-.252	-2.85	.005
EES	.33	-.202	-2.27	.025

Table XII. Stepwise multiple regression of predictors of PTSD scores on the PTDS – time 3

Variables	Adjusted R Square	Beta	T	Significance
EPDS 3	.21	.413	3.86	.000
STRESS-FUL LIFE EVENTS	.25	.231	2.77	.034

Table XIII. Correlation matrix between time 1, time 2 variables and avoidance subscale of the IES (time 2)

INDEPENDENT VARIABLES	IES – AVOIDANCE SUBSCALE
Appraisal (PLDQ) - *Staff*	-.367** *(.000)* n = 101
- *Fear*	.336** *(.000)* n = 106
- *Pain*	.182 *(.063)* n = 105
Emotional Expressivity (EES)	-.242* *(.012)* n = 107
Attitude to Emotional Expression (AEE)	.282* *(.004)* n = 103

**** Significant at 0.001 level of significance (two-tailed)**
*** Significant at 0.01 level of significance (two tailed)**

Table XIV. Stepwise Multiple Regression of the predictors of avoidance (IES) at time 2

Variables	Adjusted R Square	Beta	T	Significance
STAFF SUPPORT/ CARE	.14	-.33	-.3.4	.000
AEE	.18	.207	2.12	.036

Table XV. Correlation matrix between maternal attitudes, depression and cluster scores of the PTDS

PTDS FACTORS	MAQ	EPDS 3
INTRUSIONS	.18 *(.119)*	.09 *(.46)*
AVOIDANCE	.21 *(.071)*	.46 ** *(.000)*
HYPERAROUSAL	.23 * *(.048)*	.40 ** *(.000)*
TOTAL PTDS SCORE	.27 * *(.020)*	.47 ** *(.000)*
EPDS 3 N = 76	.23* *(.04)*	

*** Significant < 0.05 level** **** Significant at < 0.001 level**

Figure I. The relationship between antenatal variables, emotional expression, appraisal of delivery and PTSD at time 1 and time2.

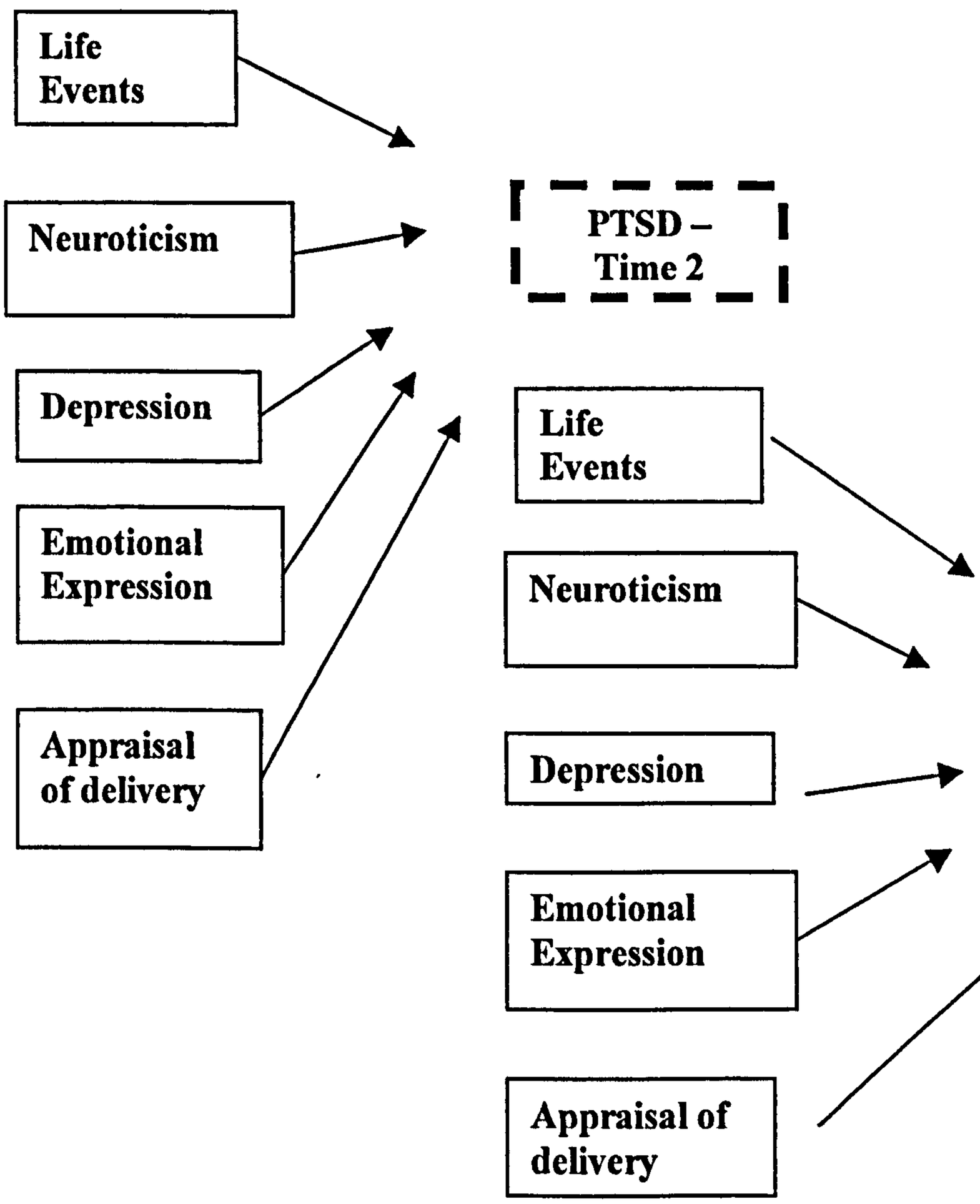
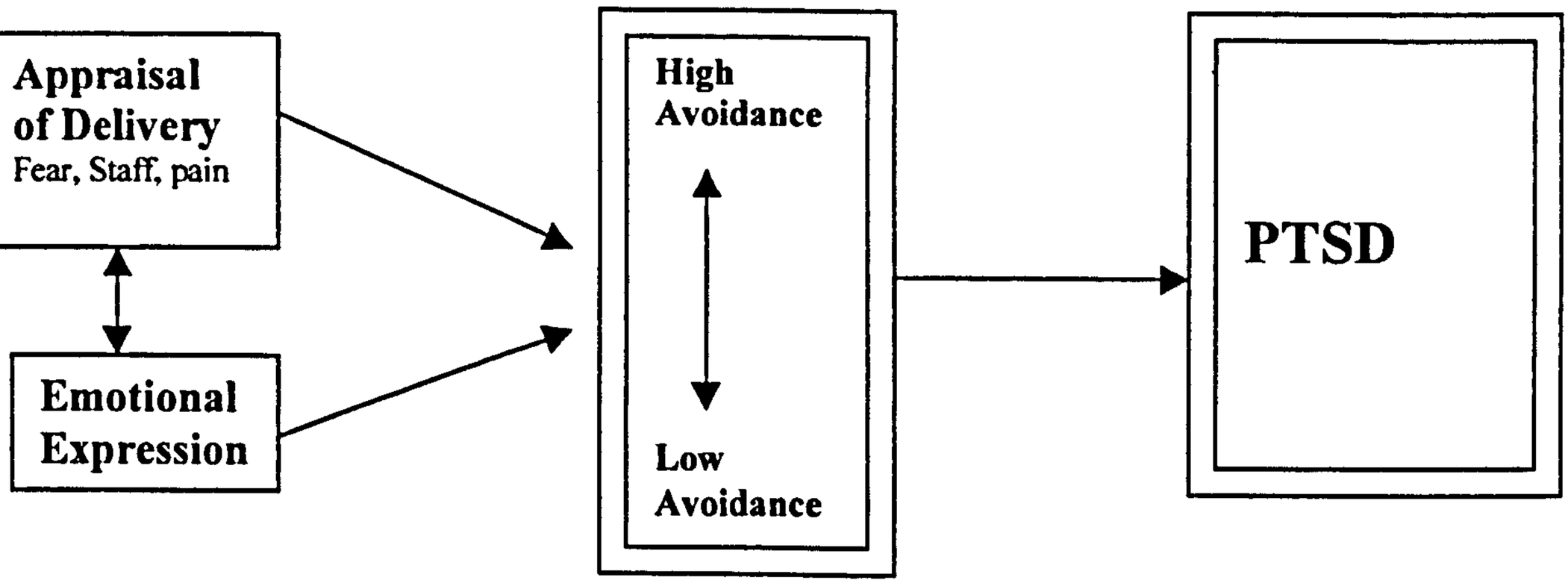


Figure II. The relationship between appraisal of delivery, attitudes to emotional expression, symptoms of avoidance coping and PTSD



References

American Psychiatric Association (1994) Diagnostic and Statistic Manual of Mental Disorders (4th edn). Washington, D.C: American Psychiatric Association.

Andrews, B. & Brown, G.W. (1988) Social support, onset of depression and personality. Social Psychiatry and Psychiatric Epidemiology, 23, 99 – 108.

Audit Commission (1997) First Class Delivery:Improving Maternity Services in England and Wales. Audit Commission Publications, Abingdon

Bailham, D.B.R & Joseph, S. (2001) The Factor Structure and the Clinical Utility of the Perception of labour and Delivery Scale. In preparation.

Beck, A.T. (1976) Cognitive therapy and the emotional disorder. New York: International University Press.

Boyce, P. (1990) High interpersonality sensitivity as a risk factor for postnatal depression. Paper presented at the Fifth International Conference of the Marce Society: Child Bearing and Mental Health, University of York.

Breslau, N., Davis, G.C., Andreski, P., & Peterson, E. (1991) Traumatic events and posttraumatic stress disorder in an urban population of young adults. Archives of General Psychiatry, 48, 216-222.

Brown, G.W., Andrews, B., Harris, T., Adler, Z., & Bridge, L. (1986) Social support, self-esteem and depression. Psychological Medicine, 16, 813-831.

Brown, G.W. & Harris, T. (1978) Social Origins of Depression. Tavistock, London.

Brugha, T.S. & Cragg, D. (1990) The list of threatening experiences: the reliability and validity of a brief life events questionnnaire. Acta Psychiatrica Scandinavia, 82, 77-81.

Church, J. & Vincent, C. (1986) Psychological consequences of medical accidents in personal litigants. British Journal of Health Psychology, 1, 167-179.

Clark, L.A., Watson, D. & Mineka, S. (1994) Temperament, personality and the mood and anxiety disorders. Journal of Abnormal Psychology, 103, 103-116.

Costa, P.T., & Mc Crae, R.R. (1992) Revised NEO Personality Inventory (NEOPI-R) and NEO Five Factor Inventory (NEO-FFI). Odessa, FL: Psychological Assessment Resources.

Cox, J. & Holder, J. (1994) Perinatal Psychiatry: Use and Misuse of the Edinburgh Postnatal Depression Scale. Royal College of Psychiatrists.

Cox, J.L., Holden, J.M. & Sagovsky, R. (1987) Development of the 10 item Edinburgh postnatal depression scale. British Journal of Psychiatry, 150, 782-786.

Creedy, D.K., Shochet, I.M. & Horsfall, J (2000) Childbirth and the development of acute trauma symptoms: Incidence and contributing factors. Birth Issues in Perinatal Care , 27 (2) 104-111, June.

Czarnocka, J. & Slade, P. (2000) Prevalence and predictors of post-traumatic stress symptoms following childbirth. British Journal of Clinical Psychology, 39, 35-51.

Dalgleish, T., Joseph, S., Thrasher, S., Tranch, T., & Yule, W. (1996) Crisis support following the Herald of Free Enterprise disaster: a longitudinal perspective. Journal of Traumatic Stress, 9, 833-846.

Dragonas, T., Thorpe, K.J. and Golding, J. (1992) Transition to fatherhood: a cross-Cultural comparison. Journal of Psychosomatic Obstetrics and Gynaecology, 13: 1-19.

Elliott, S.A., Leverton, T.J., Sanjack, M., Turner, H., Cowmeadow, P., Hopkins, J. & Bushnell, D. (2000) Promoting mental health after childbirth: A controlled trial of primary prevention of postnatal depression. British Journal of Clinical Psychology, 39, 223-241.

Endicott, J. & Spitzer, R.L. (1978) A diagnostic interview: the schedule for affective disorders and schhizophrenia. Archives of General Psychiatry, 35, 837-844.

Eysenck, H.J. (1970) Readings in Extraversion-Introversion; Bearings on Basic Psychological Processes, volume 3, New York: Wiley.

Eysenck, H.J., & Eysenck, S.B.G. (1991) Manual of the Eysenck Personality Scales (EPS Adult) Hodder & Stoughton, London.

Foa, E.B., Riggs, D.S., Dancu, C.V., & Rothbaum, B.O. (1993) Reliability and validity of a brief instrument for assessing posttraumatic stress disorder. Journal of Traumatic Stress, 6, 459-473.

Foa, E.B., Riggs, D.S., Gershuny, B.S. (1995) Arousal, numbing, and intrusion: Symptom structure of PTSD following assault. American Journal of Psychiatry, 152, 116-120.

Foa, E.B., Cashman, L., Jaycox, L. & Perry, K. (1997) the validation of a self-report measure of posttraumatic stress disorder: The posttraumatic diagnostic scale. Psychological Assessment, 9 (4), 445-451.

Fones, C. (1996) Posttraumatic stress disorder occurring after painful childbirth. Journal of Nervous and Mental Disease, 184 (3) 195-196.

Grazioli, R. & Terry, D.J. (2000) The role of cognitive vulnerability in the prediction of postpartum symptomatology. British Journal of Clinical Psychology, 39, 329-347.

Green, J.M. (1990) Who is unhappy after childbirth ? Antenatal and intrapartum correlates from a prospective study. Journal of Reproductive and Infant Psychology, 8, 175-183.

Hollon, S.D., & Kendall, P.C. (1980) Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. Cognitive Therapy and Research, 4, 383-395.

Horowitz, M.J., Wilner, N., & Alvarez, W. (1979) Impact of event scale: A measure of subjective stress. Psychosomatic Medicine, 41, 209-218.

Joseph, S., Andrews, B., Williams, R. & Yule, W. (1992) Crisis support and psychiatric symptomatology in adult survivors of the Jupiter cruise ship disaster. British Journal of Clinical Psychology, 31, 63-73.

Joseph, S., Williams, R., Irwing, P., & Cammock, T. (1994) The preliminary development of a measure to assess attitudes towards emotional expression. Personality and Individual Differences, 16, 869-875.

Joseph, S., Williams, R. & Yule, W. (1997) Understanding posttraumatic stress: A psychosocial perspective on PTSD and treatment. Chichester: Wiley

Joseph, S., Yule, W., Williams, R., & Andrews, B. (1993) Crisis support in the aftermath of disaster: A longitudinal perspective. British Journal of Clinical Psychology, 32, 177-185.

Kaufman, T. (2001) The rising caesarean rate: causes and effects for public health. RCM Midwives Journal, January 4 (1) 24-26.

Kennedy-Moore, E. & Watson, J.C. (1999) Expressing Emotion – Myths, realities, and therapeutic strategies. The Guildford Press

Kennedy-Moore, E., Greenberg, M.A., & Wortman, C.B. (1991, August). Varieties of nonexpression: A review of self-report measures of emotional control. Paper presented at the meeting of the American Psychological Association, San Franciso, CA.

King, L.A., & Emmons, R.A. (1990) Conflict over emotional expression: psychological and physical correlates. Journal of Personality and Social Psychology, 58 (5), 864-877.

Kitzinger, S. (1992) Birth and violence against women. In: Roberts, H. (Ed) Woman's Health Matters. Routledge, London.

Kring, A.M., Smith, D.A. & Neale, J.M. (1994) Individual differences in dispositional expressiveness: Development and validation of the emotional expressivity scale. Journal of Personality and Social Psychology, 66 (5) 934-949.

Laghai, A. & Joseph, S. (2000) Attitudes towards emotional expression: factor structure, convergent validity and associations with personality. British Journal of Medical Psychology, 73, 381-384.

Loos, C. & Julius, L. (1989) The clients view of hospitalization during pregnancy. Journal of Obstetric, Gynaecological and Neonatal Nursing. January/February, 52-56.

Lyons, S. (1998) A prospective study of posttraumatic stress symptoms 1 month following childbirth. Journal of Reproductive and Infant Psychology, 16 (2-3), 91-105.

Matthey, S., Silove, D., Barnett, B., Fitzgerald, M.H. & Mitchell, P. (1999) Correlates of depression and PTSD in Cambodian women with young children: A pilot study. Stress Medicine, 15, 103-107.

Menage, J. (1993) Post-traumatic stress disorder in women who have undergone obstetric and/or gynaecological procedures. Journal of Reproductive and Infant Psychology, 11, 221-228.

Mulhern, G. & Joseph, S. (1996) Psychological Perspectives on Stress and Trauma from Disaster to Political Violence. The British Psychological Society – Northern Ireland Branch

Murray, D. & Cox, J.L. (1990) Screening for depression during pregnancy with the Edingburgh Postnatal Depression Scale (EPDS). Journal of Reproductive and Infant Psychology, 8: 99-107.

Oakley, A. (1980) Women Confined: Towards a Sociology of Childbirth. Martin Robertson, Oxford.

Pennebaker, J.W. (1989) Confession, inhibition, and disease. In L. Berkowiz (Ed.), Advances in experimental social psychology (Vol. 22, pp. 211-244). New York: Academic Press

Pennebaker, J.W., & Francis, M.E. (1996) Cognitive, emotional, and language processes in disclosure. Cognition and Emotion, 10, 601-626.

Reynolds, J.L. (1997) Posttraumatic stress disorder after childbirth: the phenomenon of traumatic birth. Canadian Medical Association Journal, Mar 156 (6), 831-5.

Roberts, S.B. & Kendler, K.S (1999) Neuroticism and self esteem as indices of the vulnerability to major depression in women. Psychological Medicine, 29, 1101-1109.

Ryding, E.L., Wijma, B & Wijma, K. (1997) Posttraumatic stress reactions after emergency caesarian section Acta Obstetrica Gynaecologica Scandinavica, 76, 856-861.

Thune-Larsen, K.B., & Moller Pedersen, K. (1988) Childbirth experience and postpartum emotional disturbance. Journal of Reproductive and Infant Psychology, 6, 229-240

Waldenstrom, U. (1999) Experience of labor and birth in 1111 women – Journal of Psychosomatic Research, 47 (5) 471-482. Nov.

Warner, R., Appleby, L. & Whitton, A. & Faragher, B. (1997) Attitudes toward motherhood in postnatal depression: development of the maternal attitudes questionnaire. Journal of Psychosomatic Research, 43 (4), 351-358.

Weaver, J. (1997) Childbirth: preventing posttraumatic stress disorder. Professional Care of Mother and Child. 7 (1) 2 – 3.

Wijma, K., Soderquist, J. & Wijma, B. (1997) Posttraumatic stress disorder after childbirth; A cross sectional study. Journal of Anxiety Disorders, 11 (6) 587-597.

Williams, R.M. (1989) Towards a cognitive model of PTSD. Paper presented at the discussion meeting-Post-traumatic stress disorder; prospects for inter-disciplinary investigation. CIBA Foundation, London, UK.

Conducting Research in Maternity Services: A Psychological Perspective

The following account outlines my experiences and observations of conducting research within maternity service settings whilst completing my clinical psychology research doctorate. The subject area of my thesis was 'psychological trauma following childbirth (PTSD)'.

Firstly I need to mention why I have an interest in this area; I was drawn to research in this area because prior to embarking on a career in clinical psychology I had experience of working in a similar setting, as a student midwife. There was also an identified need for research in PTSD following childbirth from the psychological service that provided input into this area.

My prior experience of working in maternity services made me particularly aware of the emotional and psychosocial processes involved in childbirth, and how it is difficult for these to be acknowledged and dealt with within the constraints of a medical environment. In addition this earlier experience had given me an awareness of medical terminology and an insight into the underlying philosophy of care of health professionals who worked in this area. This also possibly influenced my expectations and possibly anxieties of conducting research in this area.

Recruitment in Antenatal Clinics

To obtain a representative sample of women following ethical approval (See Appendix 22) I recruited participants by two methods: through antenatal

clinics and community midwives. The women I recruited from antenatal clinics had potentially high-risk pregnancies either because of medical or obstetric complications, or past difficult deliveries; they were booked for mainly consultant care. To ensure that I recruited women who were also more low risk e.g. more community based, home birth, I requested the assistance of community midwives. One of my expectations was that I could encounter some resistance from midwives and obstetricians who may be wary and suspicious of my motives for conducting research in this area. In fact I found that the majority of midwives, and health visitors were very interested in the research and expressed an interest in conducting research in this area themselves. My discussions with them indicated that they could see the clinical relevance of the research; a number had encountered women in the course of their work who had experienced trauma following childbirth. There is some indication in the literature that midwives and obstetricians can themselves experience vicarious trauma after witnessing difficult traumatic childbirth (Lyons, 1998).

I felt that my presence in maternity services in fact alerted midwives to the possibility that trauma could occur following childbirth. For instance at one of the hospitals my advice was sought regarding the development of an information sheet to advertise a trauma listening service for women who had experienced difficult traumatic labours and deliveries. The community midwives also provided me with some useful feedback about the information sheets consent forms and questionnaires. To help encourage recruitment they advised me to include a prize draw of 'Mothercare 'gift vouchers as an

incentive for women to take part. This idea I adopted and it was very successful.

Clinician versus Researcher

Some of the questions I asked the women in the antenatal period were open and designed to elicit information about past trauma; they enquired if anything had happened in the past which had really upset them and which they avoided thinking about. The responses I received were varied but one recurrent theme I noticed was how the women would frequently respond with information about past bereavements and loss. Parental loss appeared to be one of the main themes, and it became apparent that towards the end of pregnancy earlier losses and memories of the woman's own parenting were very prominent. It appears that a psychological process occurs towards the end of pregnancy that involves a woman resolving ambivalent feelings about her own experience of being parented (Ballou, 1978; Kliot, 1988; Berne, 1998). In most women these ambivalent feelings will be resolved but for others this may not occur. This could have implications for the woman's perception of her role as a mother and her relationship with her child. It is at this stage that some women may experience psychological difficulties in resolving their own memories of being parented and some may require psychological assistance from clinical psychology services to complete this process.

My experience of recruiting women in antenatal clinic was insightful! There were advantages with this type of recruitment possibly because it gave me

control over recruitment. The disadvantages were that I did feel uncomfortable intruding on women at times when they may be preoccupied with other anxieties about the impeding birth or possible complications. In accordance with professional practice guidelines for conducting research I always tried to approach women in a way in which they did not feel too pressurised to participate. I was aware that my presence in clinic would make them feel more obliged to participate. (BPS, 1995). This is where my clinical skills became very useful; for instance an awareness of the sensitivity of the needs of the women at that moment in time. On occasions I approached women who clearly were not able to listen, or take part in the research because they had received surprising news from the obstetrician about the birth. For instance one woman had been hopeful of having a normal birth but was told by her obstetrician that because of medical complications she would need an elective caesarean section. This situation had to be dealt with sensitively listening, providing support to the woman, as well as acknowledging and respecting her reasons for not wishing to take part in a research study.

I was aware that with some women my presence could have exerted 'a response bias'. I felt that some could have perceived me as part of the maternity service 'system', a health professional rather than an objective researcher. This may have made the women less likely to express dissatisfaction or express how distressed they felt for fear of acquiring a 'label'. Some women clearly wished to avoid me when I mentioned the area of my research 'psychological changes following childbirth', although this

was rare. At times I felt intrusive approaching women in clinic but I soon began to realise that most women appreciated being able to talk to someone about their pregnancy who was not a midwife or obstetrician. Therefore at some level I appeared to maintain a position of 'neutrality'.

I was also aware whilst recruiting in clinic of the difficulties in attempting to maintain the position of an objective researcher. I would approach each woman and give her the same amount of information about the research with consent forms, informing her that I was investigating 'psychological changes following childbirth'. As a quantitative researcher I was attempting to reduce 'demand characteristics', and experimenter effects (Orne, 1962; Rosenthal, 1966). The result was that most women were very interested in the research, many responded by wanting to tell me about past traumatic experiences of childbirth, a past history of postnatal depression or miscarriage. This gave me the impression that many women had a need to talk about these experiences, and at times I questioned the validity of the methodology that I had chosen for the research. I felt that a more qualitative approach would have been more appropriate for research in this area. For instance a grounded theory approach which would help to explore a woman's experience of pregnancy and anticipation of labour and delivery. This would be of particular interest explored in relation to a prior experience of traumatic childbirth. In retrospect I could clearly see the benefits of complementing the quantitative data with some qualitative accounts, which would have provided a more in-depth exploration of the women's individual experiences.

Ethical and Clinical Implications

It was important that as the design of the research was longitudinal that some form of screening mechanism was in place to detect women that may be experiencing psychological difficulties in either the antenatal, or postnatal period. The literature indicates that approximately 10-15% of women experience some form of psychological distress following childbirth, this is usually described as 'postnatal depression (PND)' (O'Hara & Swain, 1996; Elliott, Leverton, Sanjack, Turner, Cowmeadow, Hopkins & Bushnell, 2000). However, this does not account for women that experience difficulties in the antenatal period, it is possible that women can present with depression during pregnancy (Murray & Cox, 1990; Boyce, 1990; Dragonas, Thorpe & Golding, 1992). Consistent with professional practice guidelines section 10.13 research participants should be offered help if their participation in research reveals any previously unidentified psychological problem (BPS, 1994). This did pose a dilemma because all women that participated in the study were guaranteed confidentiality, and this precluded any contact with health professionals on the woman's behalf without her consent. To preserve confidentiality as well as provide assistance to these women; all women who were identified as having psychological difficulties during the course of the study were sent a standard letter advising them on how to seek assistance from their G.P or health visitor (See Appendix 23). In addition the letter included a contact number and an offer of referral to clinical psychology services with the woman's consent. The women that participated in this study were assessed for depression with the Edinburgh Postnatal Depression Scale (EPDS: Cox, Holden & Sagovsky, 1987) at three individual time points; in

the antenatal period (mean = 36 weeks), postnatal period (mean 6 weeks), and finally postnatal period (mean 12.6 weeks). The EPDS is the most widespread measure of postnatal depression used within clinical settings; it has been validated cross-culturally, and is used in most NHS trusts nationally to screen for PND. In addition participants were also screened in the postnatal period for symptoms of posttraumatic stress disorder with the Posttraumatic Diagnostic Scale (PTDS: Foa, Riggs, Dancu & Rothbaum, 1993) and the IES (IES: Horowitz, Wilner & Alvarez, 1979). If women demonstrated clinically significant symptoms above the cut-offs for either of these measures they were sent a standard advice letter. In total from the 141 women originally recruited to the study (24) 17% were sent the advice letter because the scores on their questionnaires indicated that they were experiencing some degree of psychological distress. It is unclear how many women did accept this advice because none of the women responded to the letter with a request for a referral to clinical psychology services.

Many women commented that they had enjoyed completing the questionnaires as it gave them the opportunity to reflect on their labour and delivery and how it had impacted on them. This no doubt contributed to the very high response rate of 78% at 5 – 8 weeks following delivery. Many find it difficult to reflect on their experience of childbirth unless they can meet with people who have had a recent similar experience. In one of the NHS trusts postnatal support groups had been established, and from the sample of participants who completed measures at time point 3 (mean 12.6 weeks) 20 (29%) attended some form of postnatal support group. The aim of a postnatal

support group is for women who have recently given birth to meet with other women and provide each other with mutual support. It is hoped that the support of the group will prevent the development of postnatal psychological difficulties such as PND and possibly PTSD. The groups usually run on a weekly basis and are facilitated by a health visitor. Past research indicates that a flexible supportive environment will help with the adjustment and changes in role, sleep, rest and social expectations of new motherhood (Ball, 1987; 1994, Podkolinski, 1998). The importance of social support has been demonstrated in pregnancy and during the postpartum period leading to successful adjustment to motherhood (Oakley, 1992; Brugha, Sharp, Cooper, Weisender, Britto, Shinkwin, Sherrif & Kirwan, 1998). The postnatal support groups not unlike other types of self-help group allow women who have undergone a similar life event to discuss their experiences, anxieties and concerns facilitated by a health professional. This can lead to growth at both the interpersonal (between people) and intrapsychic (within the person) level (Raphael-Leff, 1992). There is clearly a need for more research to assess the outcome of attendance at postnatal support groups; it is likely that the effect of attendance at these groups will be beneficial with a possible reduction in psychological distress. Therefore the role for clinical psychology services at the postnatal stage, in contrast to resolution in the antenatal phase is possibly to provide women with the opportunity to reflect on their experiences.

The postnatal support groups have other important clinical implications; if they are found to be effective and can reduce the incidence of postnatal psychological difficulties they will present a challenge to biological and

References

Ball, J. A. (1987) Reactions to Motherhood: The Role of Postnatal Care. Cambridge University Press.

Ball, J. A. (1994) Reactions to Motherhood: The Role of Postnatal Care, 2nd edn. Books for midwives press, Hale, Cheshire.

Ballou, J. W. (1978) The Psychology of Pregnancy. Lexington: DC. Health & Co.

Berne, N. (1988) Psychology of childbirth cited in Offerman- Zuckerburg, J. Critical Psychophysiological Passages in the Life of a Woman. Plenum Medical Book.

Boyce, P. (1990) High interpersonality sensitivity as a risk factor for postnatal depression. Paper presented at the Fifth International Conference of the Marce Society: Child Bearing and Mental Health, University of York.

Brugha, T.S., Sharp, H.M., Cooper, S.A., Weisender, C., Britto, D., Shinkwin, R., Sherrif, T., & Kirwin, P.H. (1998) The Leicester 500 Project. Social support and the development of postnatal depressive symptoms, a prospective cohort survey. Psychological Medicine, 28, 63-79.

psychological distress, some indicated that all their memories of childbirth were positive. This is also an area where research is needed exploring protective factors such as individual characteristics like 'hardiness' and 'resilience' in adaptation following difficult childbirth (Yule, 1999). This would enable a shift away from the focus on the 'pathological' or negative to the more positive adaptive aspects of motherhood.

At a personal level I have enjoyed conducting research in this area and hope to continue writing some interesting 'clinically relevant' papers based on the findings of this study. However the process of conducting the study recruiting in antenatal clinics, gaining information and guidance from other health professionals, making sense of the data and conducting the analysis have psychologically mirrored the process of labour. The final stage of completing the thesis, compiling the results and writing the papers has at times been painful, and in a sense has psychologically mirrored the end stage of labour. It is hoped then that the results of this study will encourage the 'birth' of new insight and service development that will recognise and support the psychological needs of women in the transition to motherhood.

References

Ball, J. A. (1987) Reactions to Motherhood: The Role of Postnatal Care. Cambridge University Press.

Ball, J. A. (1994) Reactions to Motherhood: The role of Postnatal Care, 2nd edn. Books for midwives press, Hale, Cheshire.

Ballou, J. W. (1978) The Psychology of Pregnancy. Lexington: DC. Health & Co.

Berne, N. (1988) Psychology of childbirth cited in Offerman- Zuckerburg, J. Critical Psychophysiological Passages in the Life of a Woman. Plenum Medical Book.

Boyce, P. (1990) High interpersonality sensitivity as a risk factor for postnatal depression. *Paper presented at the Fifth International Conference of the Marce Society: Child Bearing and Mental Health, University of York.*

Brugha, T.S., Sharp, H.M., Cooper, S.A., Weisender, C., Britto, D., Shinkwin, R., Sherrif, T., & Kirwin, P.H. (1998) The Leicester 500 Project. Social support and the development of postnatal depressive symptoms, a prospective cohort survey. Psychological Medicine, 28, 63-79.

Cox, J.L., Holden, J.M. & Sagovsky, R. (1987) Development of the 10 item Edinburgh postnatal depression scale. British Journal of Psychiatry, 150, 782-786.

Division of Clinical Psychology (1995) Professional Practice Guidelines. British Psychological Society.

Dragonas, T., Thorpe, K.J. and Golding, J. (1992) Transition to fatherhood: a cross-cultural comparison. *Journal of Psychosomatic Obstetrics and Gynaecology*, 13: 1-19.

Elliott, S.A., Leverton, T.J., Sanjack, M., Turner, H., Cowmeadow, P., Hopkins, J. & Bushnell, D. (2000) Promoting mental health after childbirth: A controlled trial of primary prevention of postnatal depression. British Journal of Clinical Psychology, 39, 223-241.

Foa, E.B., Riggs, D.S., Dancu, C.V., & Rothbaum, B.O. (1993) Reliability and validity of a brief instrument for assessing posttraumatic stress disorder. Journal of Traumatic Stress, 6, 459-473.

Foa, E.B., Riggs, D.S., Gershuny, B.S. (1995) Arousal, numbing, and intrusion: Symptom structure of PTSD following assault. American Journal of Psychiatry, 152, 116-120.

Horowitz, M.J., Wilner, N., & Alvarez, W. (1979) Impact of event scale: A measure of subjective stress. Psychosomatic Medicine, 41, 209-218.

Joseph, S., Williams, R. & Yule, W. (1993) Changes in outlook following disaster: The preliminary development of a measure to assess positive and negative responses. Journal of Traumatic Stress, 6, 271-279.

Kliot, D. (1988) Emotional aspects of pregnancy and childbirth cited in Offerman-Zuckerburg, J. Critical Psychophysiological Passages in the Life of a Woman. Plenum Medical Book.

Lyons, S. (1998) A prospective study of posttraumatic stress symptoms 1 month following childbirth. Journal of Reproductive and Infant Psychology, 16 (2-3), 91-105.

Murray, D. & Cox, J.L. (1990) Screening for depression during pregnancy with the Edingburgh Postnatal Depression Scale (EPDS). Journal of Reproductive and Infant Psychology, 8: 99-107.

O'Hara, M.W., & Swain, A.M. (1996) Rates and risk of postpartum depression – a meta-analysis. International Review of Psychiatry, 8, 37-54.

Oakley, A. (1992) Social Support and Motherhood: A National History of a Research Project. Blackwell, Oxford.

Orne, M.T. (1962) 'On the social psychology of the psychology experiments: with particular reference to demand characteristics and their implications'. American Psychologist, 17, 776-83.

Parker, I. (1996) Qualitative research cited in Banister, P., Burman, E., Taylor, M & Tindall C. Qualitative Methods in Psychology – A research guide. Open Univeristy Press.

Podkolinski, J. (1998) cited in Clement, S. Women's Experience of Postnatal Support. Psychological Perspectives on Pregnancy & Childbirth. Churchill Livingstone

Raphael-Leff, J. (1992) Psychological Processes of Childbearing. Chapman & Hall

Rosenthal, R (1966) Experimenter Effects in Behavioural Research. New York: Appleton – Century- Crofts.

Tedeschi, R.G., & Calhoun, L.G. (1996) The posttraumatic growth inventory: measuring the positive legacy of trauma. Journal of Traumatic Stress, 9, 455-471

Yule, W. (1999) Post-traumatic Stress Disorders - Concepts and Therapy. Wiley

BEST COPY

AVAILABLE

Variable print quality

Appendix 1

CLINICAL PSYCHOLOGY REVIEW

INSTRUCTIONS TO AUTHORS

AIMS AND SCOPE: *Clinical Psychology Review* publishes substantive reviews of topics germane to clinical psychology. Its purpose is to help clinical psychologists keep up-to-date on relevant issues outside of their immediate areas of expertise by publishing scholarly but readable reviews. Papers cover diverse issues, including: psychopathology, psychotherapy, behavior therapy, behavioral medicine, community mental health, assessment, and child development.

Reviews on other topics, such as psychophysiology, learning therapy, and social psychology, often appear if they have a clear relationship to research or practice in clinical psychology. Integrative literature reviews and summary reports of innovative ongoing clinical research programs are also sometimes published. Reports on individual research studies are not appropriate.

SUBMISSION REQUIREMENTS: All manuscripts should be submitted to Alan S. Bellack, The University of Maryland at Baltimore, Department of Psychiatry, 737 W. Lombard St., Suite 551, Baltimore, MD 21201, USA. Submit three (3) high-quality copies of the entire manuscript; the original is not required. Allow ample margins and type double-space throughout. Papers should not exceed 50 pages (including references). One of the paper's authors should enclose a letter to the Editor, requesting review and possible publication; the letter must also state that the manuscript has not been previously published and has not been submitted elsewhere. One author's address (as well as any upcoming address change), telephone and FAX numbers, and E-mail address (if available) should be included; this individual will receive all correspondence from the Editor and Publisher.

Papers accepted for *Clinical Psychology Review* may not be published elsewhere in any language without written permission from the author(s) and publishers. Upon acceptance for publication, the author(s) must complete a Transfer of Copyright Agreement form.

COMPUTER DISKS: Authors are encouraged to submit a 3.5" HD/DD computer disk to the editorial office. Please observe the following criteria: (1) Send only hard copy when first submitting your paper. (2) When your paper has been refereed, revised if necessary, and accepted, send a disk containing the final version with the final hard copy. If the disk cannot be converted, the hard copy will be used. (3) Specify what software was used, including which release, e.g., WordPerfect 6.0a. (4) Specify what computer was used (IBM compatible PC, Apple Macintosh, etc.). (5) The article file should include all textual material (text, references, tables, figure captions, etc.) and separate illustration files, if available. (6) The file should follow the general instructions on style/arrangement and, in particular, the reference style of this journal as given in the Instructions to Contributors. (7) The file should be single-spaced and should use the wrap-around end-of-line feature, i.e., returns at the end of paragraphs only. Place two returns after every element such as title, headings, paragraphs, figure and table call-outs. (8) Keep a back-up disk for reference and safety.

TITLE PAGE: The title page should list (1) the article; (2) the authors' names and affiliations at the time the work was conducted; (3) a concise running title; and (4) an unnumbered footnote giving an address for reprint requests and acknowledgments.

ABSTRACT: An abstract should be submitted that does not exceed 200 words in length. This should be typed on a separate page following the title page.

KEYWORDS: Authors should include up to six keywords with their article. Keywords should be selected from the APA list of index descriptors, unless otherwise agreed with the Editor.

STYLE AND REFERENCES: Manuscripts should be carefully prepared using the *Publication Manual of the American Psychological Association*, 4th ed., 1994, for style. The reference section must be double spaced, and all works cited must be listed. Avoid abbreviations of journal titles and incomplete information.

Reference Style for Journals:
Raymond, M. J. (1964). The treatment of addiction by aversion conditioning with apomorphine. *Behavior Research and Therapy, 3*, 287–290.

For Books:
Barlow, D. H., Hayes, S. C., & Nelson, R. O. (1984). *The scientist practitioner: Research and accountability in clinical and educational settings.* Elmsford, NY: Pergamon.

TABLES AND FIGURES: Do not send glossy prints, photographs or original artwork until acceptance. Copies of all tables and figures should be included with each copy of the manuscript. Upon acceptance of a manuscript for publication, original, camera-ready photographs and artwork must be submitted, unmounted and on glossy paper. Photocopies, blue ink or pencil are not acceptable. Use black india ink and type figure legends on a separate sheet. Write the article title and figure number lightly in pencil on the back of each.

PAGE PROOFS AND OFFPRINTS: Page proofs of the article will be sent to the corresponding author. These should be carefully proofread. Except for typographical errors, corrections should be minimal, and rewriting the text is not permitted. Corrected page proofs must be returned within 48 hours of receipt. Along with the page proofs, the corresponding author will receive a form for ordering offprints and full copies of the issue in which the article appears. Twenty-five (25) free offprints are provided; orders for additional offprints must be received before printing in order to qualify for lower publication rates. All coauthor offprint requirements should be included on the offprint order form.

COPYRIGHT: Publications are copyrighted for the protection of the authors and the publisher. A Transfer of Copyright Agreement will be sent to the author whose manuscript is accepted. The form must be completed and returned to the publisher before the article can be published.

Appendix 2

Notes for Contributors

Journal of Reproductive and Infant Psychology welcomes reports of original research and creative or critical review articles which make an original contribution. Articles should not currently be submitted for publication elsewhere.

Topics of interest to the journal include medical, behavioural, cognitive, affective, dynamic, psychological, societal and social aspects of: fertility and infertility; menstruation and menopause; pregnancy and childbirth; antenatal preparation; motherhood and fatherhood; neonatology and early infancy; infant feeding; early parent–child relationships; postnatal psychological disturbance and psychiatric illness; obstetrics and gynaecology including preparation for medical procedures; psychology of women.

The journal also publishes brief reports, comment articles and special issues dealing with innovative and controversial topics. A review section reports on new books and training material.

Studies of both human and animal subjects are welcome.

Papers should be sent in the first instance to any one of the Editors:

Suzanne Zeedyk, Department of Psychology, The University of Dundee, Dundee DD1 4HN, UK;

Ken Gannon, St Bartholomew's & The Royal London School of Medicine and Dentistry, School of Occupational Therapy, Turner Street, London E1 2AD, UK;

John Worobey, Department of Nutritional Sciences, Rutgers University, New Brunswick, NJ 08903-0270, USA;

Axel Schoelmerich, Fakultaet für Psychologie, Ruhr-Universität, Bochum, D-44 780, Bochum, Germany

Contributions should be as concise as possible and should not normally exceed 5000 words or the equivalent lineage including tables and figures. The title should be brief but precise. Each paper should be accompanied by an abstract of not more than 200 words.

Papers should be typed on A4 or equivalent paper, on one side, double spaced with margins of not less than 3.5 cm. Sheets should be numbered consecutively at the head. The top copy and two good copies should be submitted.

Papers are refereed anonymously. The author's name and address should therefore appear under the title on a separate page. The title and abstract should appear on the first page of text. Authors who wish to ascertain in advance the criteria on which submissions are judged may obtain a copy of the blank referee's form from the editors.

Tables should be typed double spaced on separate sheets, or spaced sufficiently to be distinct in the case of small tables. They should be numbered in sequence in arabic numerals and referred to in the text as 'Table 1' etc. Large tables of more than six lines should be titled in order to make the contents comprehensible independently of the text.

Diagrams, graphs, drawings and half-tone illustrations should be on a separate sheet labelled 'Fig. 1' and so forth. Each sheet should carry at the top the title of the article. Where possible they should be submitted as artwork ready for photographic reproduction, larger than the intended size. Where more than one figure is submitted, they should as far as possible be to the same scale. When submitting articles on disk (see below) figures should be supplied as separate TIFF or EPS files if possible.

References in the text should cite the author's name followed by the date of publication unless there are more than two authors where only the first author's name should be given followed by '*et al.*'. References should be listed at the end of the paper in alphabetical order by first author, but including all authors, in the following format with titles of articles, books and journals given in full.

BERRYMAN, J. C. and WINDRIDGE, K. C. (1993) Pregnancy after 35: a preliminary report on maternal-fetal attachment. *Journal of Reproductive and Infant Psychology*, 11, 169–174.

BERRYMAN, J. C., THORPE, K. J. and WINDRIDGE, K. C. (1995) *Older Mothers: conception, pregnancy and birth after 35*. Pandora, London.

REID, M. (1990) Prenatal diagnosis and screening. In Garcia, J., Kilpatrick, R. and Richards, M. P. M. (Eds), *The Politics of Maternity Care*, pp. 300–324. Oxford University Press, Oxford.

SI units should be used for all measurements. Imperial measurements may be quoted in brackets. Where studies involve small numbers of subjects, both numbers and percentages of groups should be given.

Authors are advised to avoid sexist sentiments and language, except insofar as these form part of a study.

After notification of acceptance of a paper, authors should, if possible, send a copy of the final version as a word-processed document on computer disk to the accepting editor.

Manuscripts and correspondence concerning publication of articles will only be kept for 3 years by the Editors.

Page proofs will be sent to the author submitting each article. Correction of typographical and other minor errors only will be permitted at this stage. Textual alterations may be charged to authors in exceptional circumstances.

Fifty offprints of each paper are supplied free to the author nominated for correspondence, for further distribution, together with a copy of the issue concerned. Additional offprints may be purchased by returning to Taylor & Francis Ltd the order form enclosed with proofs. Offprints are sent about 3 weeks after publication.

For further guidance on general aspects of manuscript preparation authors should consult APA or BPS Manuals for Contributors.

Copyright. It is a condition of publication that authors vest copyright in their articles, including abstracts, in Society for Reproductive and Infant Psychology. This enables us to ensure full copyright protection and to disseminate the article, and the journal, to the widest possible readership in print and electronic formats as appropriate. Authors may, of course, use the article elsewhere *after* publication providing that prior permission is obtained from, Society for Reproductive and Infant Psychology. Authors are themselves responsible for obtaining permission to reproduce copyright material from other sources.

Composition by Genesis Typesetting, Laser Quay, Rochester, Kent
Printed and Bound in Great Britain by Polestar AUP Aberdeen Limited, Aberdeen

Appendix 3

NOTES FOR CONTRIBUTORS

1. The *British Journal of Clinical Psychology* publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour, e.g. neuropsychology, age associated CNS changes and pharmacological (in the latter case an explicit psychological analysis is also required), through studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis. The general focus of studies is an abnormal behaviour such as that described and classified by current diagnostic systems (ICD-10, DSM-IV) but it is not bound by the exclusive use of such diagnostic systems. The Journal is catholic with respect to the range of theories and methods used to answer substantive scientific problems. Studies of samples with no current psychological disorder will only be considered if they have a direct bearing on clinical theory or practice.

2. The following types of paper are invited:

(*a*) Papers reporting original empirical investigations.

(*b*) Theoretical papers, provided that these are sufficiently related to empirical data

(*c*) Review articles which need not be exhaustive, but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications.

(*d*) Brief Reports and Comments (see paragraph 6).

Case studies are normally published only as Brief Reports. Papers are evaluated in terms of their theoretical importance, contributions to knowledge, relevance to the concerns of practising clinical psychologists, and readability. Papers generally appear in order of acceptance, except for the priority given to Brief Reports and Comments.

3. The circulation of the Journal is worldwide, and papers are reviewed by colleagues in many countries. There is no restriction to British authors, and papers are invited from authors throughout the world.

4. The editors will reject papers which evidence discriminatory, unethical or unprofessional practices.

5. Papers should be prepared in accordance with The British Psychological Society's *Style Guide*, available from The British Psychological Society, S. Andrews House, 48 Princess Road East, Leicester LE1 7DR, England. Contributions should be kept as concise as clarity permits, and illustrations kept as few as possible. Papers should not normally exceed 5000 words. A structured abstract of up to 250 words should be provided (see Volume 35(2), pp. 323 (1996), for details). The title should indicate exactly but as briefly as possible the subject of the article, bearing in mind its use in abstracting and indexing systems.

(*a*) Contributions should be typed in double spacing with wide margins and only on one side of each sheet. Sheets should be numbered. The top copy and at least three good duplicates should be submitted and a copy should be retained by the author.

(*b*) This journal operates a policy of blind peer review. Papers will normally be scrutinized and commented on by at least two independent expert referees as well as by the editor or by an associate editor. The referees will not be made aware of the identity of the author. All information about authorship including personal acknowledgements and institutional affiliations should be confined to a removeable front page and the text should be free of such clues as identifiable self-citations ('In our earlier work...') The paper's title should be repeated on the first page of the text.

(*c*) Tables should be typed in double spacing on separate sheets. Each should have a self-explanatory title and should be comprehensible without reference to the text. They should be referred to in the text by arabic numerals. Data given should be checked for accuracy and must agree with mentions in the text.

(*d*) Figures, i.e. diagrams, graphs or other illustrations, should be on separate sheets numbered sequentially 'Fig. 1', etc., and each identified on the back with the title of the paper. They should be carefully drawn, larger than their intended size, suitable for photographic reproduction and clear when reduced in size. Special care is needed with symbols: correction at proof stage may not be possible. Lettering must not be put on the original drawing but upon a copy to guide the printer. Captions should be listed on a separate sheet.

(*e*) Bibliographical references in the text should quote the author's name and the date of the publication thus; Hunt (1993). They should be listed alphabetically by author at the end of the article according to the following format:

Moore, R. G., & Blackburn, I.-M. (1993). Sociotrophy, autonomy and personal memories in depression. *British Journal of Clinical Psychology, 32*, 460–462.

Steptoe, A., & Wardle, J. (1992). Cognitive predictors of health behaviour in contrasting regions of Europe. In C. R. Brewin, A. Steptoe, & J. Wardle (Eds.), *European perspectives in clinical and health psychology* (pp. 101–118). Leicester: The British Psychological Society.

Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full.

(*f*) SI units must be used for all measurements, rounded off to practical values if appropriate.

(*g*) Authors are requested to avoid the use of sexist language.

(*h*) Supplementary data too extensive for publication may be deposited with the British Library Document Supply Centre. Such material includes numerical data, computer programs, fuller details of case studies and experimental techniques. The materials should be submitted to the Editor together with the article, for simultaneous refereeing.

6. Brief Reports and Comments are limited to two printed pages. These are subject to an accelerated review process to afford rapid publication of research studies, and theoretical, critical or review comments whose essential contribution can be made within a small space. They also include research studies whose importance or breadth of interest is insufficient to warrant publication as full articles, and case reports making a distinctive contribution to theory or method. Authors are encouraged to append an extended report to assist in the evaluation of the submission and to be made available to interested readers on request to the author. Figures and tables should be avoided.

7. Proofs are sent to the corresponding author for correction of print, but not for introduction of new or different material. They should be returned to the Journals Manager as soon as possible. Fifty complimentary copies of each paper are supplied to the corresponding author on request: further copies may be ordered on a form supplied with the proofs.

8. Authors should consult the Journal editor concerning prior publication in any form or in any language of all or part of their article.

9. Authors are responsible for getting written permission to publish lengthy quotations, illustrations, etc., of which they do not own copyright.

10. To protect authors and journals against unauthorized reproduction of articles. The British Psychological Society requires copyright to be assigned to itself as publisher, on the express condition that authors may use their own material at any time without permission. On acceptance of a paper submitted to the Journal, authors will be requested to sign an appropriate assignment of copyright form.

Clinical Psychology Forum

Clinical Psychology Forum is produced by the Division of Clinical Psychology of The British Psychological Society. It is edited by Steve Baldwin, Lorraine Bell, Jonathan Calder, Lesley Cohen, Simon Gelsthorpe, Laura Golding, Helen Jones, Craig Newnes, Mark Rapley and Arlene Vetere, and circulated to all members of the Division monthly. It is designed to serve as a discussion forum for any issues of relevance to clinical psychologists. The editorial collective welcomes brief articles, reports of events, correspondence, book reviews and announcements.

Notes for contributors

Articles of 1000-2000 words are welcomed. Send two copies of your contribution, typed and double spaced. Contributors are asked to keep tables to a minimum, to ensure that all references are complete and accurate, and to give a word count. Please indicate the authors' employers, to appear at the head of the article, and include an address for correspondence, with e-mail if possible. News of Branches and Special Groups is especially welcome.

Language: contributors are asked to use language which is psychologically descriptive rather than medical and to avoid using devaluing terminology; i.e. avoid clustering terminology like "the elderly" or medical jargon like "person with schizophrenia". If you find yourself using quotation marks around words of dubious meaning, please use a different word.

Articles submitted to **Forum** will be sent to members of the Editorial Collective for refereeing. They will then communicate directly with authors.

We reserve the right to shorten, amend and hold back copy if needed.

Copy

Please send all copy and correspondence to the Co-ordinating Editor:

Craig Newnes
Field House
1 Myddlewood
Myddle
Shrewsbury SY4 3RY
Fax 01939 291209
106071.666@compuserve.com

Division News

Please send all copy to:

Helen Jones
Psychology Consultancy Service
Chaddeslode House
130 Abbey Foregate
Shrewsbury SY2 6AX
Fax 01743 352210
hjones9@compuserve.com

Book Reviews

Please send all books and review requests to:

Arlene Vetere
The Tavistock Centre
120 Belsize Lane
London NW3 5BA

Advertisements

Rates. Advertisements not connected with DCP sponsored events are charged as follows:

Full page (20cm x 14cm): £140
Half page (10cm x 14cm): £85
Inside cover: £160

All these rates are inclusive of VAT and are subject to a 10 per cent discount for publishers and agencies, and a further 10 per cent discount if the advertisement is placed in four or more issues. DCP events are advertised free of charge.

The Society's Terms and Conditions for the acceptance of advertising apply. Copy (preferably camera ready) should be sent to:

Jonathan Calder
The British Psychological Society
St Andrews House
48 Princess Road East
Leicester LE1 7DR
Tel. 0116 252 9502 *(direct line)*
Fax 0116 247 0787
joncal@bps.org.uk

Publication of advertisements is not an endorsement of the advertiser, nor of the products and services advertised.

Subscriptions

Subscription rates of **Clinical Psychology Forum** are as follows:

US only: $160
Outside US and UK: £80
UK (Institutions): £60
UK (Individuals): £30

Subscriptions should be sent to:

Clinical Psychology Forum
The British Psychological Society
St Andrews House
48 Princess Road East
Leicester LE1 7DR
Tel. 0116 254 9568
Fax 0116 247 0787

Clinical Psychology Forum is published monthly and is dispatched from the printers on the penultimate Thursday of the month prior to the month of publication.

Appendix 5

PLDQ

If you turn over the page there are more questions that ask about your labour and delivery. *Please try to complete the questions if you had a planned caesarean your experience is equally important.* If you did have a planned caesarean just answer the questions about the delivery ignoring the reference to 'labour'. You may feel that some of the questions are very similar, but they are just encouraging you to think carefully about the experience.

1.3 NOW I WOULD LIKE YOU TO RATE YOUR EXPERIENCE OF LABOUR AND DELIVERY ON A SCALE OF 1 TO 10, WHERE 1 = NONE AT ALL/LOWEST POSSIBLE SCORE, AND 10 = THE MOST/ HIGHEST POSSIBLE SCALE. PLEASE READ EACH QUESTION AND THEN CIRCLE THE ONE NUMBER WHICH ACCURATELY DESCRIBES YOUR FEELINGS

1. Overall, how pleasurable was your experience of labour and delivery ?

Not at all Pleasurable **1 2 3 4 5 6 7 8 9 10** The most pleasurable experience you could imagine

2. At its worst how severe was your pain during labour and delivery ?

Not at all Painful **1 2 3 4 5 6 7 8 9 10** The most painful experience you could imagine

3. On average how severe was your pain during labour and delivery ?

Not at all Severe **1 2 3 4 5 6 7 8 9 10** The most painful experience you could imagine

4. How distressing did you find the pain you experienced ?

Not at all Distressing **1 2 3 4 5 6 7 8 9 10** Extremely distressing

5. In general how distressing did you find the overall experience of labour and delivery ?

Not at all Distressing **1 2 3 4 5 6 7 8 9 10** Extremely distressing

6. How satisfied were you with the way you coped during your labour and delivery ?

Not at all Satisfied **1 2 3 4 5 6 7 8 9 10** Totally satisfied

7. How prepared did you feel during your labour and delivery ?

Not at all Prepared **1 2 3 4 5 6 7 8 9 10** Fully prepared

8. At its worst how fearful did you feel for yourself during you labour and delivery ?

No fear at All **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

9. At its worst how fearful did you feel for your baby during your labour and delivery ?

No fear at All **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

Please turn over the page

10. On average how fearful did you feel for yourself during labour and delivery ?

No fear at All **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

11. On average how fearful did you feel for your baby during labour and delivery ?

No fear at all **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

12. How unexpected were the procedures that you experienced during your labour and delivery ?

Not at all Unexpected **1 2 3 4 5 6 7 8 9 10** Totally unexpected

13. How confident did you feel about being able to cope during your labour and delivery ?

Not at all Confident **1 2 3 4 5 6 7 8 9 10** Completely confident

14. How supportive were staff during your labour and delivery ?

Not at all Supportive **1 2 3 4 5 6 7 8 9 10** Totally supportive

15. How supportive was your partner/other relative during your labour and delivery ?

Not at all Supportive **1 2 3 4 5 6 7 8 9 10** Totally supportive

16. How much did you feel in control of what was happening during your labour and delivery ?

Not at all In control **1 2 3 4 5 6 7 8 9 10** Totally in control

17. How well-informed did you feel about the progress of your labour and delivery ?

Not at all Informed **1 2 3 4 5 6 7 8 9 10** Completely well informed

18. How much did you feel that your wishes and views were listened to by staff during your labour and delivery ?

Not listened To at all **1 2 3 4 5 6 7 8 9 10** Listened to everything I said

19. How closely was your birthplan followed during your labour and delivery ?
(you may not have had a birthplan if so, please leave blank)

Completely Ignored **1 2 3 4 5 6 7 8 9 10** It was followed in full

Please turn over the page

20. How much was your experience of labour and delivery worse than you had expected ?

Not worse than I expected	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Very much worse than I expected

21. How much was your experience of labour and delivery better than you had expected ?

No better than I expected	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Very much better then I expected

22. How far did you feel responsible for any difficulties you experienced ?

No blame at All	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Blamed myself totally

23. How far did you feel staff were responsible for any difficulties you experienced ?

No blame at All	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Blamed staff totally

24. On the whole do you feel that you coped as well with your labour and delivery as others would have if they had been in your position ?

Not coped as Well as others	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Coped as well as anyone else would

Please turn over the page

Appendix 6 - Factor Analysis

Communalities

	Initial	Extraction
LABDEL1	1.000	.455
LABDEL2	1.000	.840
LABDEL3	1.000	.829
LABDE4	1.000	.761
LABDE5	1.000	.662
LABDE6	1.000	.426
LABDE7	1.000	.400
LABDE8	1.000	.585
LABDE9	1.000	.670
LABDE10	1.000	.569
LABDE11	1.000	.695
LABDE12	1.000	.373
LABDE13	1.000	.319
LABDE14	1.000	.454
LABDE15	1.000	.220
LABDE16	1.000	.535
LABDE17	1.000	.483
LABDE18	1.000	.549
LABDE19	1.000	.629
LABDE20	1.000	.337
LABDE21	1.000	.239
LABDE22	1.000	.254
LABDE23	1.000	.413

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.471	28.135	28.135	6.471	28.135	28.135
2	3.184	13.842	41.977	3.184	13.842	41.977
3	2.044	8.886	50.863	2.044	8.886	50.863
4	1.439	6.259	57.121			
5	1.218	5.297	62.418			
6	1.133	4.926	67.344			
7	.948	4.120	71.464			
8	.907	3.946	75.410			
9	.856	3.721	79.131			
10	.753	3.274	82.404			
11	.636	2.765	85.169			
12	.517	2.247	87.416			
13	.463	2.014	89.430			
14	.407	1.769	91.199			
15	.388	1.685	92.885			
16	.356	1.547	94.432			
17	.325	1.412	95.844			
18	.270	1.174	97.017			
19	.185	.803	97.821			
20	.183	.794	98.615			
21	.152	.662	99.277			
22	.112	.487	99.764			
23	5.421E-02	.236	100.000			

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	4.267	18.550	18.550
2	4.044	17.582	36.132
3	3.388	14.731	50.863
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
LABDEL1	.660	3.534E-04	-.137
LABDEL2	-.331	.854	3.711E-02
LABDEL3	-.358	.833	8.138E-02
LABDE4	-.600	.611	.165
LABDE5	-.762	.275	7.456E-02
LABDE6	.641	5.503E-02	.109
LABDE7	.611	.153	5.550E-02
LABDE8	-.260	-.676	.245
LABDE9	-.427	-.158	.680
LABDE10	-.346	-.537	.402
LABDE11	-.488	-.122	.665
LABDE12	-.557	-.250	-2.516E-03
LABDE13	.543	-.142	-6.587E-02
LABDE14	.440	.162	.484
LABDE15	.361	8.471E-02	.286
LABDE16	.582	.439	6.574E-02
LABDE17	.549	.156	.397
LABDE18	.575	.300	.359
LABDE19	-.786	7.398E-02	6.981E-02
LABDE20	.508	-.236	.152
LABDE21	-.486	4.400E-02	2.663E-02
LABDE22	-.296	-.105	-.394
LABDE23	.602	5.182E-02	.220

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Rotated Component Matrix[a]

	Component		
	1	2	3
LABDE1	.367	-.364	-.433
LABDE2	5.681E-02	.895	-.189
LABDE3	6.059E-02	.899	-.133
LABDE4	-.120	.851	.150
LABDE5	-.394	.639	.314
LABDE6	.531	-.270	-.266
LABDE7	.506	-.181	-.334
LABDE8	-.226	-.395	.615
LABDE9	.102	.196	.788
LABDE10	-.141	-.208	.712
LABDE11	6.036E-02	.255	.792
LABDE12	-.464	7.898E-02	.390
LABDE13	.289	-.412	-.257
LABDE14	.671	-1.674E-02	6.419E-02
LABDE15	.463	-7.206E-02	-7.892E-03
LABDE16	.580	7.619E-02	-.440
LABDE17	.687	-9.271E-02	-5.156E-02
LABDE18	.724	9.451E-03	-.157
LABDE19	-.475	.482	.413
LABDE20	.378	-.439	-3.704E-02
LABDE21	-.305	.294	.244
LABDE22	-.495	4.491E-03	-9.539E-02
LABDE23	.576	-.235	-.163

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Component Transformation Matrix

Component	1	2	3
1	.691	-.520	-.502
2	.306	.840	-.448
3	.654	.156	.740

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Appendix 7 - Internal Reliability Analysis for Factors; Staff, Pain and Fear

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	LABDE6	7.7087	2.3205	103.0
2.	LABDE7	7.1650	2.6275	103.0
3.	LABDE14	9.0194	1.5592	103.0
4.	LABDE16	5.7476	2.7890	103.0
5.	LABDE17	7.7670	2.3772	103.0
6.	LABDE18	8.2524	1.9439	103.0
7.	LABDE23	8.7864	1.9835	103.0

Correlation Matrix

	LABDE6	LABDE7	LABDE14	LABDE16	LABDE17
LABDE6	1.0000				
LABDE7	.4759	1.0000			
LABDE14	.2346	.2050	1.0000		
LABDE16	.3006	.3763	.2266	1.0000	
LABDE17	.3146	.3421	.5329	.4554	1.0000
LABDE18	.4403	.2989	.5386	.4712	.5199
LABDE23	.5338	.3417	.2962	.2843	.3615

	LABDE18	LABDE23
LABDE18	1.0000	
LABDE23	.3243	1.0000

N of Cases = 103.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	54.4466	113.7202	10.6640	7

Reliability Coefficients 7 items

Alpha = .7987 Standardized item alpha = .8077

R E L I A B I L I T Y A N A L Y S I S - S C A L E

		Mean	Std Dev	Cases
1.	LABDEL2	6.8972	3.1621	107.0
2.	LABDEL3	5.6542	3.0347	107.0
3.	LABDE4	5.2056	2.8968	107.0
4.	LABDE5	4.8224	2.7431	107.0

Correlation Matrix

	LABDEL2	LABDEL3	LABDE4	LABDE5
LABDEL2	1.0000			
LABDEL3	.8761	1.0000		
LABDE4	.7284	.6617	1.0000	
LABDE5	.4231	.3665	.6446	1.0000

N of Cases = 107.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	22.5794	100.6045	10.0302	4

Reliability Coefficients 4 items

Alpha = .8678 Standardized item alpha = .8655

R E L I A B I L I T Y A N A L Y S I S - S C A L E

		Mean	Std Dev	Cases
1.	LABDE8	4.2593	2.8098	108.0
2.	LABDE9	5.1759	2.8770	108.0
3.	LABDE10	3.7870	2.4687	108.0
4.	LABDE11	4.7593	2.5972	108.0

Correlation Matrix

	LABDE8	LABDE9	LABDE10	LABDE11
LABDE8	1.0000			
LABDE9	.2868	1.0000		
LABDE10	.8057	.3093	1.0000	
LABDE11	.2392	.8337	.3680	1.0000

N of Cases = 108.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	17.9815	69.8875	8.3599	4

Reliability Coefficients 4 items

Alpha = .7798 Standardized item alpha = .7827

Appendix 8 - Oneway Analysis of Variance and Scheffe Post Hoc test

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
FEAR4	Between Groups	580.887	2	290.443	4.509	.013
	Within Groups	6698.721	104	64.411		
	Total	7279.607	106			
STAFF4	Between Groups	823.894	2	411.947	3.850	.025
	Within Groups	10592.978	99	107.000		
	Total	11416.873	101			
PAIN4	Between Groups	3873.335	2	1936.668	30.183	.000
	Within Groups	6608.929	103	64.164		
	Total	10482.264	105			

Post Hoc Tests

Multiple Comparisons

Scheffe

Dependent Variable	(I) Type of delivery	(J) Type of delivery	Mean Difference (I-J)	Std. Error
FEAR4	Normal vaginal delivery	Elective caesarian section	-5.1265	2.1376
		Unexpected procedures	-4.4737	1.9170
	Elective caesarian section	Normal vaginal delivery	5.1265	2.1376
		Unexpected procedures	.6528	2.5024
	Unexpected procedures	Normal vaginal delivery	4.4737	1.9170
		Elective caesarian section	-.6528	2.5024
STAFF4	Normal vaginal delivery	Elective caesarian section	5.3722	2.8369
		Unexpected procedures	6.0683	2.4925
	Elective caesarian section	Normal vaginal delivery	-5.3722	2.8369
		Unexpected procedures	.6961	3.2791
	Unexpected procedures	Normal vaginal delivery	-6.0683	2.4925
		Elective caesarian section	-.6961	3.2791
PAIN4	Normal vaginal delivery	Elective caesarian section	16.6024*	2.1371
		Unexpected procedures	3.4219	1.9173
	Elective caesarian section	Normal vaginal delivery	-16.6024*	2.1371
		Unexpected procedures	-13.1806*	2.4976
	Unexpected procedures	Normal vaginal delivery	-3.4219	1.9173
		Elective caesarian section	13.1806*	2.4976

Multiple Comparisons

Scheffe

Dependent Variable	(I) Type of delivery	(J) Type of delivery	Sig.	95% Confidence Interval Lower Bound
FEAR4	Normal vaginal delivery	Elective caesarian section	.061	-10.4351
		Unexpected procedures	.070	-9.2343
	Elective caesarian section	Normal vaginal delivery	.061	-.1821
		Unexpected procedures	.967	-5.5618
	Unexpected procedures	Normal vaginal delivery	.070	-.2869
		Elective caesarian section	.967	-6.8674
STAFF4	Normal vaginal delivery	Elective caesarian section	.172	-1.6783
		Unexpected procedures	.056	-.1261
	Elective caesarian section	Normal vaginal delivery	.172	-12.4227
		Unexpected procedures	.978	-7.4533
	Unexpected procedures	Normal vaginal delivery	.056	-12.2627
		Elective caesarian section	.978	-8.8454
PAIN4	Normal vaginal delivery	Elective caesarian section	.000	11.2943
		Unexpected procedures	.208	-1.3403
	Elective caesarian section	Normal vaginal delivery	.000	-21.9105
		Unexpected procedures	.000	-19.3841
	Unexpected procedures	Normal vaginal delivery	.208	-8.1841
		Elective caesarian section	.000	6.9770

Multiple Comparisons

Scheffe

Dependent Variable	(I) Type of delivery	(J) Type of delivery	95% Confidence Interval Upper Bound
FEAR4	Normal vaginal delivery	Elective caesarian section	.1821
		Unexpected procedures	.2869
	Elective caesarian section	Normal vaginal delivery	10.4351
		Unexpected procedures	6.8674
	Unexpected procedures	Normal vaginal delivery	9.2343
		Elective caesarian section	5.5618
STAFF4	Normal vaginal delivery	Elective caesarian section	12.4227
		Unexpected procedures	12.2627
	Elective caesarian section	Normal vaginal delivery	1.6783
		Unexpected procedures	8.8454
	Unexpected procedures	Normal vaginal delivery	.1261
		Elective caesarian section	7.4533
PAIN4	Normal vaginal delivery	Elective caesarian section	21.9105
		Unexpected procedures	8.1841
	Elective caesarian section	Normal vaginal delivery	-11.2943
		Unexpected procedures	-6.9770
	Unexpected procedures	Normal vaginal delivery	1.3403
		Elective caesarian section	19.3841

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

FEAR4

Scheffe[a,b]

Type of delivery	N	Subset for alpha = .05 1
Normal vaginal delivery	65	15.9846
Unexpected procedures	24	20.4583
Elective caesarian section	18	21.1111
Sig.		.071

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 26.641.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

STAFF4

Scheffe[a,b]

Type of delivery	N	Subset for alpha = .05
		1
Unexpected procedures	24	50.8333
Elective caesarian section	17	51.5294
Normal vaginal delivery	61	56.9016
Sig.		.115

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 25.667.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PAIN4

Scheffe[a,b]

Type of delivery	N	Subset for alpha = .05	
		1	2
Elective caesarian section	18	9.4444	
Unexpected procedures	24		22.6250
Normal vaginal delivery	64		26.0469
Sig.		1.000	.302

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 26.585.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 9

Thank you for agreeing to take part in this study. Firstly I would like to ask a few more details about you and your pregnancy – please fill in the following details below:

Name .....

Address .....

.....

Day contact phone no: .....

Is this the number you can be contacted on after the birth of your baby ?. If not can you give the phone number where you can be contacted after the birth

.... Today's date.....

Age ..... Midwife .....

Your marital status e.g. Single/Married/Co-habiting/Divorced/Separated

.....

Expected date of delivery of your baby .....

Where will your baby be born e.g. at which hospital .....

.....

Is this you first baby (please circle) Yes/No, if your answer is no please indicate how many pregnancies you have had before this pregnancy

.....

How many children do you have in total (please circle) 1 2 3 4 5 6 7 8

Are you attending antenatal classes at present (please circle) Yes / No

How many classes have you attended ? .....

Where are your antenatal classes held? .....

What techniques have you been taught in these classes ?

.....

If your answer is no, do you intend to attend antenatal classes at a later date

Yes / No

Are you currently employed (please circle) Yes / No

If you have not stopped work at which stage of your pregnancy do you intend to stop working e.g. how many weeks before the birth

.....

During your labour will your partner be present (please circle) Yes / No

If your answer is no, will a friend or parent be present with you at the birth (please circle) Yes/No

Who will this person be ? e.g. your close friend, mother, sister etc

....

Thank you for completing this section of the

questionnaire. Please turn over the page and complete the remainder of the questionnaires. The next questionnaire will ask you what you expect your labour to be like

The following relates to your expectations of labour and delivery

Please mark the degree to which you agree or disagree on the scale provided with the following statements by circling your answers.

During my labour and childbirth I expect I will .....

	Strongly Agree				**Strongly Disagree**
1. Be able to influence the type of care I receive	1	2	3	4	5
2. That I will be in control of the situation	1	2	3	4	5
3. That I will be told what to do	1	2	3	4	5
4. That I will get my questions answered	1	2	3	4	5
5. That I will be allowed to play an active role in my health care	1	2	3	4	5
6. That what I say or do will make a difference	1	2	3	4	5

Thank you for completing this questionnaire. If you turn over the page the next questionnaire will ask more about you as a person, and your views of the world.

EPQ

Please answer each question by putting a circle around the 'YES' or 'NO' following the question. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the questions. ***PLEASE REMEMBER TO ANSWER EACH QUESTION***

1. Does you mood often go up and down ? **YES/NO**

2. Do you take much notice of what people think ? **YES/NO**

3. Are you a talkative person ? **YES/NO**

4. If you say you will do something, do you always keep your promise no matter how inconvenient it might be ? **YES/NO**

5. Do you ever feel 'just miserable' for no reason ? **YES/NO**

6. Would being in debt worry you ? **YES/NO**

7. Are you rather lively ? **YES/NO**

8. Were you ever greedy by helping yourself to more than your fair share of anything ? **YES/NO**

9. Are you an irritable person ? **YES/NO**

10. Would you take drugs which may have strange or dangerous effects ? **YES/NO**

11. Do you enjoy meeting new people ? **YES/NO**

12. Have you ever blamed someone for doing something you knew was really your fault ? **YES/NO**

13. Are your feelings easily hurt ? **YES/NO**

14. Do you prefer to go your own way rather than act by the rules ? **YES/NO**

15. Can you usually let yourself go and enjoy yourself at a lively party ? **YES/NO**

16. Are all your habits good and desirable ones ? **YES/NO**

17. Do you often feel 'fed-up'? **YES/NO**

18. Do good manners and cleanliness matter much to you ? **YES/NO**

19. Do you usually take the initiative in making new friends ? **YES/NO**

20. Have you ever taken anything (even a pin or button) that belonged to someone else ? **YES/NO**

21. Would you call yourself a nervous person ? **YES/NO**

22. Do you think marriage is old-fashioned and should be done away with ? **YES/NO**

23. Can you easily get some life into a rather dull party ? **YES/NO**

24. Have you ever broken or lost something belonging to someone else ? **YES/NO**

25. Are you a worrier ? **YES/NO**

26. Do you enjoy cooperating with others ? **YES/NO**

27. Do you tend to keep in the background on social occasions ? **YES/NO**

28. Does it worry you if you known there are mistakes in your work ? **YES/NO**

29. Have you ever said anything bad or nasty about anyone ? **YES/NO**

30. Would you call yourself tense or 'highly-strung' ? **YES/NO**

31. Do you think people spend too much time safeguarding their future with savings and insurance ? **YES/NO**

32. Do you like mixing with people ? **YES/NO**

33. As a child were you ever cheeky to your parents ? **YES/NO**

34. Do you worry too long after an embarrassing experience ? **YES/NO**

35. Do you try not to be rude to people ? **YES/NO**

36. Do you like plenty of bustle and excitement around you ? **YES/NO**

37. Have you ever cheated at a game ? **YES/NO**

38. Do you suffer from 'nerves' ? **YES/NO**

39. Would you like other people to be afraid of you ? **YES/NO**

40. Have you ever taken advantage of someone ? **YES/NO**

41. Are you mostly quiet when you are with other people ? **YES/NO**

42. Do you often feel lonely ? **YES/NO**

43. Is it better to follow society's rules than go your own way ? **YES/NO**

44. Do other people think of you as being very lively ? **YES/NO**

45. Do you always practise what you preach ? **YES/NO**

46. Are you often troubled about feelings of guilt ? **YES/NO**

47. Do you sometimes put off until tomorrow what you ought to do today ? **YES/NO**

48. Can you get a party going ? **YES/NO**

- **PLEASE CHECK THAT YOU HAVE ANSWERED ALL THE QUESTIONS**

(EPDS)

1. How are you feeling ?

As you have recently had a baby, we would like to know how you are feeling now. Please underline the answer which comes closest to how you felt in the past 7 days, not just how you feel today.

Here is an example, already completed:

I have felt happy:
Yes, most of the time
Yes, some of the time
No, not very often
No, not at all

This would mean: ' I have felt happy some of the time' during the past week. Please complete the other questions in the same way.

IN THE PAST SEVEN DAYS

1. I have been able to laugh and see the funny side of things:

As much as I always could
Not quite so much now
Definitely not so much now
Not at all

2. I have looked forward with enjoyment to things:

As much as I ever did
Rather less than I used to
Definitely less that I used to
Hardly at all

3. I have blamed myself unnecessarily when things went wrong:

Yes, most of the time
Yes, some of the time
Not very often
No, never

4. I have felt worried and anxious for no very good reason:

No, not at all
Hardly ever
Yes, sometimes
Yes, very often

5. I have felt scared or panicky for no very good reason:

Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

Please turn over

6. Things have been getting on top of me:

Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

Yes, most of the time
Yes, sometimes
Not very often
No, not at all

8. I have felt sad or miserable:

Yes, most of the time
Yes, quite often
Not very often
No, not at all

9. I have been so unhappy that I have been crying:

Yes, most of the time
Yes, quite often
Only occasionally
No, never

10. The thought of harming myself has occurred to me:

Yes, quite often
Sometimes
Hardly ever
Never

Thank you for completing this questionnaire. Please turn over the page, the next questionnaire will ask about how you are coping at present with aspects of your recent labour and delivery that may have been upsetting.

The List of Threatening Experiences

The following list consists of life events that people may experience, can you indicate by circling yes or no whether any of these have happened to you in the past 12 months.

1. You yourself suffered a serious illness, injury or assault — Yes / No

2. A serious illness, injury or assault happened to a close relative — Yes / No

3. Your parent, child, spouse or partner died — Yes / No

4. A close family friend or another relative (aunt, cousin, grandparent) died — Yes / No

5. You had a separation due to marital difficulties — Yes / No

6. You broke off a steady relationship — Yes / No

7. You had a serious problem with a close friend, neighbour or relative — Yes / No

8. You became unemployed or you were seeking work unsuccessfully for more than one month — Yes / No

9. You were sacked from your job — Yes / No

10. You had a major financial crisis — Yes / No

11. You had problems with the police and a court appearance — Yes / No

12. Something you valued was lost or stolen: — Yes / No

Thank you, and now I would like to ask you overleaf about things that may have happened at any time in your life

13. Have you experienced, at any time in your life any past obstetric or gynaecological procedures or surgery that you would describe as upsetting e.g. past pregnancies, miscarriage, abortion, stillbirth, or operations

Yes / No If yes please give brief details

Please turn over the page

14. Has anything ever happened to you, which you have not already mentioned, which frightened or scared you so much you thought about it for a long time afterwards?

Yes/No If yes please give brief details ?

15. Has anything ever happened to you, which you have not already mentioned, which frightened or scared you so much you tried to avoid thinking about it?

Yes/No If yes please give brief details ?

16. Has anything else ever happened which you have not already mentioned, which made you very upset or frightened?

Yes/No If yes please give brief details ?

Thank you, if you require more space to write your answers please continue on the back of the page, but please indicate the question number you are referring to e.g. 14, 15, 16. To finish I would be grateful if you could answer the questions overleaf about any past health difficulties you may have experienced

Have you experienced any of the following prior to this pregnancy:

MISCARRIAGE **YES / NO**

ABORTION **YES / NO**

STILLBIRTH **YES / NO**

Have you ever been treated for a psychiatric/psychological difficulty at any time in you life ? (e.g. depression / anxiety)

YES/NO

If your answer is yes, what was your difficulty .....

.....

When did treatment for this difficulty end (please state date in full) .....

.....

Thank you for taking your time to complete all of the questionnaires. I would appreciate any comments you have about the questionnaires overleaf i.e. how they could be improved etc, and how you felt completing them.

I will then contact you again 4 to 6 weeks after the birth of your baby; firstly I will send you some more questionnaires to complete, and I will then contact you by phone so you can give me your answers to the questionnaires. Alternatively I will also send a S.A.E with the questionnaires so you can return them by post if you prefer.

In the meantime if you feel that you would like to discuss anything with me you can contact me at Psychological Services, Combe House, George Eliot Hospital on 024 76350111. If I am not in the department at the time, please leave a contact number and I will return you call as soon as possible.

Dawn Bailham-Cozens
Trainee Clinical Psychologist

Please feel free to give any feedback about the questionnaires

Appendix 10

THANK YOU AGAIN FOR AGREEING TO TAKE PART IN THIS STUDY. THIS IS THE SECOND PACK OF QUESTIONNAIRES. FIRSTLY I WOULD LIKE TO ASK YOU ABOUT YOUR EXPERIENCE OF LABOUR AND THE DELIVERY OF YOUR BABY – PLEASE FILL IN THE FOLLOWING DETAILS BELOW:

PERSONAL DETAILS

Name .....

Address .....

Day contact phone no ..... Today's date .....

Age ..... Midwife .....

Ethnic Group e.g. Afro-Caribbean, Caucasian ....

What date was your baby born ..... Hospital .....

1.1 LABOUR AND DELIVERY DETAILS

How did you know that your labour had started e.g. waters broke, painful contractions .....

.....

.....

How long was your labour in hours ..... Was your labour induced Yes/No

Did you have a drip to speed up labour Yes/No Did you have a forceps delivery Yes/No

Did you have a caesarean Yes/No If yes was it planned or emergency.....

.....

Did you have gas and air Yes/No Did you have an epidural or similar Yes/No

Were you given pethidine Yes/No Were you given any other medication Yes/No

If yes what was the medication called .....

THANK YOU. PLEASE TURN OVER THE NEXT QUESTIONS WILL ASK YOU IN MORE DETAIL ABOUT YOUR LABOUR AND DELIVERY.

1.2 THE FOLLOWING RELATES TO YOUR EXPECTATIONS OF LABOUR AND DELIVERY – Please also complete if you had a planned caesarean section

Please mark the degree to which you agree or disagree on the scale provided with the following statements by circling your answers.

During my labour and childbirth, I felt .....

	Strongly Agree				**Strongly Disagree**
1. That I was unable to influence the type of care I receive	1	2	3	4	5
2. That I was in control of the situation	1	2	3	4	5
3. That I was just told what to do	1	2	3	4	5
4. That I could get my questions answered	1	2	3	4	5
5. That I was allowed to play an active role in my health care	1	2	3	4	5
6. That what I did or said made no difference	1	2	3	4	5

If you turn over the page there are more questions that ask about your labour and delivery. *Please try to complete the questions if you had a planned caesarean your experience is equally important.* If you did have a planned caesarean just answer the questions about the delivery ignoring the reference to 'labour'. You may feel that some of the questions are very similar, but they are just encouraging you to think carefully about the experience.

1.3 NOW I WOULD LIKE YOU TO RATE YOUR EXPERIENCE OF LABOUR AND DELIVERY ON A SCALE OF 1 TO 10, WHERE . 1 = NONE AT ALL/LOWEST POSSIBLE SCORE, AND 10 = THE MOST/ HIGHEST POSSIBLE SCALE. PLEASE READ EACH QUESTION AND THEN CIRCLE THE ONE NUMBER WHICH ACCURATELY DESCRIBES YOUR FEELINGS

1. Overall, how pleasurable was your experience of labour and delivery ?

Not at all Pleasurable **1 2 3 4 5 6 7 8 9 10** The most pleasurable experience you could imagine

2. At its worst how severe was your pain during labour and delivery ?

Not at all Painful **1 2 3 4 5 6 7 8 9 10** The most painful experience you could imagine

3. On average how severe was your pain during labour and delivery ?

Not at all Severe **1 2 3 4 5 6 7 8 9 10** The most painful experience you could imagine

4. How distressing did you find the pain you experienced ?

Not at all Distressing **1 2 3 4 5 6 7 8 9 10** Extremely distressing

5. In general how distressing did you find the overall experience of labour and delivery ?

Not at all Distressing **1 2 3 4 5 6 7 8 9 10** Extremely distressing

6. How satisfied were you with the way you coped during your labour and delivery ?

Not at all Satisfied **1 2 3 4 5 6 7 8 9 10** Totally satisfied

7. How prepared did you feel during your labour and delivery ?

Not at all Prepared **1 2 3 4 5 6 7 8 9 10** Fully prepared

8. At its worst how fearful did you feel for yourself during you labour and delivery ?

No fear at All **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

9. At its worst how fearful did you feel for your baby during your labour and delivery ?

No fear at All **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

Please turn over the page

10. On <u>average</u> how <u>fearful</u> did you feel for yourself during labour and delivery ?

No fear at All **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

11. On <u>average</u> how <u>fearful</u> did you feel for your baby during labour and delivery ?

No fear at all **1 2 3 4 5 6 7 8 9 10** Absolutely terrified

12. How <u>unexpected</u> were the <u>procedures</u> that you experienced during your labour and delivery ?

Not at all Unexpected **1 2 3 4 5 6 7 8 9 10** Totally unexpected

13. How <u>confident</u> did you feel about being able to <u>cope</u> during your labour and delivery ?

Not at all Confident **1 2 3 4 5 6 7 8 9 10** Completely confident

14. How <u>supportive</u> were <u>staff</u> during your labour and delivery ?

Not at all Supportive **1 2 3 4 5 6 7 8 9 10** Totally supportive

15. How <u>supportive</u> was your <u>partner/other relative</u> during your labour and delivery ?

Not at all Supportive **1 2 3 4 5 6 7 8 9 10** Totally supportive

16. How much did you feel in <u>control</u> of what was happening during your labour and delivery ?

Not at all In control **1 2 3 4 5 6 7 8 9 10** Totally in control

17. How <u>well-informed</u> did you feel about the progress of your labour and delivery ?

Not at all Informed **1 2 3 4 5 6 7 8 9 10** Completely well informed

18. How much did you feel that your <u>wishes</u> and <u>views</u> were <u>listened</u> to by staff during your labour and delivery ?

Not listened To at all **1 2 3 4 5 6 7 8 9 10** Listened to everything I said

19. How closely was your <u>birthplan</u> followed during your labour and delivery ?
(you may not have had a <u>birthplan</u> if so, please leave blank)

Completely Ignored **1 2 3 4 5 6 7 8 9 10** It was followed in full

Please turn over the page

20. How much was your experience of labour and delivery worse than you had expected ?

Not worse than I expected	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Very much worse than I expected

21. How much was your experience of labour and delivery better than you had expected ?

No better than I expected	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Very much better then I expected

22. How far did you feel responsible for any difficulties you experienced ?

No blame at All	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Blamed myself totally

23. How far did you feel staff were responsible for any difficulties you experienced ?

No blame at All	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Blamed staff totally

24. On the whole do you feel that you coped as well with your labour and delivery as others would have if they had been in your position ?

Not coped as Well as others	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Coped as well as anyone else would

Please turn over the page

1.4 UNEXPECTED/STRESSFUL EVENTS

Were any other procedures carried out ..... what were

they.....

How was your health/your baby's health monitored during your labour (please circle)
Stethoscope/CTG monitor/abdominal belts/clip on baby's head/sonic aid (Doppler)
/colour of your 'waters'/fluid/other (please describe)

.....

Was the delivery a breech birth

Yes/No.....

Did anything unexpected happen during your labour (describe) .....

.....

Did anything unexpected happen during your delivery (describe) .....

.....

What was the most stressful event during your labour (describe) .....

.....

What was the most stressful event during your delivery (describe).....

.....

Thank you for completing this questionnaire
The following section consists of questions that ask about how <u>you cope</u> when you experience stress or difficulties in your life.

(EES)
Please indicate by circling a number on the rating scale whether you believe the statement is true about you
1 = Never True, and 6 = Always True

	Never True					Always True
1. I think of myself as emotionally expressive	**1**	**2**	**3**	**4**	**5**	**6**
2. People think of me as an unemotional person	**1**	**2**	**3**	**4**	**5**	**6**
3. People can read my emotions	**1**	**2**	**3**	**4**	**5**	**6**
4. I keep my feelings to myself	**1**	**2**	**3**	**4**	**5**	**6**
5. I display my emotions to other people	**1**	**2**	**3**	**4**	**5**	**6**
6. I am often considered indifferent by others	**1**	**2**	**3**	**4**	**5**	**6**
7. I am able to cry in front of other people	**1**	**2**	**3**	**4**	**5**	**6**
8. don't like to let other people to see how I'm feeling	**1**	**2**	**3**	**4**	**5**	**6**
9. Even if I am feeling very emotional I don't let others see my feelings	**1**	**2**	**3**	**4**	**5**	**6**
10. I can't hide the way I'm feeling	**1**	**2**	**3**	**4**	**5**	**6**
11. Other people aren't easily able to observe what I'm feeling	**1**	**2**	**3**	**4**	**5**	**6**
12. Other people believe me to be very emotional	**1**	**2**	**3**	**4**	**5**	**6**
13. I am not very emotionally expressive	**1**	**2**	**3**	**4**	**5**	**6**
14 Even when I'm experiencing strong feelings I don't express them outwardly	**1**	**2**	**3**	**4**	**5**	**6**
15 I don't express my emotions to other people	**1**	**2**	**3**	**4**	**5**	**6**
16 The way I feel is different from how others think I feel	**1**	**2**	**3**	**4**	**5**	**6**
17. I hold my feelings in	**1**	**2**	**3**	**4**	**5**	**6**

Please turn over

AMBIVALENCE OVER EMOTIONAL EXPRESSIVENESS QUESTIONNAIRE

Please read the following statement and indicate by circling a number on the rating scale whether you feel this way or not. ***1 = Never feel this way, 5 = Often feel this way***

	Never feel this way				**Often feel this way**
1. It is hard to find the right words to indicate to others what I am really feeling	**1**	**2**	**3**	**4**	**5**
2. I worry that if I express negative emotions such as fear and anger, other people will not approve of me.	**1**	**2**	**3**	**4**	**5**
3. I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt	**1**	**2**	**3**	**4**	**5**
4. I often cannot bring myself to express what I am really feeling	**1**	**2**	**3**	**4**	**5**
5. I'd like to talk about my problems with others, but at times I just can't	**1**	**2**	**3**	**4**	**5**
6. I want to tell someone when I love them, but it is difficult to find the right words	**1**	**2**	**3**	**4**	**5**
7. I would like to express my disappointment when things don't go as well as planned, but I don't want to appear vulnerable	**1**	**2**	**3**	**4**	**5**
8. Often I'd like to show others how I feel, but something seems to be holding me back	**1**	**2**	**3**	**4**	**5**
9. I try to hide my negative feelings around others, even though I am not being fair to those close to me	**1**	**2**	**3**	**4**	**5**
10. Often I find that I am not able to tell others how much they really mean to me	**1**	**2**	**3**	**4**	**5**
11. I try to keep my deepest fears and feelings hidden, but at times I'd like to open up to others	**1**	**2**	**3**	**4**	**5**
12. I would like to be more spontaneous in my emotional reactions but I just can't seem to do it	**1**	**2**	**3**	**4**	**5**
13. I can recall a time when I wish that I I had told someone how much I really cared about them	**1**	**2**	**3**	**4**	**5**
14. I feel guilty after I have expressed anger to someone	**1**	**2**	**3**	**4**	**5**
15. I would like to express my affection more physically but I am afraid others will get the wrong impression	**1**	**2**	**3**	**4**	**5**
16. I try to suppress my anger, but I would like other people to know how I feel	**1**	**2**	**3**	**4**	**5**

	Never feel this way				Often feel this way
17. I try to apologise when I have done something wrong but I worry that I will be perceived as incompetent	1	2	3	4	5
18. After I express anger at someone, it bothers me for a long time	1	2	3	4	5
19. I try to show people I love them, although at times I am afraid that it may make me appear weak or too sensitive	1	2	3	4	5
20. I strive to keep a smile on my face in order to convince others I am happier than I really am	1	2	3	4	5
21. When someone bothers me, I try to appear indifferent even though I'd like to tell them how I feel	1	2	3	4	5
22. I try to avoid sulking even when I feel like it	1	2	3	4	5
23. When I am really proud of something I accomplish I want to tell someone, but I fear I will be thought of as conceited	1	2	3	4	5
24. I try to refrain from getting angry at my parents even though I want to at times	1	2	3	4	5
25. I try not to worry others, even though sometimes they should know the truth	1	2	3	4	5
26. I try to control my jealousy concerning my boyfriend/girlfriend even though I want to let them know I'm hurting	1	2	3	4	5
27. I think about acting when I'm angry but I try not to	1	2	3	4	5
28. I make an effort to control my temper at all times even though I'd like to act on these feelings at times	1	2	3	4	5

Thank you

(AEE)
Please read the following items and indicate whether you agree or disagree with the following statements.

	Disagree very much			Agree very much	
1. I think you should always keep your feelings under control	1	2	3	4	5
2. I think you should not burden other people with your problems	1	2	3	4	5
3. I think getting emotional is a sign of weakness	1	2	3	4	5
4. I think other people don't understand your feelings	1	2	3	4	5

(CSS) We would like to ask you a few questions about your family and friends, the people you have turned to for help, advice, and support since the birth of your baby. Each question asks about the support you receive at the present time. Each question has seven answer choices ranging from 'Never' to 'Always'. As a guide think of these words as representing the numbers below.

Never	Very Seldom	Seldom	Sometimes	Often	Very Often	Always
1	**2**	**3**	**4**	**5**	**6**	**7**

Now, thinking about these people you have turned to for help, advice, and support.....

	Never					**Always**
1 Whenever you want to talk how often is there someone willing to listen ?	1	2	3	4	5	6	7
2. Do you have personal contact with other women/mothers with a similar experience ?	1	2	3	4	5	6	7
3. Are you able to talk about your thoughts and feelings ?	1	2	3	4	5	6	7
4. Are people sympathetic and supportive ?	1	2	3	4	5	6	7
3. Are people helpful in a practical sort of way ?	1	2	3	4	5	6	7
5. Do people you expect to be supportive make you feel worse at any time ?	1	2	3	4	5	6	7

Thank you for completing this questionnaire. Please turn over the page.

(EPDS)

1. How are you feeling ?

As you have recently had a baby, we would like to know how you are feeling now. Please underline the answer which comes closest to how you felt in the past 7 days, not just how you feel today.

Here is an example, already completed:

I have felt happy:
Yes, most of the time
Yes, some of the time
No, not very often
No, not at all

This would mean: ' I have felt happy some of the time' during the past week. Please complete the other questions in the same way.

IN THE PAST SEVEN DAYS

1. I have been able to laugh and see the funny side of things:

As much as I always could
Not quite so much now
Definitely not so much now
Not at all

2. I have looked forward with enjoyment to things:

As much as I ever did
Rather less than I used to
Definitely less that I used to
Hardly at all

3. I have blamed myself unnecessarily when things went wrong:

Yes, most of the time
Yes, some of the time
Not very often
No, never

4. I have felt worried and anxious for no very good reason:

No, not at all
Hardly ever
Yes, sometimes
Yes, very often

5. I have felt scared or panicky for no very good reason:

Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

Please turn over

6. Things have been getting on top of me:

Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

Yes, most of the time
Yes, sometimes
Not very often
No, not at all

8. I have felt sad or miserable:

Yes, most of the time
Yes, quite often
Not very often
No, not at all

9. I have been so unhappy that I have been crying:

Yes, most of the time
Yes, quite often
Only occasionally
No, never

10. The thought of harming myself has occurred to me:

Yes, quite often
Sometimes
Hardly ever
Never

Thank you for completing this questionnaire. Please turn over the page, the next questionnaire will ask about how you are coping at present with aspects of your recent labour and delivery that may have been upsetting.

(IES)

2. The next two questionnaires ask about how you are coping with aspects of your recent labour and delivery that may have upset you i.e. avoiding thinking about it, discussing with others, having recurrent thoughts about things that happened, or disturbing dreams. Please fill in the questionnaire even if this does not apply to you.

Instructions: Below is a list of comments made by people after stressful life events. Please check each item, indicating how frequently these comments were true for you during the **PAST SEVEN DAYS.** If they did not occur during that time, please mark the 'not at all' column.

	Not At all	**Rarely**	**Sometimes**	**Often**
1. I thought about it when I didn't mean to.	**0**	**1**	**2**	**3**
2. I avoided letting myself get upset when I thought about it or was reminded of it.	**0**	**1**	**2**	**3**
3. I tried to remove it from my memory.	**0**	**1**	**2**	**3**
4. I had trouble falling asleep, or staying asleep because of pictures or thoughts about it that came into my mind.	**0**	**1**	**2**	**3**
5. I had waves of strong feelings about it.	**0**	**1**	**2**	**3**
6. I had dreams about it.	**0**	**1**	**2**	**3**
7. I stayed away from reminders of it.	**0**	**1**	**2**	**3**
8. I felt as if it hadn't happened or it wasn't real.	**0**	**1**	**2**	**3**
9. I tried not to talk about it.	**0**	**1**	**2**	**3**
10. Pictures about it popped into my mind.	**0**	**1**	**2**	**3**
11. Others things kept making me think about it.	**0**	**1**	**2**	**3**
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	**0**	**1**	**2**	**3**
13. I tried not to think about it.	**0**	**1**	**2**	**3**
14. Any reminder brought back feelings about it.	**0**	**1**	**2**	**3**
15. My feelings about it were kind of numb.	**0**	**1**	**2**	**3**

Please turn over the page

(PTDS) **The following questions relate to your recent experience of childbirth. Please answer the following questions by circling yes or no**

1. During the labour and delivery were you physically injured ? **Yes/No**
2. During the labour and delivery was your baby physically injured ? **Yes/No**
3. At any time during the labour and delivery did you think your life was in danger ? **Yes/No**
4. At any time during the labour and delivery did you think that your baby was in danger ? **Yes/No**
5. Did you feel helpless at any time during the labour and delivery ? **Yes/No**
6. Did you feel terrified at any time during the labour and delivery ? **Yes/No**

3.1 Below is a list of problems that people sometimes have after experiencing a stressful event. Read each one carefully and circle the number (0 – 3) that best describes how often that problem has bothered you IN THE PAST MONTH. Rate each problem with respect to your recent labour and delivery.

0 = Not at all or only one time
1 = Once a week or less/ once in a while
2 = 2 to 4 times a week/half the time
3 = 5 or more times a week/almost always

	Not at all or only one time	**Once a week or less/once in a while**	**2-4 times a week/half the time**	**5 or more times a week/ almost always**
1. Having upsetting thoughts or images about the labour and delivery that came into your head when you didn't want them to.	0	1	2	3
2. Having bad dreams or nightmares about the labour and delivery	0	1	2	3
3. Reliving the labour and delivery, acting or feeling as if it was happening again	0	1	2	3
4. Feeling emotionally upset when you were reminded of the labour and delivery (for example, feeling scared, angry, sad, guilty etc)	0	1	2	3
5. Experiencing physical reactions when you were reminded of the labour and delivery (for example breaking out in a sweat, heart beating fast)	0	1	2	3
6. Trying not to think about, talk about, or have feelings about the labour and delivery	0	1	2	3
7. Trying to avoid activities, people, or places that remind you of the labour and delivery	0	1	2	3
8. Not being able to remember an important part of the labour and delivery	0	1	2	3
9. Having much less interest or participating much less often in important activities	0	1	2	3

please turn over

	Not at all or only one time	Once a week or less/once in a while	2-4 times a week/half the time	5 or more times a week/ almost always
10. Feeling distant or cut off from people around you	0	1	2	3
11. Feeling emotionally numb (for example being unable to cry or unable to have loving feelings)	0	1	2	3
12. Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life)	0	1	2	3
13. Having trouble falling or staying asleep (other than waking for the baby)	0	1	2	3
14. Feeling irritable or having fits of anger	0	1	2	3
15. Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read)	0	1	2	3
16. Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc.)	0	1	2	3
17.Being jumpy or easily startled (for example when someone walks up behind you)	0	1	2	3

3.2 Indicate below if the problems you rated above in section 4.2 have interfered with any of the following areas of your life DURING THE PAST MONTH. Circle Y for Yes or N for No.

1.	Y	N	Household chores and duties
2.	Y	N	Relationships with friends
3.	Y	N	Fun and leisure activities
4.	Y	N	Relationships with your family
5.	Y	N	Sex life
6.	Y	N	General satisfaction with life
7.	Y	N	Overall level of functioning in all areas of your life

THANK YOU FOR COMPLETING ALL THE QUESTIONNAIRES. COULD YOU PLEASE CHECK THAT YOU HAVE ANSWERED ALL OF THE QUESTIONS. I WOULD BE GRATEFUL IF YOU COULD RETURN YOUR COMPLETED QUESTIONNAIRE TO ME IN THE ENCLOSED S.A.E.

I WILL ALSO CONTACT YOU BY PHONE WITHIN THE NEXT TWO WEEKS (UNLESS YOU INDICATED OTHERWISE IN YOUR LAST QUESTIONNAIRE) TO SEE HOW THINGS ARE GOING. IF YOU WISH YOU CAN GIVE ME YOUR ANSWERS TO THE QUESTIONS OVER THE PHONE.

SOME OF THE WOMEN I HAVE SPOKEN TO HAVE ASKED IF THEY COULD HAVE A BRIEF SUMMARY OF THE FINDINGS FROM THE STUDY AT THE END, THIS WOULD BE JUNE OR JULY 2001 WHEN THE STUDY FINISHES. IF YOU WOULD LIKE A SUMMARY SENT TO YOU AT THAT TIME PLEASE INDICATE BELOW:

YES/NO

IF YOU HAVE ANY FURTHER COMMENTS OR FEEDBACK ABOUT THE QUESTIONNAIRE PLEASE FEEL FREE TO USE THE SPACE ON THE PAGE OVERLEAF. I WILL CONTACT YOU AGAIN IN APPROXIMATELY 4 TO 6 WEEKS WITH THE LAST PACK OF QUESTIONNAIRES.

KIND REGARDS

Dawn Bailham-Cozens
Psychologist in clinical training

COMMENTS/FEEDBACK .....

.....

.....

.....

.....

.....

.....

.....

THANK YOU AGAIN

Appendix 11

THANK YOU AGAIN FOR AGREEING TO TAKE PART IN THE STUDY. THIS IS THE THIRD AND LAST PACK OF QUESTIONNAIRES – FIRSTLY COULD YOU PLEASE COMPLETE THE FOLLOWING SECTION:

PERSONAL DETAILS

Name .....Address.....

.....

Day contact phone no ..... Today's date .....

Your age ? ..... How old is your baby ? .....

What date was your baby born ? ..... At which hospital?.....

Was your partner present at the birth ? Y / N (please circle)

If you answered no to the last question did you have a friend or parent present with you at the birth, please indicate

who was present at the birth.....

Who is your health visitor ? .....

Have you attended any postnatal support groups since the birth of your baby
Y / N (please circle)

If you answered yes how long have you been attending .....

Do you find the group supportive Y / N (please circle)

Have you had any other form of postnatal support/advice/counselling following the birth of your baby e.g. birth

trauma advice service Y / N (please circle)

If yes please state .....

THE FIRST QUESTIONNAIRE OVERLEAF WILL ASK ABOUT HOW YOU HAVE BEEN FEELING IN THE PAST WEEK

1. How are you feeling ?

As you have recently had a baby, we would like to know how you are feeling now. Please underline the answer which comes closest to how you felt in the past 7 days, not just how you feel today.

Here is an example, already completed:

I have felt happy:
Yes, most of the time
Yes, some of the time
No, not very often
No, not at all

This would mean: ' I have felt happy some of the time' during the past week.
Please complete the other questions in the same way.

IN THE PAST SEVEN DAYS

1. I have been able to laugh and see the funny side of things:

As much as I always could
Not quite so much now
Definitely not so much now
Not at all

2. I have looked forward with enjoyment to things:

As much as I ever did
Rather less than I used to
Definitely less that I used to
Hardly at all

3. I have blamed myself unnecessarily when things went wrong:

Yes, most of the time
Yes, some of the time
Not very often
No, never

4. I have felt worried and anxious for no very good reason:

No, not at all
Hardly ever
Yes, sometimes
Yes, very often

5. I have felt scared or panicky for no very good reason:

Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

Pleas turn over

6. Things have been getting on top of me:

Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

Yes, most of the time
Yes, sometimes
Not very often
No, not at all

8. I have felt sad or miserable:

Yes, most of the time
Yes, quite often
Not very often
No, not at all

9. I have been so unhappy that I have been crying:

Yes, most of the time
Yes, quite often
Only occasionally
No, never

10. The thought of harming myself has occurred to me:

Yes, quite often
Sometimes
Hardly ever
Never

Thank you for completing this questionnaire. Please turn over the page, the next questionnaire will ask about how you are coping at present with aspects of your recent labour and delivery that may have been upsetting.

2. The next two questionnaires ask about how you are coping with aspects of your recent labour and delivery that may have upset you i.e. avoiding thinking about it, discussing with others, having recurrent thoughts about things that happened, or disturbing dreams. Please fill in the questionnaire even if this does not apply to you.

Instructions: Below is a list of comments made by people after stressful life events. Please check each item, indicating how frequently these comments were true for you during the **PAST SEVEN DAYS.** If they did not occur during that time, please mark the 'not at all' column.

	Not At all	**Rarely**	**Sometimes**	**Often**
1. I thought about it when I didn't mean to.	**0**	**1**	**2**	**3**
2. I avoided letting myself get upset when I thought about it or was reminded of it.	**0**	**1**	**2**	**3**
3. I tried to remove it from my memory.	**0**	**1**	**2**	**3**
4. I had trouble falling asleep, or staying asleep because of pictures or thoughts about it that came into my mind.	**0**	**1**	**2**	**3**
5. I had waves of strong feelings about it.	**0**	**1**	**2**	**3**
6. I had dreams about it.	**0**	**1**	**2**	**3**
7. I stayed away from reminders of it.	**0**	**1**	**2**	**3**
8. I felt as if it hadn't happened or it wasn't real.	**0**	**1**	**2**	**3**
9. I tried not to talk about it.	**0**	**1**	**2**	**3**
10. Pictures about it popped into my mind.	**0**	**1**	**2**	**3**
11. Others things kept making me think about it.	**0**	**1**	**2**	**3**
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	**0**	**1**	**2**	**3**
13. I tried not to think about it.	**0**	**1**	**2**	**3**
14. Any reminder brought back feelings about it.	**0**	**1**	**2**	**3**
15. My feelings about it were kind of numb.	**0**	**1**	**2**	**3**

Please turn over the page

3.1 The following questions relate to your recent experience of childbirth. Please answer the following questions by circling yes or no

1. During the labour and delivery were you physically injured ? **Yes/No**
2. During the labour and delivery was your baby physically injured ? **Yes/No**
3. At any time during the labour and delivery did you think your life was in danger ? **Yes/No**
4. At any time during the labour and delivery did you think that your baby was in danger ? **Yes/No**
5. Did you feel helpless at any time during the labour and delivery ? **Yes/No**
6. Did you feel terrified at any time during the labour and delivery ? **Yes/No**

3.2 Below is a list of problems that people sometimes have after experiencing a stressful event. Read each one carefully and circle the number (0 – 3) that best describes how often that problem has bothered you IN THE PAST MONTH. Rate each problem with respect to your recent labour and delivery.

0 = Not at all or only one time
1 = Once a week or less/ once in a while
2 = 2 to 4 times a week/half the time
3 = 5 or more times a week/almost always

	Not at all or only one time	**Once a week or less/once in a while**	**2-4 times a week/half the time**	**5 or more times a week/ almost always**
1. Having upsetting thoughts or images about the labour and delivery that came into your head when you didn't want them to.	0	1	2	3
2. Having bad dreams or nightmares about the labour and delivery	0	1	2	3
3. Reliving the labour and delivery. acting or feeling as if it was happening again	0	1	2	3
4. Feeling emotionally upset when you were reminded of the labour and delivery (for example, feeling scared, angry. sad. guilty etc)	0	1	2	3
5. Experiencing physical reactions when you were reminded of the labour and delivery (for example breaking out in a sweat, heart beating fast)	0	1	2	3
6. Trying not to think about, talk about, or have feelings about the labour and delivery	0	1	2	3
7. Trying to avoid activities, people, or places that remind you of the labour and delivery	0	1	2	3
8. Not being able to remember an important part of the labour and delivery	0	1	2	3
9. Having much less interest or participating much less often in important activities	0	1	2	3

please turn over

	Not at all or only one time	Once a week or less/once in a while	2-4 times a week/half the time	5 or more times a week/ almost always
10. Feeling distant or cut off from people around you	0	1	2	3
11. Feeling emotionally numb (for example being unable to cry or unable to have loving feelings)	0	1	2	3
12. Feeling as if your future plans or hopes will not come true (for example, you will not have a career, marriage, children, or a long life)	0	1	2	3
13. Having trouble falling or staying asleep (other than waking for the baby)	0	1	2	3
14. Feeling irritable or having fits of anger	0	1	2	3
15. Having trouble concentrating (for example, drifting in and out of conversations, losing track of a story on television, forgetting what you read)	0	1	2	3
16. Being overly alert (for example, checking to see who is around you, being uncomfortable with your back to a door, etc.)	0	1	2	3
17.Being jumpy or easily startled (for example when someone walks up behind you)	0	1	2	3

3.3 Indicate below if the problems you rated above in section 4.2 have interfered with any of the following areas of your life DURING THE PAST MONTH. Circle Y for Yes or N for No.

1.	Y	N	Household chores and duties
2.	Y	N	Relationships with friends
3.	Y	N	Fun and leisure activities
4.	Y	N	Relationships with your family
5.	Y	N	Sex life
6.	Y	N	General satisfaction with life
7.	Y	N	Overall level of functioning in all areas of your life

Thank you for completing the above questionnaire. The questionnaire overleaf will ask about the amount of support you are receiving at present from the people closest to you.

4. We would like to ask you a few questions about your family and friends, the people you have turned to for help, advice, and support since the birth of your baby. Each question asks about the support you receive at the present time. Each question has seven answer choices ranging from 'Never' to 'Always'. As a guide think of these words as representing the numbers below.

Never	Very Seldom	Seldom	Sometimes	Often	Very Often	Always
1	**2**	**3**	**4**	**5**	**6**	**7**

Now, thinking about these people you have turned to for help, advice, and support.....

	Never					**Always**
1 Whenever you want to talk how often is there someone willing to listen ?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. Do you have personal contact with other women/mothers with a similar experience ?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. Are you able to talk about your thoughts and feelings ?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. Are people sympathetic and supportive ?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. Are people helpful in a practical sort of way ?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. Do people you expect to be supportive make you feel worse at any time ?	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Thank you for completing this questionnaire. Please turn over the page. The questionnaire overleaf will ask you about how you are feeling about motherhood and your feelings about your baby.

MAQ

Below is a series of statements about being a mother. In each case please circle the answer which most applies to you. This questionnaire is seeking your opinion – there are no right or wrong answers.

	Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*
1. I think my baby is very demanding.	1	2	3	4
2. I feel proud of being a mother.	1	2	3	4
3. I am disappointed by motherhood.	1	2	3	4
4. Having a baby has made me as happy as I expected.	1	2	3	4
5. I sometimes regret having my baby.	1	2	3	4
6. I am the only person who can look after my baby properly.	1	2	3	4
7. To be a good mother, I should be able to cope well all the time.	1	2	3	4
8. If my baby is unwell or unhappy it is not my fault.	1	2	3	4
9. I have resented not having enough time to myself since having my baby.	1	2	3	4
10. My daily life has been no more difficult since my baby was born.	1	2	3	4
11. If I find being a mother difficult, I feel a failure.	1	2	3	4
12. If I love my baby I should want to be with him/her all the time.	1	2	3	4
16. If other people help me look after my baby, I feel a failure	1	2	3	4
17. I resent the way my life has been restricted since having my baby.	1	2	3	4

Thank you the questionnaire please turn overleaf.

THANK YOU – THAT WAS THE LAST QUESTIONNAIRE ! I WILL BE COMPLETING THE RESEARCH IN MAY NEXT YEAR, SO I WILL INFORM YOU ABOUT THE OUTCOME OF THE PRIZE DRAW WHEN ALL THE DATA IS COLLECTED. THIS WILL BE BY THE END OF MAY OR EARLY JUNE 2001. I WILL ALSO SEND YOU A BRIEF SUMMARY OF THE OVERALL RESULTS BY JULY 2001.IF YOU HAVE ANY QUERIES BEFORE THEN PLEASE DO NOT HESITATE TO CONTACT ME AT COMBE HOUSE, GEORGE ELIOT HOSPITAL ON TEL NO: 024 76350111.

THANK YOU AGAIN FOR YOUR PARTICIPATION

Dawn Bailham- Cozens
Trainee Clinical Psychologist

Appendix 12

PSYCHOLOGICAL CHANGES FOLLOWING CHILDBIRTH

Pregnancy and childbirth can lead to major changes in a woman's life. For most women this adjustment is stressful but positive as the woman adjusts to the demands of her new baby. However, for a few women the transition to motherhood is not as smooth, and some women may experience psychological problems following the birth of their babies.

The aim of this research study is to see if difficult life events before the birth of a baby make some women prone to develop psychological problems after childbirth. These life events could include situations from childhood or adulthood where a woman has felt very afraid and out of control, including events such as road traffic accident, medical procedures, operations, assault, previous miscarriage, stillbirth e.t.c. In addition recent stressful events during pregnancy could make some women more at risk of developing psychological problems after childbirth including unemployment, relationship difficulties, financial problems, bereavement etc.

A small number of women may experience psychological problems following childbirth including depression, anxiety, frequently thinking about the labour, nightmares, and difficulty accepting the new baby. It is of course uncommon for women to have these problems following the birth of a baby, but if they do occur and are detected shortly after birth a woman can be given extra support. One of the aims of the research study is to try and understand what puts women at risk from developing problems like these so they can receive the support they need. In addition it is hoped that this study will increase awareness that some women can have these problems after the birth of a baby.

- If you decide to take part in this study any information obtained from questionnaires will remain confidential i.e. you will not be identifiable from

the information you have given, and only the research team will have access to the information used in the study.

- The findings from the research will be published in academic journals, but it will not be possible to identify anyone who has taken part in the study within the publication.

- If you initially decide that you want to take part in the study, but after you baby is born decide that you wish to withdraw, that is okay your wishes will be respected.

- In addition, if you feel that you need further information and support during before or during the course of the study you can contact the researcher Dawn Bailham-Cozens at the Department of Clinical Psychology, George Eliot Hospital on telephone number 024 76350111.

What will I have to do ?

If you decide that you would like to take part in this study you will be asked to complete a set of questionnaires at three time intervals; in the later stages of your pregnancy at approximately 4 - 6 weeks before your baby is due to be born, and between 4 and 12 weeks after the birth of your baby. The initial questionnaires will take no longer than 30 minutes to complete, and subsequent questionnaires after the birth will also take no longer than 30 -40 minutes to fill in. I will also be asking additional information from you about past medical history, pregnancies, age, occupation etc. It will also be necessary for me to ask your midwife details about the type of labour that you had i.e. normal delivery or caesarian section.

When I contact you following the birth of your baby at about 4 weeks I will send two questionnaires to you to read and complete. I will then contact you by telephone and ask you to give me your answers to the questionnaires over the phone, or you can send them back to me by post. If at this stage you feel that you would also like to meet with me this can be arranged. Then at about 8 -12 weeks following the birth of your baby I will send a further two questionnaires for you to complete, I will again contact you by phone.

All mothers that take part in the study completing all questionnaires will be entered into a prize draw to win Mothercare gift vouchers – Please see overleaf for details

First prize - ***£30.00 Mothercare gift voucher***

Second prize - ***£20.00 Mothercare gift voucher***

Third prize - ***£10.00 Mothercare gift voucher***

THANK YOU FOR YOUR ASSISTANCE

Dawn Bailham-Cozens

Psychologist in clinical training

Appendix 13

CONSENT FORM

I am willing to take part in the research study, and I have read the enclosed information sheet. I understand that all questionnaire and interview data will remain confidential and anonymous and will only be used for the purpose of this study.

I realise that the researcher will ask me to complete questionnaires at three time intervals; 4-6 weeks before my baby is born, and at 6 and 12 weeks after the birth of my baby.

I am aware that although I have given my consent to participate in the study I will be able at any stage of the study to withdraw my participation, and if I so request have any questionnaire or interview data also withdrawn from the study.

I appreciate that the findings from this study will be published in research journals but any data that I have supplied in the course of the study will remain confidential and anonymous.

Name .....

Address .....

.....

Hospital .....

Contact phone number .....

Expected date of delivery..... Midwife .....

Signed ..... Date .....

Programme Director
Doctorate Course in Clinical Psychology
Dr Delia Cushway
BA (Hons) MSc PhD AFBPS CPsychol

School of Health and Social Sciences
Coventry University
Priory Street Coventry CV1 5FB
Telephone 01203 838328
Fax 01203 838784

THE UNIVERSITY OF WARWICK

COVENTRY UNIVERSITY

Our ref

Your ref

Date

To: All Expectant Mothers

I am a trainee clinical psychologist on the Coventry and Warwick course, and I am conducting my doctoral research thesis on how women cope psychologically following childbirth. I would be very grateful if you would agree to take part in the study before and after the birth of your baby, so I have enclosed an information sheet with this letter for you.

If you feel that you would like to take part please complete the enclosed consent form and return it to your community midwife in the enclosed envelope. The aim of the study is to identify women that need extra support before and after the birth of their babies, so by taking part in this study you will be helping to increase awareness of the difficulties some women experience.

If you decide that you would like to take part in this study and you are willing to complete all of the questionnaires your name will be entered into a prize draw for Mothercare gift vouchers (please see information sheet for details)

The research study has been approved by the Warwickshire Local Research Ethics Committee and will be conducted at two sites, The George Eliot Hospital, Nuneaton and Warwick Hospital. I look forward to hearing from you in due course if you decide you would like to take part in the research study.

Thank you

Dawn Bailham-Cozens
Trainee clinical psychologist

Appendix 15 - Stepwise Regression Analysis time 2 (IES)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	STAFF4		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	EPDSTOT2		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	ATTEETOT		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: IESTOT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.453[a]	.205	.196	9.3256
2	.565[b]	.319	.305	8.6738
3	.592[c]	.351	.330	8.5168

a. Predictors: (Constant), STAFF4

b. Predictors: (Constant), STAFF4, EPDSTOT2

c. Predictors: (Constant), STAFF4, EPDSTOT2, ATTEETOT

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2083.060	1	2083.060	23.953	.000[a]
	Residual	8087.846	93	86.966		
	Total	10170.905	94			
2	Regression	3249.355	2	1624.678	21.595	.000[b]
	Residual	6921.550	92	75.234		
	Total	10170.905	94			
3	Regression	3570.201	3	1190.067	16.407	.000[c]
	Residual	6600.705	91	72.535		
	Total	10170.905	94			

a. Predictors: (Constant), STAFF4

b. Predictors: (Constant), STAFF4, EPDSTOT2

c. Predictors: (Constant), STAFF4, EPDSTOT2, ATTEETOT

d. Dependent Variable: IESTOT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.648	5.173		6.118	.000
	STAFF4	-.455	.093	-.453	-4.894	.000
2	(Constant)	21.517	5.456		3.944	.000
	STAFF4	-.367	.089	-.365	-4.115	.000
	EPDSTOT2	.770	.196	.350	3.937	.000
3	(Constant)	13.857	6.478		2.139	.035
	STAFF4	-.325	.090	-.324	-3.623	.000
	EPDSTOT2	.651	.200	.296	3.253	.002
	ATTEETOT	.664	.316	.193	2.103	.038

a. Dependent Variable: IESTOT

Excluded Variables[c]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	EPDSTOT2	.350[a]	3.937	.000	.380	.938
	ATTEETOT	.277[a]	2.997	.004	.298	.919
2	ATTEETOT	.193[b]	2.103	.038	.215	.846

a. Predictors in the Model: (Constant), STAFF4

b. Predictors in the Model: (Constant), STAFF4, EPDSTOT2

c. Dependent Variable: IESTOT

Appendix 16 - Stepwise Regression Analysis time 2 (PTDS)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	EPDSTOT2	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	STAFF4	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	EETOT	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: PSDSTOT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489[a]	.239	.231	3.2295
2	.559[b]	.312	.297	3.0875
3	.591[c]	.350	.328	3.0185

a. Predictors: (Constant), EPDSTOT2

b. Predictors: (Constant), EPDSTOT2, STAFF4

c. Predictors: (Constant), EPDSTOT2, STAFF4, EETOT

ANOVA[d]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	298.139	1	298.139	28.585	.000[a]
	Residual	949.108	91	10.430		
	Total	1247.247	92			
2	Regression	389.287	2	194.644	20.418	.000[b]
	Residual	857.960	90	9.533		
	Total	1247.247	92			
3	Regression	436.325	3	145.442	15.962	.000[c]
	Residual	810.922	89	9.111		
	Total	1247.247	92			

a. Predictors: (Constant), EPDSTOT2

b. Predictors: (Constant), EPDSTOT2, STAFF4

c. Predictors: (Constant), EPDSTOT2, STAFF4, EETOT

d. Dependent Variable: PSDSTOT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.459	.608		.754	.453
	EPDSTOT2	.381	.071	.489	5.347	.000
2	(Constant)	6.209	1.948		3.187	.002
	EPDSTOT2	.331	.070	.424	4.723	.000
	STAFF4	-9.902E-02	.032	-.278	-3.092	.003
3	(Constant)	9.562	2.410		3.968	.000
	EPDSTOT2	.296	.070	.380	4.218	.000
	STAFF4	-8.990E-02	.032	-.252	-2.848	.005
	EETOT	-5.330E-02	.023	-.202	-2.272	.025

a. Dependent Variable: PSDSTOT

Excluded Variables[d]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Number of stressful events	.137[a]	1.386	.169	.145	.852
	STAFF4	-.278[a]	-3.092	.003	-.310	.946
	EETOT	-.234[a]	-2.556	.012	-.260	.937
	ATTEETOT	.154[a]	1.582	.117	.164	.873
2	Number of stressful events	.083[b]	.854	.396	.090	.819
	EETOT	-.202[b]	-2.272	.025	-.234	.922
	ATTEETOT	.091[b]	.942	.349	.099	.825
3	Number of stressful events	.077[c]	.809	.421	.086	.818
	ATTEETOT	-.018[c]	-.167	.868	-.018	.628

a. Predictors in the Model: (Constant), EPDSTOT2

b. Predictors in the Model: (Constant), EPDSTOT2, STAFF4

c. Predictors in the Model: (Constant), EPDSTOT2, STAFF4, EETOT

d. Dependent Variable: PSDSTOT

Appendix 17 - Stepwise Regression Analysis time 3 (PTDS)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	EPDSTOT3		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Number of stressful events		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: PSDSTO2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472[a]	.222	.211	2.8460
2	.522[b]	.272	.251	2.7731

a. Predictors: (Constant), EPDSTOT3

b. Predictors: (Constant), EPDSTOT3, Number of stressful events

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	159.924	1	159.924	19.745	.000[a]
	Residual	558.865	69	8.099		
	Total	718.789	70			
2	Regression	195.852	2	97.926	12.734	.000[b]
	Residual	522.937	68	7.690		
	Total	718.789	70			

a. Predictors: (Constant), EPDSTOT3

b. Predictors: (Constant), EPDSTOT3, Number of stressful events

c. Dependent Variable: PSDSTO2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.680	.567		1.199	.235
	EPDSTOT3	.370	.083	.472	4.444	.000
2	(Constant)	.246	.588		.419	.676
	EPDSTOT3	.324	.084	.413	3.863	.000
	Number of stressful events	.657	.304	.231	2.161	.034

a. Dependent Variable: PSDSTO2

Excluded Variables[b]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Number of stressful events	.231[a]	2.161	.034	.254	.936

a. Predictors in the Model: (Constant), EPDSTOT3

b. Dependent Variable: PSDSTO2

Appendix 18 - Correlations Matrix (avoidance)

Correlations

		STAFF4	PAIN4	FEAR4	ATTEETOT
STAFF4	Pearson Correlation	1.000	-.253**	-.377**	-.294**
	Sig. (2-tailed)	.	.010	.000	.003
	N	103	103	103	98
PAIN4	Pearson Correlation	-.253**	1.000	.046	-.058
	Sig. (2-tailed)	.010	.	.637	.563
	N	103	107	107	102
FEAR4	Pearson Correlation	-.377**	.046	1.000	.277**
	Sig. (2-tailed)	.000	.637	.	.005
	N	103	107	108	103
ATTEETOT	Pearson Correlation	-.294**	-.058	.277**	1.000
	Sig. (2-tailed)	.003	.563	.005	.
	N	98	102	103	105
EETOT	Pearson Correlation	.262**	-.104	-.226*	-.554**
	Sig. (2-tailed)	.008	.291	.020	.000
	N	101	105	106	103
IESAVO	Pearson Correlation	-.367**	.182	.336**	.282**
	Sig. (2-tailed)	.000	.063	.000	.004
	N	101	105	106	103

Correlations

		EETOT	IESAVO
STAFF4	Pearson Correlation	.262**	-.367**
	Sig. (2-tailed)	.008	.000
	N	101	101
PAIN4	Pearson Correlation	-.104	.182
	Sig. (2-tailed)	.291	.063
	N	105	105
FEAR4	Pearson Correlation	-.226*	.336**
	Sig. (2-tailed)	.020	.000
	N	106	106
ATTEETOT	Pearson Correlation	-.554**	.282**
	Sig. (2-tailed)	.000	.004
	N	103	103
EETOT	Pearson Correlation	1.000	-.242*
	Sig. (2-tailed)	.	.012
	N	109	107
IESAVO	Pearson Correlation	-.242*	1.000
	Sig. (2-tailed)	.012	.
	N	107	109

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 19 - Stepwise Regression Analysis (avoidance IES)

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	STAFF4		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	ATTEETOT		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: IESAVO

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.393[a]	.154	.145	5.8380
2	.440[b]	.193	.176	5.7316

a. Predictors: (Constant), STAFF4

b. Predictors: (Constant), STAFF4, ATTEETOT

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	583.974	1	583.974	17.134	.000[a]
	Residual	3203.766	94	34.083		
	Total	3787.740	95			
2	Regression	732.538	2	366.269	11.149	.000[b]
	Residual	3055.201	93	32.852		
	Total	3787.740	95			

a. Predictors: (Constant), STAFF4

b. Predictors: (Constant), STAFF4, ATTEETOT

c. Dependent Variable: IESAVO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.725	3.262		5.127	.000
	STAFF4	-.242	.058	-.393	-4.139	.000
2	(Constant)	10.735	4.265		2.517	.014
	STAFF4	-.205	.060	-.333	-3.419	.001
	ATTEETOT	.426	.201	.207	2.127	.036

a. Dependent Variable: IESAVO

Excluded Variables[c]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	FEAR4	.190[a]	1.829	.071	.186	.816
	ATTEETOT	.207[a]	2.127	.036	.215	.916
2	FEAR4	.153[b]	1.465	.146	.151	.786

a. Predictors in the Model: (Constant), STAFF4

b. Predictors in the Model: (Constant), STAFF4, ATTEETOT

c. Dependent Variable: IESAVO

Appendix 20 T-Test and Mann-Whitney (avoidance)

Group Statistics

	level of distress on avoidance IES	N	Mean	Std. Deviation	Std. Error Mean
PSDSTO2	low distress	22	3.2273	3.3085	.7054
	medium to high distress	10	5.4000	3.3400	1.0562

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
PSDSTO2	Equal variances assumed	.225	.639
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means		
		Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper
PSDSTO2	Equal variances assumed	1.2654	-4.7571	.4116
	Equal variances not assumed	1.2701	-4.8484	.5029

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
PSDSTO2	Equal variances assumed	-1.717	30	.096	-2.1727
	Equal variances not assumed	-1.711	17.340	.105	-2.1727

NPar Tests

Mann-Whitney Test

Ranks

	level of distress on avoidance IES	N	Mean Rank	Sum of Ranks
PSDSTO2	low distress	22	14.41	317.00
	medium to high distress	10	21.10	211.00
	Total	32		

Test Statistics[b]

	PSDSTO2
Mann-Whitney U	64.000
Wilcoxon W	317.000
Z	-1.887
Asymp. Sig. (2-tailed)	.059
Exact Sig. [2*(1-tailed Sig.)]	.064[a]

a. Not corrected for ties.

b. Grouping Variable: level of distress on avoidance IES

(MAQ Appendix 21- Correlation Matrix)

Correlations

		Maternal attitudes total	EPDSTOT3	PTSD2INT	PTSD2AVO
Maternal attitudes total	Pearson Correlation	1.000	.235*	.180	.208
	Sig. (2-tailed)	.	.041	.119	.071
	N	76	76	76	76
EPDSTOT3	Pearson Correlation	.235*	1.000	.087	.461**
	Sig. (2-tailed)	.041	.	.456	.000
	N	76	76	76	76
PTSD2INT	Pearson Correlation	.180	.087	1.000	.363**
	Sig. (2-tailed)	.119	.456	.	.001
	N	76	76	76	76
PTSD2AVO	Pearson Correlation	.208	.461**	.363**	1.000
	Sig. (2-tailed)	.071	.000	.001	.
	N	76	76	76	76
PTSD2HYP	Pearson Correlation	.229*	.404**	.302**	.346**
	Sig. (2-tailed)	.048	.000	.008	.002
	N	75	75	75	75
PSDSTO2	Pearson Correlation	.267*	.474**	.643**	.779**
	Sig. (2-tailed)	.020	.000	.000	.000
	N	76	76	76	76

Correlations

		PTSD2HYP	PSDSTO2
Maternal attitudes total	Pearson Correlation	.229*	.267*
	Sig. (2-tailed)	.048	.020
	N	75	76
EPDSTOT3	Pearson Correlation	.404**	.474**
	Sig. (2-tailed)	.000	.000
	N	75	76
PTSD2INT	Pearson Correlation	.302**	.643**
	Sig. (2-tailed)	.008	.000
	N	75	76
PTSD2AVO	Pearson Correlation	.346**	.779**
	Sig. (2-tailed)	.002	.000
	N	75	76
PTSD2HYP	Pearson Correlation	1.000	.818**
	Sig. (2-tailed)	.	.000
	N	75	75
PSDSTO2	Pearson Correlation	.818**	1.000
	Sig. (2-tailed)	.000	.
	N	75	76

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 22

Warwickshire NHS
Health Authority

PAH

16th May 2000

Westgate House
Market Street
Warwick CV34 4DE

Tel: 01926 493491
Fax: 01926 495074

WARWICKSHIRE RESEARCH ETHICS COMMITTEE

The following LREC trial protocol has been examined from an ethical viewpoint and the decision of the Committee is as follows:

			Documentation Reviewed *as itemised in ICH guidelines*	
1.	*	Approved	Protocol	☑
			Patient Information Form/	☑
			Consent Form	☑
2		Approved subject to amendments listed below	Indemnity (signed)	☑
			CTX	☐
			Protocol Amendments	☐
3.		Rejected for reasons listed below		
4.		Approved by Chairman's Action		

Ethical Committee Minute Number 430/00 Dated 26.4.00

Protocol Title and Reference Number
RE 437 Post traumatic stress disorder following childbirth : a longtitudinal study to assess risk factors
(Dawn Bailham-Cozens)

Signed.....Committee Chairman

Dated 17\5\00

This approval is subject to the following standard conditions :

1. the study must begin within one year;
2. the researcher must seek the Committee's approval in advance of any proposed deviations from the original protocol;
3. any unusual or unexpected results which raise questions about the safety of the study must be reported to the Committee.
4. progress reports must be submitted to the Committee annually; and
5. a summary of the study's findings must be submitted to the Committee upon its completion.

BA (Hons) MSc PhD AFBPS CPsychol

School of Health and Social Sciences
Coventry University
Priory Street Coventry CV1 5FB
Telephone 01203 838328
Fax 01203 838784

THE UNIVERSITY OF WARWICK

COVENTRY UNIVERSITY

Appendix 23

Our ref

Your ref

Date

12 March 2001

Dear

Thank you for returning your questionnaire so promptly. I was sorry to hear that you have been feeling sad and low in mood since the birth of your baby, and that you have been experiencing upsetting memories about the labour.

I was writing to let you know that if you felt things were getting worse and that you could do with some support you could approach your G.P or Health Visitor and tell them how you are feeling. They will do their best to help you. Alternatively, if you feel you need more support, and with your permission only, I could ask a clinical psychology or counselling colleague to arrange to see you. The therapist would try and support you with these difficulties.

All the information that you provide for the research is strictly confidential, I will respect that confidentiality at all times. I would only approach a counsellor on your behalf if you asked me to do so. If things are beginning to improve and you are feeling better, or you just felt quite sad or worried on the day you completed your questionnaire please disregard this letter. I really just wanted to let you know that there is support available to you if you feel that you need it.

If things are better please disregard this letter but if you would like me to arrange for someone to see you, please write back to me or ring me at Psychological Services, George Eliot Hospital on 02476 – 350111. If I am not available please leave a message and I will return your call as soon as possible.

Kind Regards

Yours Sincerely

Dawn Bailham-Cozens
Trainee Clinical Psychologist

Dean of School of Health and Social Sciences Dr Donald Pennington BA PhD CPsychol AFBPS Coventry University Priory Street Coventry CV1 5FB Telepho
Chair of Department of Psychology Professor Gregory V Jones MA PhD Camb MA DPhil Oxf University of Warwick Westwood Coventry CV5 5FB Telephon