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# **Expectations of Motherhood: A qualitative investigation**

# & Clinical Research Portfolio

# PART ONE

(Part Two bound separately)

# **Claire Atkins**

Submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology (D. Clin. Psy)

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# **Chapter One**

Systematic Review

# Depression during the perinatal period – The role of social support -

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#### <u>Abstract</u>

**Background:** Research has suggested that social support impacts upon individual's experiences of depression. The perinatal period involves significant social and relational changes and transitions. As such, depression during this time period is likely to be influenced by social support.

**Objectives:** To explore the relationship between social support and perinatal depression, and, the specific aspects of social support that are associated with positive and negative outcomes in relation to depression. The review intends to identify and evaluate important methodological issues within the research.

**Method:** A systematic review was used to identify published articles that prospectively examined social support and perinatal depression. An electronic database search and hand searches of key journals, and of the reference sections of key papers, were undertaken.

**Results:** Sixteen eligible papers were identified. Eleven papers observed aspects of social support to be predictors of depression scores. Four papers found associations between social support and perinatal depression, and one did not find any associations. Specific aspects of social support that were emphasised in the research included: satisfaction with support, social conflict, type of support and source of support.

**Conclusions:** The review provides evidence that suggests aspects of social support predict antenatal and postnatal depression. The implications of the findings are discussed and areas for development within clinical practice are considered. Methodological limitations of the research, variations in assessment measures used and the specific aspects of social support investigated limit firm conclusions.

#### **Introduction**

The perinatal period represents a time of transition, which involves significant physical, emotional, relational and social changes (Westdahl, et al., 2007). Adjustment to such changes can be a difficult process for some women, which has been found to be associated with symptoms of depression (Campbell, Cohn, Flanagan, Popper & Meyers, 1992). Depression during the perinatal period has received increasing attention within the literature over the past two decades. Much of the research has focused on the investigation of factors associated with the onset of postnatal depression (PD), consequences of PD and the transition to motherhood. More recently, researchers have turned their attention to antenatal depression (AD), which has been found to be as prevalent, if not more so, as PD and depression rates in the general population (Dennis, Ross & Grigoriadis, 2007; Mian, 2005).

Associations between both PD and AD, and negative effects on maternal and infant well-being, have been demonstrated by researchers. For example, depression during the puerperium has been shown to have implications for maternal-fetal attachment (Condon & Corkindale, 1997), maternal role identity (Fowles, 1998), substance dependency in expectant mothers (Pajulo, Savonlahti, Sourander, Helenius & Piha, 2001) and low birth weight and medical complications in infants (Oberlander, Warburton, Misri, Aghajanian, & Hertzman, 2006). Langer et al., (1993) concluded that observational studies during the perinatal period have shown an association between stress, anxiety and lack of support during pregnancy and negative perinatal outcomes. As with all mental health problems, there are also wider societal consequences of PD and AD.

In an attempt to develop appropriate and timely interventions to address PD, and to a lesser extent AD, a number of studies have investigated risk factors for depression during these time periods, as well as factors that are associated with more positive outcomes. One such factor that has been frequently referred to in the literature is social support (SS). There is considerable variation and debate regarding the conceptualisation and measurement of SS, as well as its relationship with depressive symptomatology in the perinatal period (Collins, Dunkel-Schetter, Lobel & Scrimshaw, 1993). A small number of researchers have conducted reviews in this area, attempting to synthesise the literature. However, the majority of these reviews do not focus on SS; instead, they

include it as one of several factors under investigation. Also, all of these reviews are concerned with PD and, therefore, do not address AD.

Three reviews (a systematic review and two meta-analyses) have investigated risk factors for PD and have reported SS to be one of several risk factors. All of these reviews found SS to be a significant predictor of PD. O'Hara and Swain (1996) and Robertson, Grace, Wallington and Stewart (2004) found SS to be a strong to moderate predictor of depressive syptomatology. However, these reviews only included a small number of studies that focused on SS (five and six, respectively) and although these reviews required depression to be assessed using a validated measure, this requirement was not upheld for the measurement of SS. Beck (2001) reviewed a larger number of studies (n=27) that investigated SS and PD, and found SS to be a moderate predictor of depression. However, the quality of the SS studies included in Beck's (2001) review varied substantially. As SS is only investigated as one of several risk factors, these reviews do not provide detailed information on specific aspects of SS that may be pertinent to women's experiences of depression. Another review, conducted by Sheppard (1994), focused on SS, childcare and PD. AD was not addressed in Sheppard's (1994) review, and, although detailed findings regarding SS were outlined, the review was conducted fifteen years ago. As such, Sheppard's review does not reflect the current literature regarding SS and depression in the perinatal period. Despite their limitations, these reviews and further evidence from correlational and prospective research studies have consistently found a relationship between SS and depression in the puerperium.

Researchers have proposed that SS can help to promote psychological well-being and physical health even in the context of stressful experiences (Heh, 2003; Jacobsen, 1986). However, the idea that SS represents a protective factor or 'buffer' against psychological distress following stressful life events has been debated by numerous researchers (Baker, Taylor & The ALSPAC Survey Team, 1997; Cohen & Wills, 1985; Harley & Eskenazi, 2006; Rini, Dunkel-Schetter, Hobel, Glynn & Sandman, 2006). Several studies have demonstrated associations between the presence of SS and lower rates of depressive symtpomatology (Chung & Yue, 1999; Dalgard, Bjork & Tambs, 1995; Elsenbruch et al., 2007). However, it has been argued that it is specific aspects of SS that influence rates of depressive symtpomatology and that these associations are not

always indicative of SS as a protective factor against depression. As Sheppard outlined, " to conceive social support as a single commodity not only does violence to the range and complexity of factors subsumed within this concept, it does little to help us understand the in which way social support may contribute to good health" (Sheppard, 1194, p. 289). For example, perceptions of, and satisfaction with, support received (Rudnicki, Graham, Habboushe & Ross, 2001), types of support provided (Baker et al., 1997; Collins et al., 1993), and the experience of social conflict (Telleen, Herzog & Kilbane, 1989) have all been shown to impact upon levels of depression.

The variability of findings regarding associations between SS and depression in the perinatal period, and the importance of salient aspects of SS (such as conflictual relationships), which might place individuals at risk of experiencing depressive symptoms, are essential to consider when evaluating the research in this area. Evidently, it is not possible to reduce the associations between SS and perinatal depression to a simple equation wherein the presence of SS negates the experience of depressive symptoms. Despite difficulties with some of the research on SS, which has failed to acknowledge the complexity and multi-dimensional nature of SS, the consistency with which SS is linked to beneficial effects regarding depression outcomes suggests that there is value in investigating what these are.

As outlined above, a number of studies have examined the impact of psychosocial factors on depression during the perinatal period, most of these focusing on risk factors for PD. Fewer studies have specifically addressed the impact of SS on women's experiences of depression during the perinatal period (particularly AD), or the importance of specific aspects of SS with regard to depression. Therefore, the present review aims to summarise the research evidence on SS and experiences of depression in the perinatal period in a systematic way, conducting a methodological critique of the literature. It is hoped that this review will provide an up-to-date critical evaluation of the impact of SS, and specific aspects of SS, with regard to depression in the perinatal period.

## **Objectives**

- To investigate the quality of published research on the relationship between SS and depression during the perinatal period.
- 2. To investigate the relationship between SS and depression during the perinatal period
- 3. To establish what specific aspects of SS are positively and negatively associated with women's experiences of PD and AD.

### **Method**

#### Search strategy

The following electronic databases were searched for relevant studies investigating the relationship between SS and depression during the perinatal period: PsychINFO, CINAHL, EMBASE, Medline, Cochrane Database of Systematic Reviews and British Nursing Index. The 'Web of Science' citation database was also searched. Limits were set to papers published between January 1990 and March 2009. Key journals were also hand searched, including "Archives of Women's Mental Health" and "Journal of Reproductive and Infant Psychology".

The following key words were used for the electronic search:

[SOCIAL SUPPORT] or [MARITAL] or [PEER RELATIONS] or [EXPRESSED EMOTION] combined with [ANTENATAL DEPRESSION] OR [ANTEPARTUM DEPRESSION] or [POSTNATAL DEPRESSION] or [POSTPARTUM DEPRESSION] or [PREGNANCY] or [PERINATAL].

## Inclusion and exclusion of studies

For the purposes of this review, studies were included if they were prospective studies relating to SS and depression in women during the perinatal period. Studies were included if they met the following criteria:

- Study design was prospective.
- Only standardised measures were used to assess depression and SS (or adequate psychometric properties were reported for the measures used).
- Levels of depression were assessed on more than one occasion.
- The articles were published in peer-reviewed journals and reported in English.

Studies were excluded if they were randomised controlled trials, cross sectional studies, qualitative studies, reviews, conference abstracts, written book chapters, dissertations, unpublished articles or used unpublished measures (and did not provide information on the psychometric properties).

In order to check the sensitivity of the search strategy, the reference sections of papers identified by the electronic database search were then hand searched to identify any further relevant articles. These articles were then systematically excluded, where appropriate, on the basis of title, abstract or full publication.

A checklist was developed in order to rate the studies (see Appendix 2.1). This checklist was influenced by the Scottish Intercollegiate Guidelines Network (SIGN, 2004) guidelines for assessing the quality of cohort studies and the Clinical Trial Assessment Measure (CTAM; Tarrier & Wykes, 2004). Specific items relevant to the present systematic review were also included. The checklist consisted of 6 sections:

- 1. Objectives.
- 2. Sampling procedures.
- 3. Design.
- 4. Assessment.
- 5. Analysis and results.
- 6. Discussion.

Overall, 24 items were included, producing a score of 48 when the sub scores were totalled. This score was then used to rank studies according to their methodological quality. An independent rater graded the quality of papers, leading to a 95% agreement rate with the author. Disagreements were resolved through discussion.

#### <u>Results</u>

The process of identifying studies for the review is summarised in Figure 1 below. The initial electronic search produced a total of 1,866 studies. Of these studies, 480 were found to be relevant to the subject topic on the basis of the study title. Of the 480 studies' abstracts, 61 studies were read in order to establish whether or not the studies met inclusion criteria. Eleven studies met the inclusion criteria for the review. Two articles were identified from the hand search of reference sections of papers that also met the inclusion criteria. A further 3 articles were identified from a hand search of the reference section of two previous review articles (Beck, 2001: Robertson et al., 2004).

Insert Figure 1

The results will briefly summarise salient characteristics of the studies, following which methodological issues will be considered (see Table 1). The main findings of the review, with regard to SS, will be discussed in detail.

Insert Table 1

#### **Characteristics of the studies**

All studies were prospective. Therefore, each study conducted assessments at least twice during the course of the research, with some studies including additional assessment points. The majority of studies conducted assessments during both antenatal and postnatal phases. Two studies (Campbell et al., 1992; Lee, Yip, Leung & Chung, 2000) did not include antenatal assessments. One study (Paarlberg et al., 1996) did not include a postnatal assessment as its focus was on the influence of psychosocial factors on maternal well-being throughout pregnancy. Time between assessments varied, with the earliest assessment being conducted as soon as medical confirmation of pregnancy was established and the latest assessment was at 2 years postpartum. The timing of assessments is important to consider in relation to specific aspects of childbirth. Kearns, Neuwelt, Hitchman & Lennan (1997) highlighted that research has shown that women who have suffered from depressive symptoms in the antenatal and postnatal phases

often report emotional well-being and feelings of joy immediately after delivery, which has been referred to as the 'postpartum pinks' (Saks et al., 1985). It is also common for women in the latter stages of pregnancy to report increased levels of psychological distress related to the impending birth.

Most studies investigated psychosocial predictors of depressive symptoms in the postnatal period. Several studies (Barnet, Joffe, Duggan, Wilson & Repke, 1996; Turner, Grindstaff & Phillips, 1990; Westdahl et al., 2007) examined these issues among adolescent or young pregnant women. These studies highlighted the additional adversities that may be experienced by young women during the transition to motherhood, such as socio-economic problems and pregnancy or birth complications. Two studies (Lee et al., 2000; Martinez-Schallmoser, Telleen & MacMullen, 2003) investigated the effects of acculturation or cultural differences with regard to psychosocial variables and depressive symptomatology in the perinatal period. Three studies addressed predictors of AD (Kearns et al., 1997; Paarlberg et al., 1996; Westdahl et al., 2007). Social conflict, satisfaction with support, parity and education were highlighted as predictors of AD in these studies.

#### Methodological issues

#### Sample Characteristics

Brugha et al., (1998) employed a geographic cohort design. The remainder of studies used convenience sampling, where participants were recruited through hospital clinics and clinician referrals. Two studies (Bernazzani, Saucier, David & Borgeat, 1997; Turner et al., 1990) also recruited participants via advertisements in local media. It is important to acknowledge the sampling procedures used by studies when considering their methodological strengths and limitations. Selection or sampling bias may be introduced when using convenience samples, which impacts upon the external validity of the study's findings.

Of the studies included in the review, 5 did not provide information on inclusion or exclusion criteria for their sample groups (Gotlib, Whiffen, Wallace & Mount, 1991; Kearns et al., 1997; Lee et al., 2000; O'Hara, Schlechte, Lewis & Varner, 1991; Turner et al., 1990). The remainder of the studies outlined either the inclusion, or inclusion and exclusion, criteria used when recruiting sample groups. Reporting such information

allows for appropriate comparisons between studies, highlights the potential groups that findings can be generalised to, and allows for replication of studies.

The majority of studies reported attrition rates and described the flow of participants through each stage of the study. Two studies (Bernazzani et al., 1997; Turner et al., 1990) reported a limited amount of information regarding the number of participants who dropped out of the study prior to completion. A further two studies (Martinez-Schallmoser et al., 2003; Westdahl et al., 2007) did not report any information regarding attrition rates. Of the studies that reported attrition rates, only half (Brugha et al., 1998; Campbell et al., 1992; Gotlib et al., 1991; Richman, Raskin & Gaines, 1991; Seguin, Ptvin, St-Denis & Loiselle, 1999; Turner et al., 1990) recognised the impact of attrition rates within their analyses, conducting comparisons between participants who completed the study and those who refused to participate or were lost to follow-up. The remaining studies did not address the issue of missing data.

#### Covariate Assessment

Parity is an important issue to consider within this area of research as it may influence mothers', or expectant mothers', perceptions of SS. As outlined by Logsdon, McBride & Birkimer (1994), multiparous women face additional difficulties related to dividing their time between an infant and their other children, whereas primiparous or nulliparous women have been found to experience different concerns regarding housework, family routines and the unknown aspects of motherhood. Eight studies used samples of primiparous or nulliparous women (Barnet et al., 1996; Brugha et al., 1998; Campbell et al., 1992; Castle, Slade, Barranco-Wadlow & Rogers, 2008; Logsdon et al., 1994; Paarlberg et al., 1996; Richman et al., 1991; Seguin et al., 1999). These studies use the terms nulliparous and primiparous interchangeably. However, the definition of these terms varies in that nulliparous refers to a woman who has never borne a child, whereas primiparous describes a woman who is pregnant for the first time or has given birth to one child. The studies included in the review use these terms to represent women who do not have any other children than the pregnancy or birth that has been investigated during the course of the study. Six studies used a mix of multiparous and primiparous women (Bernazzani et al., 1997; Gotlib et al., 1991; Kearns et al., 1997; Lee et al., 2000; O'Hara et al., 1991; Westdahl et al., 2007). Only one study (Martinez-Schallmoser et al., 2003) focused solely on multiparous women, with the remaining

study (Turner et al., 1990) not specifying whether their sample group was primiparous or multiparous.

Relationship status also represents a factor that could impact upon women's experiences of SS and depressive symptomatology. Of the 14 studies that specify the relationship status of participants, the majority of participants were in a relationship, co-habiting or married. Where participants who were not in a relationship were included (Barnet et al., 1996; Brugha et al., 1998; Gotlib et al., 1991; Martinez- Schallmoser et al., 2003; O'Hara et al., 1991; Seguin et al., 1999; Westdahl et al., 2007), they represented a relatively small proportion of the overall sample groups, ranging from 2% to 30% with the median figure at 15%.

Kearns et al. (1997) suggested that individual characteristics are likely be involved in predisposition towards psychological distress. They proposed that increased life experience and education might better prepare a woman for the life-changing events associated with pregnancy and childbirth. The authors also suggested that higher socioeconomic status (SES) would facilitate accessing resources and formal support which may alleviate distress. A number of studies reported the educational history and occupational status of participants. Almost all studies referred to the educational level attained by participants, with the exception of Castle et al. (2008) and Turner et al. (1990). Only 2 studies (Gotlib et al., 1991; Turner et al., 1990) did not report occupational status. Several studies measured SES (Barnet et al., 1996; Brugha et al., 1998; Kearns et al., 1997; Lee et al., 2000; O'Hara et al., 1991; Sequin et al., 1997; Westdahl et al., 2007). SES was conceptualised in various ways within these studies. For example, some studies (Kearns et al., 1997; Seguin et al., 1997; Westdahl et al., 2007) described SES in terms of household income or poverty level and education attainment, while others used established indexes of social class such as Hollingshead's (1975) factor index of social class (Barnet et al., 1996; O'Hara et al., 1991).

Participants' psychiatric history or number of previous episodes of depression was addressed in several studies (Bernazzani et al., 1997; Brugha et al., 1998; Campbell et al., 1992; Lee et al., 2000; O'Hara et al., 1991). Of note, Kearns et al. (1997) did not assess participants' psychiatric history, or obstetric complications, despite raising these issues as potential confounders. Three studies (Bernazzani et al., 1997; Campbell et al.,

1992; Paarlberg et al., 1996) examined the impact of obstetric complications and associations with psychological distress. Another pregnancy related factor outlined by Kearns et al. (1997) that could act as a confounder was whether or not the pregnancy was planned. Kearns et al. (1997) and only one other study (Brugha et al., 1998) investigated this potential confounder.

It can be difficult to account for all potential confounding variables in longitudinal research. However, the factors outlined above may have an impact on subsequent results found.

#### Measures

Only studies that used standardised measures, or measures that were at developmental phase but had demonstrated adequate psychometric properties, were included in the review. With regard to measures of depression, several studies (Barnet et al., 1996; Logsdon et al., 1994; Martinez-Schallmoser et al., 2003; Richman et al., 1991; Turner et al., 1990; Westdahl et al., 2007) used the Centre for Epidemiological Studies-Depression Scale (CES-D) (Radloff, 1977). Logsdon et al. (1994) discussed the utility of the CES-D as a measure of depression, particularly among samples of pregnant women. They outlined criticisms that have been made against the CES-D, suggesting that it may over-estimate rates of depressive disorders, particularly for samples of pregnant women who experience somatic symptoms which could be interpreted as related to pregnancy or depression (e.g. fatigue and difficulty sleeping). To address this problem, Westdahl et al. (2007) removed the five somatic items from the CES-D, and reported adequate levels of internal consistency and reliability for the shortened version of the CES-D.

Other measures of depression used in the remaining studies include the Beck Depression Inventory (BDI; Beck, Ward, Mendleson, Mock & Erbaugh, 1961), the General Health Questionnaire (GHQ; Goldberg, 1972), the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden & Sagovsky, 1987) and the Hopkins Symptom Checklist (HSCL; Luteijn, Hamel, Bouwman & Kok, 1984). Paarlberg et al. (1996) also referred to the difficulties assessing depression within the perinatal period. As such, they also eliminated items from the depression measure they used (HSCL) to avoid potential confounding with pregnancy-related symptoms. With the exception of

Bernazzani et al.'s (1997) study, the same measure of depression for each assessment point was used in all studies. Five studies used diagnostic criteria, such as the DSM-IV, Research Diagnostic Criteria (RDC; Spitzer, Endicott & Robins, 1978) and the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (DSM; 3<sup>rd</sup> revision) (SCID; Spitzer, Williams, Gibbon & First, 1992) to confirm depression diagnosis (Brugha et al., 1998; Campbell et al., 1992; Gotlib et al., 1991; Lee et al., 2000; O'Hara et al., 1991). Several studies acknowledged the omission of a diagnostic assessment to confirm depression diagnosis as a limitation (Barnet et al., 1996; Richman et al., 1991; Westdahl et al., 2007).

A wide range of SS measures were used reflecting the differing conceptualisations of SS within the literature and the various associated constructs, i.e. instrumental and emotional support, satisfaction with support and social conflict. Logsdon et al. (1994) stated that, traditionally, SS measures assessed either support network or perceived support. The authors reported that specific measures of SS, which are situation specific and assess particular aspects of SS, have been shown to be more predictive of outcomes than a global or general SS scale. Sheppard (1994) proposed that the ambiguity of global measures of SS regarding the type and source of support renders precise understanding of the mechanisms at play within SS unachievable. The Arizona Social Support Interview Schedule (ASSIS; Barrera, 1981) and the Dyadic Adjustment Scale (DAS; Spanier, 1976) were the only measures to be used by more than one study in the review.

#### Control Groups

The majority of studies did not use control groups; instead, they compared changes in dependent variables within one group over time. Barnet et al. (1996) acknowledged that the lack of a non-childbearing control group, to assess for differences in levels of SS and depression, was a limitation of their study. O'Hara et al. (1991) did include a non-childbearing control group to compare rates of depression between the two groups, and, to evaluate their vulnerability-stress model of postpartum depression in a group who were not undergoing a particular stressful life event. Campbell et al. (1992) also used a control group in their study. Their control group consisted of a matched sample of non-depressed postpartum women. Inclusion of a non-depressed control group allowed Campbell et al. (1992) to investigate factors that might be associated with increased risk

of experiencing postpartum depression. They found that the depressed group were more vulnerable due to a family and personal history of depression and associated difficulties adjusting to new roles and changes in relationships during the transition to motherhood. The importance of control groups was emphasised by Gotlib et al. (1991) who highlighted the fact that findings of their study are limited to depressed populations as they did not employ a non-depressed control group, and that further research is needed to elucidate factors underpinning the onset and etiology of depression. Given the nature of the groups employed in Campbell et al's. (1992) study and O'Hara et al.'s (1991) study, random allocation to groups was not appropriate.

#### Power

Most studies in the review did not report whether or not they had conducted a power calculation to consider whether statistical power was sufficient in their studies. Brugha et al. (1998) acknowledged that they did not carry out a formal power calculation. Instead, they based their sample size on a previous study of psychiatric disorder following childbirth and discussions relating to statistical power in relation to the measurement of SS. A number of studies (Kearns et al., 1997; Lee et al., 2000; Martinez-Schallmoser et al., 2003) highlighted small sample sizes as a limitation of their studies, suggesting that they may have been underpowered.

#### **Findings**

Although the present review focuses on the relationship between SS and depression in the perinatal period, findings regarding other variables highlighted within the studies as predictors of depression are also discussed. The potential impact of some of these variables, which were identified as possible confounders, necessitated their consideration in relation to SS and depression.

#### **Predictors of Depression**

#### Antenatal Depressive Symptomatology

The most common predictor of postpartum depression, cited by studies in the current review, was antenatal depressive symptomatology (Barnet et al., 1996; Bernazzani et al., 1997; Brugha et al., 1998; Castle et al., 2008; Gotlib et al., 1991; Kearns et al., 1997; Logsdon et al., 1994; Martinez-Schallmoser et al., 2003; O'Hara et al., 1991). This finding provides further evidence for the proposal that many postpartum depressions have their origins in the antenatal period (O'Hara et al., 1991). Martinez-Schallmoser et al. (2003) found that antenatal depressive symptoms were the strongest predictors of postpartum depression, which they proposed is similar to findings of previous research (Beck, 2001) and emphasised the need to intervene at this early stage. Logsdon et al. (1994) commented on the association between antenatal and postnatal symptoms of depression observed in their study. They stated that, although they found a relationship between the two, item responses on the CES-D were extremely different for the two time periods, which might reflect the involvement of different etiological or psychological factors. The mean of depression items (of the CES-D) were reported for antenatal and postnatal time periods, substantial increases or decreases occurred between the two time periods on numerous items. For example, the mean antenatal score for the item 'disliked by people' was 0.14, this increased to 0.92 at the postnatal assessment, whereas a decrease was noted on the item 'sad' from antenatal assessment (0.85) to postnatal assessment (0.21). This appears to contradict the findings cited by Castle et al. (2008), which described a consistency of symptoms across the puerperium.

#### History of Affective Disorder

A number of studies (Bernazzani et al., 1997; Campbell et al., 1992; Lee et al., 2000; O'Hara et al., 1991) reported that history of affective disorder was a risk factor for postnatal depression, which is consistent with findings in the general literature on depression (Bernazzani et al., 1997). Campbell et al. (1992) proposed that a history of depression places women at greater risk of experiencing depression in the perinatal period where the arrival of a child necessitates reorganisation of relationships and roles within the woman's life. O'Hara et al. (1991) discussed personal psychiatric history as a vulnerability factor within their vulnerability-stress model of postpartum depression. They found personal psychiatric history to be a risk both in itself as a main effect and in its interaction with stress variables.

#### Factors related to Pregnancy and/or Birth

Campbell et al. (1992) reported that pregnancy/delivery complications and the interaction between pregnancy/delivery complications and help from spouse predicted depression severity at 2 months postpartum. Women who reported more pregnancy/delivery complications and less spouse support were likely to have the highest depression severity scores. Campbell et al. (1992) found that approximately half of the women in the depressed sample group also reported feeling extremely worried during their pregnancies. The authors suggested that these worries may have been related to higher rates of pregnancy and delivery complications and to increased conflict these women perceived in their marital relationship during pregnancy.

Kearns et al. (1997) examined differences within their sample group in relation to parity and whether the pregnancy was planned. The authors observed that multiparous women were significantly more distressed and reported less partner support than primiparous women, in the antenatal period. However, these findings were not upheld when the women were reassessed during the postnatal period.

#### Perceptions of Received Parenting

Gotlib et al. (1991) found that women who were diagnosed as depressed in the postpartum showed higher levels of depression during pregnancy and more negative perceptions of the caring they had received from their own parents. Parental caring subscales of the Parental Bonding Instrument (Parker, Tupling & Brown, 1979) were observed to be significant predictors of postpartum diagnostic status, even after controlling for depressed mood. The authors explained this finding in terms of the impact of women's perceptions of being cared for by their parents on their confidence in their own abilities to care for their children and prevent them from experiencing depression. Of particular importance in the study is the fact that initial differences between depressed and non-depressed groups were obtained before the onset of depression, when all women in the sample were not depressed.

#### Cultural factors

Martinez-Schallmoser et al. (2003) found a relationship between SS and ethnic identity in their sample of Mexican-American women. AD was observed to increase with an increase in social experiences with Anglos and with a decrease of Mexican ethnic behaviours or traditions. Fewer ethnic behaviours or traditions were related to a larger antenatal conflict network size and a greater need for SS. The authors stated that AD was found to be correlated with ethnic identity, need for SS and low satisfaction with the support received. Women in the study were more likely to experience PD if they lived in a household where English was the primary language and they did not, or preferred not, to speak English. The authors discussed several potential explanations for this finding, including stress associated with not being able to speak their preferred traditional language. The authors noted that the pressure to communicate in an English speaking culture without acquiring English language skills could produce isolation and dependence, and the stress resulting from the need to acquire the majority language may be expressed as depression. Martinez-Schallmoser et al. (2003) acknowledged that further research is required to determine whether perinatal women are more vulnerable to PD because of the inability or pressure to communicate in English. The impact of cultural factors on postnatal depressive symptomatology was also investigated by Lee et al. (2000). The authors found indigenous cultural issues that were pertinent to postnatal depression among Chinese women in Hong Kong, in particular, if the father was dissatisfied with the gender of the newborn baby postnatal depression was more likely to occur among the sample group.

#### Socioeconomic Status

Several studies observed various socioeconomic variables influenced the presence or absence of depressive symptomatology. Lee et al. (2000) found substantive poverty (as measured by living in temporary accommodation and experiencing financial difficulties) was a risk factor for PD. Lower occupational status was found to have a direct effect on postpartum depressive symptoms in Bernazzani et al.'s (1997) study. Lower occupational status was found to be one of four variables that showed a direct effect on PD symptoms (depressive symptom level during pregnancy, stressful life events preceding antenatal assessment, and personal psychiatric history were the other three variables). The authors stated that, consistent with studies on general depression two sociodemographic variables, which reflected lower SES had significant effects on

postnatal depressive symptoms. Lower occupational status showed a direct effect on depression scores, whereas lower income showed an indirect effect mediated by a lower sense of control over life events. The authors suggested that their findings show postpartum depressive symptomatology levels were influenced by factors similar to those contributing to depression at other times. Kearns et al. (1997) found women in their study were more likely to experience distress antenatally if they were less educationally qualified. The authors observed that lower education appeared to be a predictor of antenatal distress, whereas lower household income predicted postnatal distress.

#### **Dimensions of Social Support**

Many of the studies included in the review discussed various aspects of SS that were not addressed in relation to predicting depressive symptoms, or associations between SS and depression. However, it was felt that, in order to interpret the studies' findings regarding the relationship between SS and depression in the perinatal period, brief consideration of these aspects was required.

### Definitions of Social Support

Firstly, the definition and understanding of SS as a construct was discussed in several studies. The variety and differences between definitions of SS provided by the studies reflects the lack of consensus within the research literature regarding conceptualisation of the concept of SS (Logsdon et al., 1994). Several authors (Castle et al., 2008; Kearns et al., 1997; Logsdon et al., 1994; Martinez-Schallmoser et al., 2003) refer to components of SS such as: perceptions and expectations of support, need for support, satisfaction with support received, number of people available for help, and social conflict.

Turner et al. (1990) refer to Cassel's (1976) suggestion that psychosocial processes should be regarded as two dimensional with one dimension reflecting stressors and the other being protective or beneficial involving the strength of SS provided by others. This suggestion leads on to an issue within the SS literature that has been widely debated – the buffering hypothesis of SS.

#### The 'Buffering Hypothesis' of Social Support

The buffering hypothesis proposes that a high level of SS acts as a buffer against negative effects of stress (Cohen & Wills, 1985). This hypothesis predicts that people who have inadequate, or limited access to, SS will have more negative reactions (psychological distress, susceptibility to illness, etc.) when they experience high levels of difficult life events, compared to what they experience in the absence of the events. The hypothesis also predicts that people who have high levels of SS will not have as strong a negative reaction to the difficult life events (their reaction will not differ so much from what they experience in the absence of the events). Four studies (Brugha et al., 1998; Campbell et al., 1992; Turner et al., 1990; Westdahl et al., 2007) discuss the 'buffering hypothesis' of SS and depression in relation to their findings. Westdahl et al. (2007) proposed that SS does not protect against the negative effects of social conflict. In their study, Westdahl et al. (2007) found that interpersonal risk factors of low SS and high social conflict independently predicted AD symptoms. As such, the authors suggested that high social conflict remained a predictor of AD, regardless of findings related to experiences of high or low SS. This finding appears to suggest that a stress buffering hypothesis of SS does not wholly account for the complicated dynamic nature of SS, in that it does not address factors associated with SS such as social conflict, as reported in Westdahl et al.'s (2007) study. Brugha et al. (1998) observed that positive contextual support and contextual adversity acted as main effects on depression scores and were not noticeably conditional upon one another over the time period investigated in the study. The authors suggested that the more stringent statistical methods used in their study protected against chance findings. However, it also impacted upon the considerable statistical power that is required in order to replicate interaction effects between support and adversity. Therefore, Brugha et al. (1998) concluded that their findings neither supported nor refuted the buffering hypothesis of SS. However, Campbell et al. (1992) referred to the buffering hypothesis in relation to perceptions of support as a protective factor in the context of difficulties, such as pregnancy complications. Turner et al. (1990) proposed that higher family support might act as a buffer against stressful events, yet they stated that their analyses did not confirm that SS mediates against consequences of life stress. The authors suggested that higher levels of family support are associated with more favourable outcomes, regardless of the level of stress.

#### Social Support and Depression in the Perinatal Period

With regard to evidence of an association between SS and depression during the perinatal period, the following results were reported. Of the 16 studies reviewed 11 reported findings that demonstrated SS as a predictor of depressive symptomatology in the perinatal period (Bernazzani et al., 1997; Brugha et al., 1998; Campbell et al., 1992; Gotlib et al., 1991; Kearns et al., 1997; Logsdon et al., 1994; Martinez-Schallmoser et al., 2003; Paarlberg et al., 1996; Seguin et al., 1999; Turner et al., 1990 Wesdahl et al., 2007). Of the remaining 5 studies, 4 observed tentative associations between aspects of SS and symptoms of depression, while 1 study did not report any association between SS and depression during the perinatal period. Findings on SS need to be considered in light of existing or previous depression, as these factors were identified as key covariates that could impact upon the reliability of findings on SS and depression. There was substantial variation between studies regarding aspects of SS that were investigated and found to be related to perinatal depression. The details of these studies findings are summarised below.

Westdahl et al. (2007) found that both SS and social conflict had independent effects on depressive symptoms and together accounted for 34% of the variance in depressive symptoms in their study. The authors observed social conflict to be a stronger predictor of depressive symptomatology, accounting for more of the variance in depressive symptoms. The authors observed a strong dose-response effect: as the number of interpersonal risk factors increased so too did the amount of women reporting depressive symptomatology. However, it should be noted that participants' previous history of affective disorder was not addressed in the study and AD scores were not controlled for, which impacts upon the robustness of findings on SS as a predictor of depression in this study.

Seguin et al. (1999) also reported findings on social conflict. They found that the number of interpersonal conflicts during the first month postpartum seemed to influence the individual's mental health for a prolonged period afterward. The authors found that those women who reported frequent conflicts at three weeks postpartum were more likely to have high depression scores on the BDI at six months postpartum. However, the presence of emotional support at three weeks postpartum was associated with less risk of high depressive symptomatology at six months postpartum. Seguin et al. (1999)

found that this longitudinal model of interpersonal conflicts and emotional support explained 32% of the variation of BDI scores at six months postpartum. These findings remained when AD was controlled for. However, participants' previous history of affective disorder was not addressed by the authors. With regard to the type of support received, Seguin et al. (1999) suggest that informational support appeared to be most important in cross-sectional analysis. However, they argue that, over time, emotional support might be of more significance.

In their study on the effect of SS and acculturation on PD in Mexican-American women, Martinez-Schallmoser et al. (2003) found that low SS satisfaction was a prenatal predictor of postpartum depressed mood. Other prenatal predictors included: AD and low Spanish language use. The authors controlled for symptoms of AD but not participants' history of affective disorder. Approximately half of the women in the sample group, at the postpartum assessment, reported dissatisfaction with their husband's/partner's behaviour. Sources other than the husband/partner (i.e. relatives, godparents) were found to be more available to the women in the study. The authors suggest that this reflects the cultural and environmental factors that might have impacted upon Mexican-American women's perceptions of support satisfaction. During the postnatal period, an increase in the overall number of people involved with the mother was observed, as well as an increase in the number of conflictual relationships within the women's network. Spanish-speaking women in the study experienced more social conflict than English-speaking women. Martinez-Schallmoser et al. (2003) suggested that Spanish-speaking mothers may have felt dependent on others with whom they did not have a harmonious relationship due to their difficulties communicating in the majority language.

Bernazzani et al. (1997) found SS had an indirect effect on postnatal depressive symptoms, which was mediated by lower scores of internal locus of control and depressive scores during pregnancy. In particular, satisfaction with support and conflicting interpersonal relationships were observed to have an indirect effect on PD even when AD and history of affective disorder were accounted for.

Logsdon et al. (1994) reported that women who felt less close to their husbands in the postpartum period and experienced AD symptomatology were more at risk of suffering

from PD. Also, changes observed in importance ratings of SS between the antenatal and postnatal phases, and the differences in support expected and received multiplied by prenatal estimates of the importance of each, were found to contribute to PD. Together these four variables accounted for 40% of the variance of depression scores in their study. Whether or not participants had a history of affective disorder was not accounted for in the study. While lower levels of postnatal support were not associated with depression, the difference between expected and received SS multiplied by the importance ratings women had given to support was predictive of depression. The authors suggested that it is dissatisfaction with the type or amount of support received that influenced increased depression scores.

Brugha et al. (1998) found that dissatisfaction with support from others, particularly positive support regarding pregnancy, acted as a significant predictor of later symptom development. This finding remained even after controlling for antenatal symptoms of depression and personal history of depression. The authors observed that SS as indicated by primary group network size was not a predictor of depression, only one primary network variable (whether the woman and her partner were living together) was a predictor of later depression. As such, Brugha et al. (1998) argued that the importance of research investigating SS and the development of depression in the perinatal period lies in issues regarding perceived support rather than network size or amount of contact.

Satisfaction with support was also found in Paarlberg et al.'s (1996) study to be a predictor of depression in their sample group, where women who reported being satisfied with obtained support were observed to have lower depression scores, regardless of the actual amount of SS they received. Again, the difference between satisfaction with received SS and the actual level of SS is emphasised by the authors. This finding, taken together with findings from other studies, suggested that it is the women's perceptions and satisfaction with SS rather than the actual number of contacts or amount of SS that is crucial in the prediction of depressive symptom development. The authors did not account for the effects of previous history of depression, however, they did acknowledge that baseline measures of depression taken before pregnancy would have provided more insight into the nature of the associations observed.

Campbell et al. (1992) observed change in relationship with spouse, amount of help from spouse with childcare and household tasks, and the interaction between pregnancy/ delivery complications and help from spouse to be predictors of PD. These findings remained when participants' history of affective disorder was controlled for. Perceptions of limited spouse support were found to be associated with depression through to 6 months postpartum. The authors argued that perceptions of support can play a buffering role in the context of problems such as pregnancy complications.

Turner et al. (1990) observed family support, as opposed to friend or partner support, to be the most powerful predictor of depression symptomatology within their sample of adolescent mothers. The authors found that adolescent mothers who were living at home with their own parents had significantly lower depression scores than those living in other situations. The presence of family support was associated with lower levels of depressive symptomatology. However, AD and previous history of affective disorder were not controlled for in the study.

Gotlib et al. (1991) examined factors involved in the onset of, and recovery from PD. The authors found women who experienced depression in the postnatal period reported lower marital satisfaction and more negative perceptions of the caring they had received from their own parents. The authors proposed that assessment of participants prior to onset of depression facilitated the observation that marital discord precedes the onset of PD, in their sample group, but was not found to be a predictor of PD. Perceptions of low parental caring were observed to predict postpartum depression scores. The authors proposed that parental caring might have provided women with confidence in their ability to care for their own infants. However, Gotlib et al. (1991) acknowledged that further research is required to explore this issue of received parenting.

Sources of support were discussed in Kearns et al.'s (1997) study, which found less partner support was involved in experiences of AD. However, the authors noted that partner support increased over time, whereas support from friends and relatives decreased between antenatal and postnatal periods. Lack of support from friends was observed to be a predictor of postnatal distress. The authors suggested that this finding reflected unmet expectations regarding contact and empathy from friends following childbirth. While AD was controlled for in the study, history of depressive disorder was not.

Five studies did not find SS to be a predictor of depression in the perinatal period. However, 4 of those 5 studies did observe associations between SS and depression. The results of these studies are outlined below.

Castle et al. (2008) did not find an association between perceived support in the antenatal period and level of postpartum well-being in the mothers and fathers included in their sample group. Perceptions of support were observed to decrease in the postnatal period for both mothers and fathers with a focus on practical support for mothers and emotional support for fathers. The authors reported that their hypothesis that a positive attitude to emotional expression would lead to lower levels of distress mediated by higher SS was not supported by the findings.

In their study on depressive symptoms, stress and SS among adolescents in the perinatal period, Barnet et al. (1996) found that satisfaction with support increased between antenatal and postnatal periods despite a decline in the size of the support network. This finding reflects the argument made by Brugha et al. (1998) and Paarlberg et al. (1996) that satisfaction with SS and actual amount of SS, or size of network, need to be considered independently and do not reflect the same construct. Barnet et al. (1996) reported that the individual's mother and the infant's father were the most important sources of support.

O'Hara et al. (1991) investigated a vulnerability life-stress model of PD, in which social vulnerability to depression was measured by marital adjustment. The authors found significant vulnerability and life-stress interactions, which supported the proposed model of PD. However, specific findings regarding marital adjustment were not discussed.

Richman et al. (1991) examined gender differences in postpartum depressive symptoms in married couples. The authors found that women reported greater perceived support overall from their mothers and 'other' sources. Female well-being in the postnatal period was linked to support from parents and another individual as well as spouse support, whereas, male well-being was linked only to spouse support.

Lee et al. (2000) did not observe SS to be a predictor of depression during the perinatal period. The authors did not report any associations between SS and depressive symptomatology.

#### **Discussion**

The current review explored the relationship between SS and depression during the perinatal period and investigated specific aspects of SS that were associated with AD and PD. The majority of studies included in the review examined risk factors which were predictive of PD. As such, SS was identified as a risk factor for depression in the perinatal period by 11 studies. Of the remaining 5 studies, 4 observed associations between SS and depression and 1 did not report any findings regarding associations between SS and depression in the perinatal period. Other risk factors that were identified by studies (e.g. AD symptoms and personal history of depression) are discussed and considered in relation to the strength of findings on SS and depression among perinatal sample groups. Aspects of SS that were not identified as risk factors, but were highlighted by studies included in the review, are also discussed. All papers reviewed were assessed using a quality criteria checklist developed by the reviewer. Methodological strengths and limitations of the studies, as observed by the quality criteria checklist, are described. Finally, recommendations for future research will be made.

#### SS as a predictor of perinatal depression

Evidence suggesting that SS is a predictor of depression during the puerperium was observed in the current review. Of the 16 articles reviewed, 11 found that SS played a role in the prediction of depressive symptomatology during the perinatal period (only 3 of these studies included information on predictors of AD). However, the specific aspects of SS that were found to be predictive of depressive symptoms differed between studies. Four aspects of SS emerged as predictors of depression in the perinatal period according to the findings of the studies reviewed. These aspects of SS include: satisfaction with support: social conflict: type of support: and source of support.

#### Satisfaction with support

Several studies reported that satisfaction with support predicted whether or not women experienced depressive symptoms in the perinatal period (Bernazzani et al., 1997; Brugha et al., 1998; Logsdon et al., 1994; Martinez-Schallmoser et al., 2003; Paarlberg et al., 1996). Low satisfaction with support experienced by women in these sample groups was found to predict higher depressive symptomatology. These findings highlight the debate regarding how SS is measured in research. For example, Logsdon et al. (1994) found that the amount of postnatal support received was not associated with depression. However, the difference between expected and received support multiplied by the ratings of importance of support made by women in the study, was predictive of depression scores. Evidently, measuring different aspects of SS will produce different results. However, the complexity of SS as a construct and its multifaceted nature would suggest that specific measures assessing particular aspects of SS yields more informative or applicable findings compared to global measures of SS (Sheppard, 1994).

### Social Conflict

Social conflict was also reported by several studies as an aspect of SS that predicted depression (Bernazzani et al., 1997; Seguin et al., 1999; Westdahl et al., 2007). These studies found that women who experienced high levels of social conflict, or increased numbers of conflictual relationships, were more likely to report elevated levels of depression. Social conflict is an interesting aspect of SS, which highlights some of the controversies and differing opinions within the research base regarding SS. Social conflict demonstrates that not all social contact represents positive experiences for individuals. Therefore, simple measurements of the size of an individual's support network, or the amount of contact they receive, do not adequately represent an individual's experience of SS. The negative effects of social conflict identified in the literature calls into question the 'buffering hypothesis' of SS. Clearly, not all aspects of SS have protective effects for the individual.

### Type of Support

Various types of SS have been discussed within the literature, including instrumental, emotional and informational aid (Kearns et al., 1997). Two studies in the review found type of support to be a predictor of depression among women in the perinatal period.

Seguin et al. (1999) reported that the presence of emotional support was associated with less risk of depressive symptoms at 6 months postpartum. Campbell et al. (1992) found that practical help from spouses (with childcare and household tasks) was associated with depression, where perceptions of limited spouse support predicted higher depression scores at 6 months postpartum. These studies support findings regarding the importance of emotional and instrumental support during the puerperium in the research literature (Chung & Yue, 1999).

#### Source of Support

Particular sources of support were observed to predict depression among women in the perinatal period in three studies. Turner et al. (1990) found that the presence of family support was associated with lower levels of depressive symptomatology in their sample of adolescent mothers. Parental support was also discussed in Gotlib et al.'s (1991) study, which found that participants who held negative perceptions of the caring they had received from their own parents had higher depression scores. Kearns et al. (1997) found different sources of support predicted AD and PD, with less partner support predicting AD, while lack of support from friends predicted PD. The variety of sources of support, which were found to be predictors of depressive symptoms in the current review, reiterate Harley & Eskenazi's (2006) statement that studies during the puerperium have demonstrated that support from various sources, including spouse, family and friends, are associated with improved perinatal outcomes.

Alongside these various aspects of SS that were identified as predictors of depression in the puerperium, several studies discussed the 'buffering hypothesis' of SS (Brugha et al., 1998; Campbell et al., 1992; Turner et al., 1990; Westdahl et al., 2007). Westdahl et al. (2007) proposed that their findings refuted the notion of SS as a buffer or protective factor against psychological distress following stressful events. The authors stated that high social conflict within participants' SS network increased the likelihood of high depression scores regardless of findings on high or low levels of SS. Brugha et al. (1998) and Turner et al. (1990) reported equivocal findings regarding SS as a protective factor. Campbell et al. (1992) suggested that perceptions of support may be protective in the context of certain difficulties, such as pregnancy complications. The findings of these four papers cannot adequately address the question as to whether or not SS is a buffer against psychological distress following stressful events, due to their limited

number and differing results. However, the findings of the studies included in the review highlight the salient aspects of SS that contribute to the prediction of, or risk of, depressive symptoms in the perinatal period. The complexity, and variety, of constructs that form SS, which have been outlined in the current review, emphasise the fact that SS is not a homogenous concept. As such, SS cannot be reduced to a construct that is observed to impact upon other variables in a linear, uni-directional fashion as proposed by the 'buffering hypothesis'.

The findings reported regarding SS, and its relationship with depression during the puerperium, should be considered in light of other factors that have been observed to predict depression in the perinatal period (e.g. AD symptomatology and history of affective disorder). The strength of SS findings reported in the review was influenced by whether or not the studies adequately controlled for these other predictors. Only 3 studies (Bernazzani et al., 1997; Brugha et al. 1998; Lee et al., 2000) accounted for AD symptomatology and history of affective disorder. Of these studies, Lee et al. (2000) did not observe associations between SS and depression during the puerperium. Bernazzani et al. (1997) and Brugha et al. (1998) both found satisfaction with support was a predictor of depressive symptomatology. As such, after controlling for mood and history of affective disorder satisfaction with support continued to be associated with depression outcomes. Seven other studies controlled for either AD symtpomatology or history of affective disorder, while the remaining 6 studies did not address either of these two important predictors of perinatal depression. As such, ten out of the sixteen studies controlled for either AD or history of affective disorder, or both, suggesting that findings outlined within the review regarding SS are relatively robust. In general, SS was observed to have a dynamic relationship with depression scores. Certain aspects of SS (e.g. satisfaction with SS) were described as moderating experiences of depression for women, while other aspects (e.g. social conflict) increased the likelihood experiencing depression.

#### **Methodological Issues**

All studies included in the review employed prospective designs and collected data over at least two time points during the study. The use of a prospective design enables the investigation and evaluation of changes over time, and can provide insights into factors involved in the prediction of specific conditions, and variables associated with changes in that condition. It was felt that prospective studies would be better able to address the review's objectives than studies employing correlational designs. Another methodological strength of the review lies in the reliability and validity of the assessment measures used by the studies. Studies that used measures of depression and/ or SS, which had not been validated or had not demonstrated adequate psychometric properties, were excluded from the review. However, with regard to the assessment of depression, only a limited number of studies (Brugha et al., 1998; Campbell et al., 1992; Gotlib et al., 1991; Lee et al., 2000; O'Hara et al., 1991) used standard diagnostic assessments to confirm depression; the remaining studies used self report measures of depressive symtpomatology. As such, results from those studies that did not employ a standard diagnostic instrument to assess depression can only be interpreted in relation to symptoms of depression rather than the clinical syndrome of depression.

The use of a quality criteria checklist allowed the systematic evaluation of studies according to their methodological quality. The majority of studies were rated as having 'good' methodological quality. Two studies (Brugha et al. 1998; O'Hara et al., 1991) were rated as 'excellent', while one study (Turner et al., 1990) was rated as demonstrating 'adequate' methodological quality (see Appendix 2.2). In general, studies were criticised for their methods of sampling, failure to report attrition rates and/or procedures for dealing with attrition in their analysis, as well as failure to control for important confounders.

Almost all studies, with the exception of Brugha et al. (1998), used convenience samples drawn from hospital clinics. Reliance on non-probability, convenience sampling methods is likely to have introduced sampling bias into the studies. Also, regardless of a study's sample size, the extent to which a convenience sample is representative of the entire population cannot be known, therefore, limiting the external validity of results of these studies. As most participants were drawn from hospital clinics the findings of studies might not be applicable to individuals who cannot, or do not, access antenatal and postnatal services. Furthermore, sample sizes varied greatly between studies, ranging from 66 to 1,047 participants. Power calculations were not reported by any of the studies, only one study (Brugha et al., 1998) referred to the omission of a power calculation as limitation. Several other studies acknowledged small sample size as a limitation. The omission of power calculations does not necessarily mean that all studies had insufficient statistical power, but rather it is difficult for the reader to judge given the limited information provided.

### Limitations

In addition to the restraints placed on determining conclusions due to methodological limitations of the studies outlined above, several other limitations of the review are noteworthy. Firstly, the review may have been limited by the search strategy, which excluded studies that were not reported in English and those which were unpublished. As such, the review may have excluded pertinent evidence relating to the area under investigation and may have been subject to publication bias (which could have increased the likelihood of significant findings). The quality instrument used to rate studies' methodology was designed using aspects of SIGN (2004) and CTAM (Tarrier & Wykes, 2004) guidelines to fit the purposes of the review, therefore, questions regarding its reliability and validity could be raised. However, it was difficult to identify a suitable measure as most existing measures are based on the use of randomised controlled trials, which were not the focus of investigation for the present review.

#### **Future Research & Clinical Implications**

Future research investigating the relationship between SS and depression in the puerperium should aim to improve methodological rigour where possible. Probability sampling procedures, conducting power calculations and diagnostic assessments to confirm depression, and controlling for potential confounders were highlighted by the current review as research methods which would improve the overall quality of future studies. While the findings of the studies included in the present review outline factors involved in the experience of depression during the perinatal period, Kearns et al. (1997) suggested that future research should attempt to achieve a better understanding of other factors that might underlie the degree of variance that remained unexplained. The authors proposed that qualitative methods of investigation might inform the research base regarding those relationships which remained unexplained by quantitative studies. Future research in this area would benefit from having a clear theoretical basis regarding SS. Research that brings together the various aspects of SS that have been outlined by studies in the present review would further the understanding of SS as a construct, and the positive and negative associations between specific aspects of SS and depression.

The findings of the present review have clinical implications in terms of aiding health professionals in the identification of individuals at risk of developing depression during the puerperium and the development of intervention strategies to address such difficulties. Assessing aspects of SS, including social conflict, among women in the perinatal period might play a key role in preventing psychological distress and/or determining areas for intervention. The development of interventions that facilitate a systems approach, involving partners/families during the antenatal and postnatal periods, might promote the mobilisation of support resources, as well as, providing a forum for addressing conflicts within interpersonal relationships.

#### Conclusion

The majority of studies included in the review were found to be of a reasonable quality and, and with the exception of one study (Lee et al., 2000), all reported SS to be implicated in women's experiences of depression in the puerperium. Research studies have consistently identified SS as an important factor that influences rates of depression during the perinatal period. There has been much debate within the literature regarding the causal mechanisms of SS and its influence on experiences of depression. The present review has outlined the role of specific aspects of SS, including satisfaction with support, types and source of support, as well as the presence of social conflict and their influence on rates of depressive symptoms during the puerperium. Whilst there is a need to be cautious of the methodological limitations of studies included in the review, the findings suggest that SS plays a role in women's experiences of depression during the puerperium. Throughout the studies reviewed, issues regarding how SS was conceptualised and measured frequently emerged. The dynamic nature of SS as a construct would suggest that researchers should pay particular attention to how they assess SS and interpret their findings in light of the varying conceptualisations of SS.

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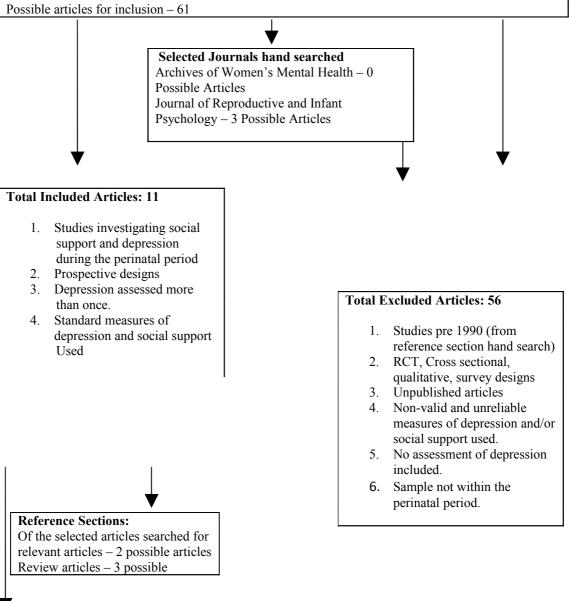
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#### **Figure 1: Article Selection Process**

Electronic Search: PsychINFO, CINAHL, EMBASE, Medline, CDSR and British Nursing Index

Terms: 'social support' or 'peer relations' or 'marital' or 'expressed emotion' AND 'Antenatal depression' or 'Antepartum depression' or 'Postnatal depression' or 'Postpartum depression' or 'Pregnancy'

Limits: 1990-March 2009, English language article, peer reviewed journal



#### **Included Articles**

Electronic search:	11	
Included articles reference sections:	2	
Review articles reference sections:	3	
Journal hand search:	0	
TOTAL:	16 Articles	

Study	Sample:	Opt in and	Time period of	Measures used	Reported	Findings	Limitations
	Demographics	Follow up rates	the study	to assess	quality of		
	&			depression and	measures		
	Characteristics			social support			
Castle et.al. (2008)	N = 86 mothers and 66 fathers Mean age mothers = 30.7 years Mean age fathers = 32.9 years All nulliparious All married or co- habiting Race/ethnicity: 90.7% White European Employed; mothers = 90.7% fathers = 100%	Complete data for 80.4% of mothers and 71% of fathers 10 mothers and 10 fathers were excluded postnatally and a further 11 mothers and 17 fathers excluded at Time 2 (due to questionnaire not returned or incomplete or because couple no longer co- habiting).	Time 1: average gestational age = 33 weeks Time 2: 6 weeks postpartum	HADS was used to measure depression at time 1 & 2 Well-being Questionnaire also measured depression at time 1 & 2. EPDS measured depression at time 2	HADS standard measure with reported good face and criterion validity. Reported internal consistency of HADS Anxiety 0.93 and HADS Depression as 0.9 EPDS validated for use with women. Now validated for	AD symptoms are risk factor for PD (accounting for 20.1% of the variance of depression scores). No significant difference between pre and postnatal depression scores. Perceptions of support reduced postnatally for both mothers and fathers with a focus on practical support in mothers and emotional support in fathers. No relation observed between perceived SS in the antenatal period and level of well-being in the postpartum. Women were found to hold a more positive attitude to expressing emotion than men. The hypothesis that a positive attitude towards emotional expression would lead to lower levels of distress mediated via higher SS was not supported.	Convenience sample of predominantly white middle-class participants limiting the generalisability of findings. Results limited to third trimester and immediate postnatal period. DUKE-UNC FSSQ measure only met average reliability and consistency, could be considered borderline. Debate regarding the use of HADS in pregnancy.

### **Table 1: Summary of included studies**

				DUKE-UNC Functional Social Support Questionnaire (FSSQ) was used to measure social support (Time 1 & 2)	use with men Cronbach's alpha 0.81 DUKE-UNC FSSQ average test-retest reliability reported (0.66 Pearson's Coefficient) and average internal consistency (0.62 item- remainder correlations for 'Confidant' scale and 0.64 for 'Affective' support scale.		
				Attitudes to Emotional Expression (AEE) also used to measure social support (Time 1& 2)	AEE demonstrated good internal consistency Cronbach's alpha 0.79		
Westdahl et. al. (2007)	N = 1047 Mean age = 20 years. In relationship with infant's father = 70% Number of	Of 1542 eligible 1047 enrolled in study = 68% participation rate	Time 1: <24 wks gestation, (average = 18 weeks) Time 2: 1 year	CES-D to measure depression. Only 15 items used, 5 somatic items excluded.	Cronbach's alpha for CES-D cognitive- affective subcomponent = 0.85	-High rates of depression during pregnancy. -Interpersonal factors of SS and social conflict play a large role in depressive symptoms during pregnancy	A standard diagnostic instrument to confirm depression (i.e. DSM- IV) was not used. Self report measure to assess symptoms of depression could

	previous children: 0 = 64% 1 = 24% 2 + = 12% Race/ethnicity: African-American = 80%, Latina = 13\%, White or other = 7%		postpartum	Social Relationships Scale: Social support 7 item subscale and Social conflict subscale	SS subscale Cronbach's alpha = 0.87 Social conflict subscale Cronbach's alpha = 0.84	(accounted for 34% of the variance in depression scores) -Low SS and high social conflict independently predict depressive symptoms during pregnancy -Dose-response effect noted – as interpersonal risk factors increased so too did proportion of women reporting depressive symptoms.	introduce bias. Study population predominantly young, nulliparious women with limited SES resources -generalisability of findings is questionable. Unable to determine cause-effect relationship between interpersonal risk factors and pregnancy, depression and gestational age.
Martinez- Schallmoser et.al. (2003)	N= 66 Age range = 20- 39 years (39% in 25-29 bracket) All multiparous. Relationship status:	Not reported	Time 1: 34-36 weeks gestation Time 2: 4-6 weeks postpartum	CES-D to measure depression.	Cronbach alpha of CES- D in study = 0.87(antenatal) 0.88 (postpartum)	Acculturation and the need for SS were significantly related to postpartum depressive symptoms. Prenatal predictors of postpartum depressed	Small sample size. Participants from demographically similar area – limits generalisability of findings. A standard diagnostic
	Married = 68.2% Single/steady relationship = 10.6% Separated = 2% Co-habiting = 12% Race/Ethnicity: All Mexican- American women Years completed education (mean) = 8.8 years			Parenting Social Support Scale	Adequate reliability alpha co- efficients of 0.78 for network size scale, 0.75 for need scale and 0.76 for satisfaction scale	<ul> <li>mood were: AD, low</li> <li>Spanish language use and</li> <li>low SS satisfaction</li> <li>(accounted for 52% of the variance in depression scores).</li> <li>Prenatal depressive</li> <li>symptoms were strongest</li> <li>predictors of PD.</li> <li>Women received more</li> <li>prenatal and postnatal</li> <li>support from other</li> <li>relatives than partners.</li> </ul>	instrument to confirm depression (i.e. DSM- IV) was not used. Self report measure to assess symptoms of depression could introduce bias. No reference to those who did not participate in the study or if there were any participants who dropped out of the study.
Lee et. al.	N = 220	330 women	Time 1:	Beck Depression	BDI is widely	Ten factors were found to	Small sample

(2000)	Chinese women	eligible for study	Two days	Inventory to assess	used rating	be significant, these	population from one
(2000)	Mean age = $29$	220 agreed to	postpartum	depression	scale with	include: personal	locality.
	years	participate	postpartum	depression	demonstrated	psychiatric history (Odds	High rate of non-
	All in a	(66.7%)	Time 2:		satisfactory	<i>ratio 4.6)</i> , history of	participation and drop
	relationship	No information	Six weeks		psychometric	depression (Odds ratio	out which was not fully
	(96.8% - married,	on those who did	postpartum		properties.	6.3), syndromal	explored or accounted
	3.2% co-habiting)	not agree to	posipartum		properties.	depression during	for.
	Mixture of	participate.		General Health	GHQ is a	pregnancy (Odds ratio	Confidence limits are
	nulliparous and	participate.		Questionnaire	widely used	<i>13.5), temporary housing</i>	unsatisfactorily large
	multiparous	34.1% of		Questionnane	rating scale	(Odds ratio 16.9),	for many putative risk
	women.	participant group			with	financial difficulties	factors therefore the
	Median number	did not attend			demonstrated	( <i>Odds ratio 3.4</i> ), spouse	estimated odds ratios
	of children was 1	follow up			satisfactory	disappointed with baby's	need to be interpreted
	(range 0-6)	appointment but			psychometric	gender (Odds ratio 5.3),	with caution.
	Education:	completed BDI &			properties.	two or more induced	Short time interval
	No formal	GHQ over		SCID-NP Chinese	properties.	abortions (Odds ratio8.5),	between assessments
	education $-2.3\%$	telephone		non- patient		neuroticism (Odds ratio	and first assessment
	Primary level –	terephone		version		<i>1.3)</i> , BDI score at	within 2 days of
	45%			version		delivery (Odds ratio 1.4),	delivery.
	Secondary level –			Medical Outcome	No	prolonged postnatal	aon vor y.
	45.9%			Study Social	information	'blues' (Odds ratio 5)	
	Tertiary level-			Support Survey	given on		
	6.8%			Support Survey	psychometric		
	0.070				properties		
Seguin et. al.	N = 68	Time 1 – 98	Time 1:	Beck Depression	BDI translated	Chronic stressors and	Possibility of over
(1999)	Mean age $= 22.9$	women were	30 weeks	Inventory revised	version:	inadequate social support	estimation of rates of
	years	assessed	gestation	5	Cronbach's	were significantly	high depressive
	All nulliparous	(participation rate	0		alpha= 0.82	associated with depressive	symptomatology at time
	Relationship	of 78%)	Time 2:		1	symptomatology	2.
	status:	Time 2 – 87	3 weeks	Arizona Social	No	(accounting for 64% of	Selection bias in sample
	Cohabiting – 43%	participated	postpartum	Support Interview	psychometric	the variance in	group – all low SES
	In relationship not	Time 3 - 80	1 1	Schedule (ASSIS)	properties	depression scores).	<b>C</b> 1
	cohabiting – 4%	women	Time 3:		given	Mothers who reported	
	Not in a	Time 4 – 68	9 weeks			conflicts with network	
	relationship -	women	postpartum			members at time 2 were	
	22%	Comparison of	· ·			more likely to have a high	

	All were of low socioeconomic status (all had less than 11 years of education and household income below the poverty level)	time 4 and time 2 data showed women lost to follow up were slightly less educated and tended to have lower BDI scores.	Time 4: 6 months postpartum			depressive score at time 4. Mothers who received emotional support at time 2 were at less risk of a high depressive score at time 4	
Brugha et.al. (1998)	N = 507 Mean age = 25 years Married or co- habiting = $85\%$ Single = $15\%$ All nulliparous women Race/ethnicity: European = 82.6% Asian/Indian = 14.4% Other = $3\%$ Education: Secondary lower = $60.2\%$ Secondary upper = $25.8\%$ Tertiary = $12.6\%$	972 women asked to participate in the study. 16% excluded. Refusal rate of 2.9% Of eligible participants 35.7% not approached for interview or had given birth before expected delivery date. 507 (64.3%) women were successfully interviewed. Statistical comparisons	Time 1: During pregnancy Time 2: 3 months postpartum	General Health Questionnaire (GHQ) Time 1 & 2 Interview Measure of Social Relationships (IMSR) Time 1	GHQ has been validated in similar populations. IMSR structured interview. Good reliability. Previous study found 96% agreement for negative interaction and complete agreement for network support.	Living alone or in a home shared with people other than a partner was a significant predictor of PD symptoms (accounting for 14% of the variance). Depressive symptoms in the prenatal period were a significant predictor of PD symptoms (accounting for 10% of the variance). SS as indicated by primary group size is not a significant predictor of depression symptom development. Satisfaction with support for others and in	Many eligible participants (34%) were not approached or interviewed due to resource limitations. Sample group not representative – generalisability of findings. Findings confined to nulliparous women. Self report data – subjectivity and bias. Simple statistical analysis employed.
		between those interviewed and not, only significant difference was higher rate of pre- term deliveries in non-participating.		Schedules for Clinical Assessment in Neuropsychiatry and the 10 <sup>th</sup> revision of the Present State Examination	Reliability not formally assessed but interviewers regularly discussed rating difficulties	particular positive support in the context of the event of becoming pregnant were found to act as independent main effect predictors of later symptom development (accounting for 15% of	

				(SCAN and PSE- 10) Time 2	together with the SCAN trainers.	the variance).	
Bernazzani et.al. (1997)	N = 213 Mean age = 29.3 years All married or in a common law relationship Number of Children: 0 = 54.5% 1 = 45.5% Education: Secondary = 20.7% College = $31.5\%$ University = 47.8%	Subset of data from a large research project. Of 251 participants 12 failed to complete due to miscarriage, moving or withdrawal and 26 failed to provide complete data at prenatal assessment	Time 1: Second trimester of pregnancy Time 2: Six months postpartum	EPDS French Canadian version (time 2) BDI short form (time 1) Social Support Questionnaire (SSQ) short form ASSIS (item on negative	EPDS adequate internal consistency in this sample Cronbach's alpha = 0.88 Standard measure with good psychometric properties Cronbach's alpha = 0.85	Four variables were found to have a direct effect on PD symptoms: prenatal depressive symptom level, lower occupational status, stressful life events preceding the prenatal assessment and personal psychiatric history (accounted for 28% of the variance in depression scores). Eight variables had an indirect effect on postnatal depressive symptom levels mediated my lower scores of internal locus of control and higher levels of depressive symptoms	Two different measures used to assess depressive symptoms during pregnancy and postpartum. Model represents a simplified picture of reality, assumptions made to simplify complex constructs. Path analysis assumes there is a unidirectional causal flow therefore reciprocal relations could not be tested. Large number of correlations were computed increasing the risk of making Type I errors
				interactions) Dyadic Adjustment Scale (DAS) French Canadian version	Good psychometric properties. Cronbach's alpha for this study = 0.91	during pregnancy. These 8 variables include: early parental divorce, foster care, personal psychiatric history, income, stressful life events in the past 12 months, SS, conflicting interpersonal relationships and locus of control (these variables accounted for 38% of the variance in depression scores)	Sample group not representative.

Kearns et.al.	N=80	Wide range of	Time 1:	Edinburgh	Validated and	Found that antenatally it	Small sample.
(1997)	Respondents were	those opting in to	32-39 weeks	Postnatal	shown to be	was multiparous women	Geographical and
(1))	more affluent and	study i.e. between	gestation (mean	Depression Scale	reliable in	who were significantly	socio-demographic
	more qualified	11-85%	36 weeks)	(EPDS) 10 item	community	more distressed and had	limitations of sampling
	than the norm in	depending on		() = = = = = = = = = = = = = = = = =	settings	less partner support than	procedures.
	the region. Low	recruitment site.	Time 2:			primiparous women - this	Use of EPDS may have
	representation of		approximately 3	Modified Social	Cronbach's	was not observed in the	measured only selected
	ethnic groups	96% of	months after the	Adjustment Scale	alpha for 7	postnatal period.	dimensions of distress.
	within the	participant group	first interview		item friends	Women considered their	
	geographical area.	completed study	(mean 12 weeks)		scale $= 0.5$ and	partners to be more	
	96% in		· · · · · · · · · · · · · · · · · · ·		for the 4 item	supportive in the postnatal	
	relationship and				relatives scale	than antenatal period,	
	co-habiting				= 0.74.	conversely perceived	
	2% in relationship			Developed scale to		support from friends and	
	not co-habiting			measure perceived		relatives declined in the	
	55% primiparous			support from		postnatal period.	
	78% pregnancy			partners		Significant predictors of	
	planned					antenatal distress were	
						parity and education	
						(accounting for 21% of	
						the variance). Age and	
						partner support were also	
						found to be significant	
						variables (accounting for	
						a further 7% of the	
						variance).	
						The experience of	
						antenatal distress was a	
						strong predictor of	
						postnatal distress. Lack of	
						support from friends also	
						a strong predictor of	
						postnatal distress	
						(together these variables	
						accounted for 47% of the	
						variance ).	

Barnet et.al.	N = 125	97% of	Time 1:	CES-D adapted for	Cronbach's	More than a quarter of	Lack of non-
(1996)	Mean age: $16.3$	adolescents	third trimester of	children and	alpha 0.84 to	adolescents without	childbearing control
(1990)	years (age range =	eligible for the	pregnancy	adolescents	0.9	depressive symptoms in	group to assess for
	12-18 years)	study gave	pregnancy	addrescents	Good test-	the antenatal period	differences.
	All primiparous	informed consent	Time 2:		retest	developed them at either 2	Exclusion criteria might
	Race/ethnicity:	(125).	Two weeks		reliability of	or 4 months postpartum.	bias results. Depressive
	93% African	Of these 83%	postpartum		0.51 to 0.67	The odds of scoring in the	symptoms rather than
	American	(104) completed	posipartum		0.51 10 0.07	depressed range at 2	the syndrome
	73% Low SES	all assessments.	Time 3: Two	Barerra's Arizona	Cronbach's	months postpartum were	depression were
	70% Living with	The remaining	months	Social Support	alpha for	5.7 times greater for	measured.
	parent (mother)	17% completed	postpartum	Interview Schedule	support	those who scored in the	ASSIS- no norms and
	80% Close	3 of the 4	postpartum	(ASSIS)	satisfaction =	depressed range during	questionable validity
	relationship with	assessments,	Time 4: Four		0.33 and for	pregnancy.	Sample group not
	father of infant	except one	months		support need is	The size of support	representative.
	87% were in	participant who	postpartum		0.52.	network declined between	representative.
	school	only completed 2	poorpartain		Test-retest	antenatal and 4 months	
	Senoor	assessments and			reliability is	postpartum assessments	
		was therefore			0.69 to 0.88.	yet more than half of	
		excluded.			There are no	participants reported	
					established	being satisfied with the	
					norms for the	support received.	
					ASSIS	Most common support	
						providers were the	
						participants' mothers and	
						the infant's father.	
						SS was negatively	
						associated with	
						depressive symptoms.	
						The presence of	
						interpersonal conflict was	
						positively associated with	
						higher depressive	
						symptom rates.	
						<b>J 1</b>	

Paarlberg et.al. (1996)	N = 396 Average age =	442 initially recruited	Time 1: 13 weeks	Hopkins Symptom Checklist (HCL)	Previous studies have	Negative correlations were found in all	No baseline measure before pregnancy
	30.7 years	46 (10.4%) were	gestation	Dutch version. 23	recommended	trimesters between	therefore cause-effect
	Nulliparous	removed from	Time 2:	of the 57 items	removing the	depression and the	relationship cannot be
	women	study due to	24-26 weeks	were removed due	23 potentially	independent variables	established.
		miscarriage,	gestation	to potential	confounding	age, work, satisfaction	Sample group – not
		withdrawal after	Time 3:	confounding.	items but no	and degree of satisfaction	representative limits
		initial	34-36 weeks		reliability co-	with received support.	generalisability of
		participation	gestation		efficients	Suggests women who are satisfied with the obtained	findings.
		moving to another area and			given for shortened	SS are less depressed	No reliability information on
		medical disorders			version.	regardless of the actual	shortened version of
		prior to				amount of SS they	HSCL Dutch version.
		pregnancy.				receive.	
		Response rates:		Social support	Cronbach's	Satisfaction with support	
		Time 1 – 99.7%		questionnaire	alpha for	was a moderate predictor	
		Time 2 – 99.7%		developed by Van	interaction	of depression (according	
		Time 3 – 99.7%		Sonderen. 2 scales	scale = $0.91$	to Cohen criteria	
				measuring social	for positive	$R^2 = 8.8\%$	
				interactions (actual	items and 0.76	Women reporting	
				and received) and	for negative	depressive symptoms in	
				satisfaction	items.	pregnancy were more	
					Cronbach's	exposed to daily stressors.	
					alpha of the satisfaction		
					scale = $0.93$		
Lodgson et.al.	N = 105	All women	Time 1:	CES-D to measure	CES-D high	Lower levels of support	Authors suggested had
(1994)	Mean age = $25.9$	approached	approximately 1	depression	internal	postnatally were not	made Type II decision
	years	agreed to	month before		consistency	associated with	error.
	All primiparous	participate.	delivery		reliability	depression.	Convenience sample
	and all married	Sample size	Time 2:		levels reported	Perceived postpartum	Largely white middle
	Race/ethnicity:	based on power	6 weeks		(alpha 0.85)	closeness to husband was	class women – limits
	Caucasian = 98%	calculation.	postpartum			related to postpartum	generealisabilty of
	Average years of	No drop out		Postpartum	Postpartum	depression.	findings.
	education past	between study		Support	Support	Depressive symptoms	SS instrument still in
	high school = $2$	phases (some		Questionnaire	Questionnaire	during pregnancy were a	developmental stage

		missing values)		developed by the first author	pilot tested – Cronbach's alpha 0.89 (prenatal) 0.79 (postnatal). In present study Cronbach's alpha 0.92 (prenatal) 0.90 (postnatal)	significant predictor of postpartum depression (accounted for 12% of the variance in depression scores).	despite good psychometric properties. Closeness to husband only measured by one item at each time period. Depression was the only measure of postpartum well-being Limitations of using CES-D particularly with pregnant populations – potential over estimation of rates of depressive disorders.
Campbell et.al. (1992)	N = 129 Depressed group = 70 Controls = 59 All primiparous All married Race/ ethnicity: All Caucasian	2,657 women were contacted to request permission to contact for telephone interview. 70% of eligible women were contacted by telephone of these 91% agreed to participate. 95 did not meet criteria and were therefore excluded. Of those who met depression screening criteria	Screened for depression at 6-8 weeks postpartum Time 1: 2 months postpartum Time 2: 4 months postpartum Time 3: 6 months postpartum Time 4: 9 months Time 5: 12 months Time 6: 18 months Time 7:	SADS interview Postpartum Social Support Questionnaire (PSSQ). Only scales assessing instrumental support from spouse (7 items) and emotional support (5 items) are reported.	Agreement on diagnosis was 97% Mean inter- rater reliability was r=0.84 Cronbach's alpha for PSSQ instrumental support subscale 0.74 Cronbach's alpha for emotional support subscale 0.62	Depressed women more likely than control group to report that their spouses were not helping and rated them as providing significantly less emotional support. Depression severity at 2 months was predicted by maternal history of affective disorder, pregnancy and delivery complications, change in relationship with spouse, how prepared the women reported feeling, amount of help from spouse with childcare and household tasks and the interaction between pregnancy and	High rates of refusal – no attempt to explore differences between those who participated and those who did not. Reliability for PSSQ emotional support subscale average/borderline. Highly selective sample group limits generalisability of findings. No account of depression during pregnancy.

		57% agreed to participate and 51% of the comparison group agreed to participate.	24 months			delivery complications and help from spouse (these variables accounted for almost 50% of variance in depression scores). Women with more pregnancy and delivery complications and less spouse support were likely to have the highest depression scores. Depressed women were more vulnerable by nature of family history of depression and because of their own prior history of depressive episodes.	
Gotlib et.al. (1991)	N = 730 Non-depressed at	1070 given questionnaires, of	Time 1: on average 23	Shortened version of the SADS	Inter-rater agreement on	Women who were diagnosed with PD had	Generalisability of findings is limited by
	prepartum group	these 912	weeks gestation	of the BADS	the presence of	higher levels of	convenience sample.
	N = 655, 89.7%	(85.2%) returned	T:		diagnosable	depressive symptoms	Potential confounders
	Mean age = 28.3 years	measures. Attrition rate was	Time 2: on average 4.5		depression was $89\%$ (k = 0.78)	during pregnancy and reported lower marital	not accounted for.
	Mean education =	low:	weeks		0 > 70 (K - 0.78)	satisfaction, higher stress,	
	14.3 years	37 women	postpartum	BDI	Standard	a greater use of escape-	
	Proportion	miscarried and 95			measure with	avoidance as a coping	
	married = $96.2\%$	(10.9%) did not			good	strategy and more	
	Number of children residing	complete for postpartum			reliability and validity.	negative perceptions of parental caring.	
	at home:	measures. A			vanuity.	Unique variance in the	
	0 = 47.6%	further 50 had				diagnosis of depression in	
	1 = 35%	incomplete data.		The Dyadic	Valid and	the postpartum was	
	2 = 13.5%	Final $N = 730$ .		Adjustment Scale	reliable	accounted for only by	
	3 or more = 3.8%	Only significant difference			measure	scores during pregnancy on the BDI and PBI	

	Depressed at prepartum group N = 75, 10.3% Mean age = 27.6 years	between two groups – depressed women had fewer years of formal education and		Parental Bonding Instrument (PBI)	Valid and reliable measure	maternal and paternal caring scales (accounted for 12% of the variance). Findings that perceptions of low parental caring and elevated depressive	
	Mean education = 13.5 years Proportion married = 93.3% Number of children residing	fewer of the depressed group were employed outside the home.				symptoms may serve as risk factors for the development of PND. All of the predictors accounted for only 12% of the variance in a	
	at home: 0 = 40% 1 = 37.3% 2 = 17.3% 3 or more = 5.3%					diagnosis of depression in the postpartum. Appears that marital distress precedes depression and decreases with symptomatic improvement.	
O'Hara et.al. (1991)	Convenience sample. N = 261 Childbearing group $N = 182$ Non-childbearing controls $N = 179$ Mean age: Childbearing group = 27 years Controls = 27.5 years Mean years in education:	Childbearing group: 191 women initially recruited – 182 participated Control group: 179 of the initial 189 controls completed the study	Time 1: Second trimester of pregnancy Time 2: 9 weeks postpartum	Beck Depression Inventory (BDI) The Research Diagnostic Criteria Semi-structured interview adapted from Schedule for Affective Disorders (SADS)	The BDI is validated standard measure	Predictors of depression diagnosis in the childbearing group were previous depression, depression during pregnancy (accounting for 19% of the variance) and a Vulnerability X Life Stress interaction (accounting for a further 17% of variance). Depression during pregnancy had strongest association with PD.	Generalisability of findings limited by highly selective sample group. Did not account for potential confounding variables
	Childbearing group = 15.2 Controls = 14.8			The Dyadic Adjustment Scale (DAS)	Good internal consistency (alpha co-	In the control group Vulnerability X Life Stress was the only	

	Employed: Childbearing group = $67\%$ Controls = $75\%$ Married: Childbearing group = $82\%$ Controls = $80\%$ 1 or more childbearing group = $43\%$ Controls = $59\%$				efficient = 0.91)	predictor of depression diagnosis. The significant Vulnerability X Life Stress interactions support the vulnerability-stress model of postpartum depression.	
Richman et.al. (1991)	N= 177 Married couples Primiparous Mean age was 31 years for men and 29.3 years for women Race/ethnicity: Caucasian 84.2% College educated – 63.2%	Approximately 90% of those eligible volunteered for the study. 8% of the sample group dropped out between time 1 and time 2. No significant difference in depressive symptoms between completers and those who dropped out.	Time 1: 6 weeks before expected delivery date Time 2: 8 weeks postpartum	CES-D Modified version of the Social Support Network Inventory	Cronbach's alpha = 0.85 at time 1 and 0.84 at time 2 for men. Cronbach's alpha = 0.84 at time 1 and 0.92 at time 2 for women Cronbach's alpha for overall scale = 0.8 for both men and women at each time point.	No gender differences were observed in depressive symptoms postnatally. Women manifested greater perceived support overall and from their mothers and "other" source at both time points. At time 2 overall SS was negatively correlated with female depressive symptomatology (r =41) but not with male depressive symptomatology. Perceived spouse support decreased following childbirth. Postpartum female well- being was linked to support from each parent and another individual as	Sample not representative limiting generalisability of findings. Lack of non- childbearing control group.

						well as support from spouse. In contrast male psychological well-being was linked only with spouse support	
Turner et.al. (1990)	N = 268 pregnant teenagers Mean age = 17.6 years	Could not obtain information on those who refused to participate or those who did not meet criteria. Estimated loss rate of 30% based on local data that suggests approximately 50% of all teenage pregnancies	Time 1: as soon as possible after medical confirmation of pregnancy Time 2: 4 weeks postpartum	CES-D was used to measure depression Provisions of Social Relation Scale (PSR)	CES-D standardised instrument. Cronbach's alpha for family support subscale = 0.91 and for the friend support subscale = 0.83	Living with parents was associated with lower levels of depression as are all three dimensions of SS (family, friend & partner). Family support was by far the most powerful predictor of depression among adolescent mothers. (together age, living situation, parity, friend support, partner support and family support	Lagged design used in sampling could have introduced bias. No intent to treat analysis and could not gain information on numbers or details of those refusing to participate. Generalisability of findings limited.
		ended in abortion during the time period of the study		Development of scale to assess boyfriend or husband support among pregnant teenagers (5 items)	Cronbach's alpha for this scale = 0.94	accounted for 15% of the variance). Findings did not support hypothesis that social support acts as a stress buffer.	

# **Chapter Two**

**Major Research Project** 

## **Expectations of Motherhood: A qualitative investigation**

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#### <u>Abstract</u>

**Purpose:** Women's experiences of depression following childbirth have received increased attention within the research base over the past two decades. However, depression that occurs during pregnancy, or antenatal depression, remains poorly understood and often unrecognised. The aim of the present study was to explore women's experiences of pregnancy and antenatal depression in order to construct a psychological understanding of antenatal depression.

**Method:** Nine women who had, or currently, experienced depression during pregnancy were interviewed. The interviews were transcribed verbatim and the data was analysed using a social constructionist grounded theory approach.

**Findings:** An over-arching theory emerged of antenatal depression as an interpersonal, transactional process, which was reflected in the themes, including 'the construction of meaning – developing an understanding of antenatal depression', 'recognising and managing transitions', 'the interpersonal environment' and 'reflections on the past and hopes for the future'. Contradictions, struggles and unresolved aspects of experiences within the women's narratives highlighted the complex interpersonal processes negotiated by participants, who suffered from antenatal depression.

**Conclusion:** The importance of an individual's interpersonal world in shaping experiences is emphasised. In light of the findings, psychotherapeutic implications are discussed.

Key words Antenatal depression, perinatal, grounded theory, interpersonal.

#### **Introduction**

Depression has been identified as the leading cause of disease burden among women of childbearing age (Bowen & Muhajarine, 2006). Much of the literature on depression and motherhood has focused on postnatal depression (PD), with researchers reporting an estimated prevalence rate of 10% (Cooper & Murray, 1998). However, a number of studies have demonstrated an equal or higher rate of depressive symptoms occurring during the antenatal period (Dennis, Ross & Grigoriadis, 2007; Heron, O'Connor, Evans, Golding, Glover & The ALSPAC Study Team, 2004). Estimates of prevalence rates for antenatal depression (AD) range from 6.9% to 20%, with a mean of 10.7%, which is similar to rates (7%) in the general population (Mian, 2005). The research base on risk factors associated with AD has identified individual and interpersonal predictors of AD. Lee et al. (2007) and Spinelli and Endicott (2003) reported that a personal or family history of mood disorder, low self-esteem, stressors and demographic variables (i.e. young age, low educational status and history of child abuse) were predictors of AD. The identification of risk factors associated with AD is beneficial in its contribution to the research literature on AD and in facilitating developments in early identification and monitoring of high risk groups (see Chapter 1. Systematic Review). However, profiling risk factors does not address the adverse consequences associated with AD.

Murray, Cooper and Hipwell (2003) reported that pregnant women with depressive symptoms experience emotional and social withdrawal, as well as increased concerns about the pregnancy and their ability to parent. Research has shown that women with depressive symptoms are more likely to demonstrate unhealthy behaviours such as poor adherence to antenatal care, use of tobacco, alcohol and other substances when compared with those without depression. A study by Oberlander, Warburton, Misri, Aghajanian, and Hertzman, (2006) found a range of neonatal outcomes were associated with AD including low birth-weight and medical complications. An association between psychosocial stress and preterm delivery and/or low birth-weight has been demonstrated by a number of studies (Orr, James, & Blackmore, 2002; Rich-Edwards et al., 2001). Infants of mothers with AD also show neurobehavioural differences, such as poor performance on neurological exams demonstrating poor motor skills, activity, coordination and resilience (Lyons-Ruth, Connell & Grunebaum, 2000). These adverse

neonatal outcomes may have long term consequences for some children. Mian (2005) suggests that behavioural and biological changes have been found to persist into late childhood and are predictors of increased vulnerability to psychopathology.

Another long term consequence of AD is the associated increased risk of postnatal depression. Approximately 50% of postnatal depressions begin during pregnancy (O'Keane & Marsh, 2007). PD is a distressing experience for both mother and infant, which affects a mother's ability to cope with the care of her baby and limits her capacity to engage positively with her baby in social interactions (Poobalan et al., 2007). The parent-child relationship is a key factor influencing child development and attachment security. Moderate associations between maternal depression and negative, disengaged parenting behaviours were observed in a meta-analysis by Lovejoy, Graczyk and O'Hare (2000). These alterations in parenting behaviours have an impact on the infant's cognitive and emotional development. It appears that the negative effects of postnatal depression on parenting behaviours can lead to the development of an insecure attachment organisation (Teti, Gelfand & Messinger, 1995). It has also been suggested that attachment insecurity is associated with conduct problems in school, poor modulation of affect, and increased risk of psychiatric problems (Rutter, 1990).

Consideration of the factors associated with depression during pregnancy and postnatally is required if the negative outcomes outlined above are to be avoided. Parry and Newton (2001) propose that hormonal changes account for the incidence of depression during the puerperium. As well as the biological changes associated with pregnancy, the experience of pregnancy itself represents a period of transition and change. The transition to parenthood is considered a developmental phase which involves significant personal, familial and social change (Feeney, Alexander, Noller & Hohaus, 2003). Adjustment to significant life events has been found to be associated with increased levels of stress. As pregnancy involves many changes, including both gains and losses, it represents a particularly stressful time for many individuals. Lee (1995) investigated women's views on what they considered to be central psychological events of their pregnancy. Events such as finding out about the pregnancy, "going public", attending antenatal classes and childbirth were identified by participants as particularly important. The transaction between biological, psychological and social factors during these events was emphasised. The author states that pregnancy is a

critical time involving several interpersonal milestones, including the development of the mother-child relationship and adaptations to established interpersonal relationships. As such, Lee (1995) argues that the events of pregnancy should be viewed as developmental milestones, or crises, to which the mother must adapt.

Central to this concept of change and transition is the relationship between mother and child, and the progressive involvement of significant others throughout the pregnancy, and into infancy. Fonagy, Steele and Steele (1991) propose that the mother-child relationship is constructed before birth, with organisation of attachment to the forthcoming infant being provoked by pregnancy. They found expectant mothers' mental representations and organisation of attachment, as measured by the Adult Attachment Interview (George, Kaplan & Main, 1985, 1996), predicted the subsequent quality of the infant-mother relationship in 75% of their sample group. This finding emphasises the importance of interpersonal relationship patterns. Interpersonal relationships play a key role in facilitating individual's communication of both positive and negative affect and provide a forum for reflection on experiences, which is likely to influence processes of adaptation and growth.

The role of interpersonal relationships in aiding the processes of adjustment to pregnancy and transition to parenthood has been discussed within the research literature (Escriba-Aguir, Gonzalez-Galarzo, Barona-Vilar & Artazcoz, 2008; Feeney et al., 2003; Spinelli & Endicott, 2003). However, the underlying mechanisms through which such relationships influence adaptive or problematic adjustment are complex, due to the dynamic nature of interpersonal interactions. The term 'social support' has been widely used to describe the role that significant others play in response to difficult circumstances in an individual's life. There has been much debate within the literature regarding the essential elements of social support (see Chapter 1. Systematic Review). Source, type, quality, availability, satisfaction and conflict are all important aspects of support which have been highlighted by researchers (Cohen & Wills, 1985; O'Hara & Swain, 1996). Raymond (2009) explored women's experiences of AD with the aim of identifying beneficial support mechanisms, using a qualitative approach. Women in the study reported emotional isolation in terms of physically being alone and a lack of emotional support from partners, family and friends. Conflictual relationships with

partners emerged as distressing experiences for participants, which contributed to feelings of rejection and fear of abandonment, and resulted in women engaging in a process of self-silencing (Jack, 1991). Tseng, Hsu, Liu and Chen (2008) also used a qualitative methodology to investigate experiences of AD among Taiwanese women. Negative feelings during the transition to parenthood were discussed with regard to women's experiences of inadequate social support, multiple conflicting roles, emotional instability, and future uncertainties. Tseng et al. (2008) highlighted the importance of providing social support to encourage feelings of acceptance, affirmation and satisfaction.

Adequate social support and supportive interpersonal relationships that provide a forum for the expression of affect have been cited as factors which might protect against the adverse effects of AD. However further research is needed to substantiate these claims. A limited number of studies have been conducted on factors which might protect against depression in the antenatal period. Grote, Bledsoe, Larkin, Lemay and Brown (2007) report that individual protective factors of optimism and perceived control are associated with less severe symptoms of depression. They argue that individuals with high levels of optimism and perceived control employ constructive coping strategies, and have increased levels of motivation to cope when exposed to stressors.

In order to address the difficulties associated with AD for the individual, her infant and her family, an understanding of the specific experiences and challenges faced by women suffering from AD needs to be achieved. Literature on AD and women's subjective experiences of being pregnant while suffering from low mood is limited. Potential reasons for the dearth of research on AD include: an emphasis on physical well-being of the mother and fetus during pregnancy by professionals, families and society to the exclusion of mental well-being, misconceptions regarding the experience of pregnancy as a "buffer" against low mood and misattribution of symptoms of depression to the changes and emotions associated with pregnancy. A small number of studies have examined women's experiences of being pregnant (Lee, 1995; Rudolfsdottir, 2000; Zasloff, Schytt, & Waldenstrom, 2007) but have not addressed the issue of AD. Zasloff et al. (2007) found that expectations and experiences of childbirth varied according to maternal age. Younger women in the study were observed to have more anxious and depressive symptoms during pregnancy and social problems were more prevalent in this

group. However, the sample size included in the younger and older age extremes were small affecting the external validity of these findings. Rudolfsdottir's (2000) qualitative study outlines a feminist perspective on how pregnancy is formulated in medical and healthcare discourses and how these formulations affect the experience of pregnancy, in particular women's agency. The author argues women's experiences of pregnancy and childbirth do not mirror the institutionalized normative ideas with which they are presented because individuals have different life stories. Results of the study suggest that the binary opposition between the mind and body makes women's agency in pregnancy and childbirth problematic and allows those in positions of authority to ignore women's wishes and views.

In addition to Raymond (2009) and Tseng et al.'s (2007) qualitative studies investigating AD, Bennett, Boon, Romans and Grootendorst (2007) used a qualitative methodology to examine the processes that women used to manage AD. Women in the study accounted for their experiences of depression in terms of symptoms, the events and circumstances that they perceived contributed to their depression and the steps they took to address their depression. To arrive at what they considered to be the 'optimum maternal situation' women in the study engaged in a complex process which included recognising the problem, dealing with their feelings of shame and embarrassment, and considering the consequences of depression and its management, in order to reground the self and regain control of their lives. However, the focus of the study is relatively narrow, concentrating on the management of AD in a highly selective participant group.

Interpersonal themes (such as role transitions and the importance of supportive relationships) permeate the research on AD. Examination of interpersonal issues in relation to the experience of being pregnant and suffering from low mood would inform the existing research base. It may enable the identification of issues which professionals and services need to address when working with this client group and highlight specific issues interventions should focus on. Qualitative methods of research allow in-depth exploration of individual's personal experiences and identification of common themes which may emerge among participants' accounts. A qualitative approach would allow for systematic investigation of interpersonal issues such as role transitions, social relationships and attachment experiences associated with AD. The present study explored individual's experiences of pregnancy and the transition to parenthood. In

particular, experiences of AD were investigated. Interpersonal issues which impact upon AD were explored using a qualitative grounded theory approach.

#### **Aims and Objectives**

#### **Aims/Research Questions**

- The study aims to investigate women's experience of pregnancy and their expectations of motherhood.
- Role transitions and interpersonal factors associated with AD will also be explored.

#### **Objectives**

- 1. To describe women's experiences of pregnancy and AD.
- To describe role transitions experienced by pregnant women who suffer from AD.
- 3. To describe the challenging and rewarding aspects of pregnancy and transition to parenthood in women who suffer from AD.
- 4. To describe their relationships with family and partners.

#### <u>Method</u>

#### **Grounded Theory**

Grounded theory methods consist of "systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves" (Charmaz, 2006). Grounded theory has its origins in the works of Glaser and Strauss (1965, 1967). More recently several researchers (Bryant, 2002; Charmaz, 2006; Clarke, 2005) have proposed a social constructionist theoretical perspective of grounded theory in which the researcher plays an active part in the process of meaning making and development of theories. As such, the social constructionist approach involves a process of dialectical and active construction, which differs from Glaser's original stance of objective reality. Raymond et al. (2009) suggest that a constructivist approach is particularly appropriate for depression research as the experience of depression is a subjective phenomenon and often involves the individual's construction of the world and their relationships in that world (Bennett et al., 2007). A social constructionist grounded theory approach was used in the present study. The use of this approach facilitated exploration of women's subjective experiences of AD, which were connected to individual and collective interpretations of depression and pregnancy. Fundamental assumptions of the social constructionist approach, including the nature of self and the concept of change, provided a useful framework within which interpersonal interactions, issues regarding identity and how the women constructed an understanding of their depressive experiences could be explored. From the outset of the study the researcher reflected on her role in constructing meaning of the participants' experiences of depression. It was essential that potential biases that the researcher brought, for example assumptions about the family unit and support that individuals would receive from their family of origin, were openly acknowledged and considered in relation to the process of constructing an understanding of AD. The researcher's clinical background in working with individuals who had suffered from depression was also important to consider, in particular the cognitive theoretical approach that she drew upon when working with individuals who suffered from depression.

#### **Participants**

A total of nine women participated in the study. Ethical approval was granted by the Local Research Ethics Committee (Reference number 08/S0701/129: see Appendix 3.1) following which management approval was obtained (Reference number PN08CP436: see Appendix 3.2) All participants were recruited from a Perinatal Mental Health Service (PMHS) based in Greater Glasgow and Clyde NHS. Participant characteristics are displayed in Table 1. The participants were women aged between twenty-one and forty-one years of age (median age: thirty-two). Of these participants three women were pregnant at the time of the interview, the remaining five had had their children within the past four years (range: two months – four years). Four participants were primiparae and five were multiparae (four participants had two children and one participant had four children). All participants were in a relationship at the time of the interviews. Staff at the PMHS confirmed that participants had a diagnosis of depression, with exception of one participant who did not have a diagnostic label but who, in her own and staff's opinions, had suffered from an episode of depression during pregnancy. In total thirteen women responded to the study advertisement. However, three women did not attend the first meeting with the researcher and decided not to participate. One woman described anxieties about participating in the research study and reported that she did not feel able to discuss her experiences at that point in time, so therefore did not participate.

#### Insert Table 1 here

#### Procedures

#### Sampling strategy

Women who had experienced depression during pregnancy were invited to participate in the research study through an advertisement which was posted in the PMHS and an out-patient psychiatric department attached to the PMHS. Information sheets (Appendix 3.3) for the study were also placed in the PMHS and out-patient department. Each service user was invited to meet with the researcher, or to speak to her on the telephone, regarding what involvement in the study would entail. During this meeting, or conversation, the researcher discussed the details in the information sheet and answered any questions that individuals had about the study. Participants were given a copy of the information sheet and were offered one week to consider their consent to participate. Those individuals who consented to participation signed a consent form (Appendix 3.4) and were interviewed in one session. All interviews were digitally recorded, with the permission of the participants, to facilitate later analysis.

#### Sensitivity to context

It has been argued that researchers employing grounded theory methods should avoid conducting literature reviews early on in the research process in order to ensure that they do not have preconceived concepts in which they "dress their data" (Charmaz, 2000). Glaser (1992) warns against forcing data through such preconceived categories and hypotheses. The researcher was mindful of this issue. However, it was not possible to completely delay the review as a research proposal and application to an ethics committee were required. The literature review served as a starting point, which sensitised the researcher to the field of AD and motherhood (Henwood & Pidgeon, 2003). This was consistent with Blumer's (1969) depiction of "sensitizing concepts" in that, the literature review provided the researcher with initial ideas and areas of interest to explore. Therefore, interviews were not based on a "received theory" or preconceived theoretical framework, rather the approach to initial sampling and interviews was open and flexible to allow for, and adapt to, emerging theory (Dey, 1999).

The research study was presented to staff at the PMHS and feedback was provided regarding how to make participation in the study accessible to potential participants. Staff also suggested topics which they believed could be relevant to explore within the interview. Prior to conducting interviews with research participants the researcher completed the interview with a non-depressed pregnant woman. Following this, and after discussions with both research and field supervisors, an interview guide was developed (Appendix 3.5). However, the interview was not formerly structured, instead the aim was to facilitate discussion elucidating the individual's experiences and the information that the participant perceived as important. As interviews progressed, questions were added, re-ordered and removed according to emergent themes, with the overarching goal of remaining broad, open and flexible in focus. The researcher began the interview with an initial orientating question: "Could we start with you telling me a little bit about yourself and your family?" Participants were then encouraged to reflect upon their experiences of pregnancy and their emotions during pregnancy. Prompts, such as "Can you tell me a bit more about that?" or "What do you think about that?" were used to facilitate more in-depth exploration of topics. The language and terminology used by participants to describe their experiences were incorporated into the in-depth interview in an attempt to remain sensitive to the participant's culture, social interaction and use of language, as outlined by Yardley (2000). For example, one participant referred to suicidal ideation as "dark thoughts". This term was then used by the researcher throughout that interview when discussing suicidal ideation. The author endeavoured to ensure that the language she used to describe participants' narratives, and her own interpretations of those narratives, did not impose restrictions on the richness and diversity of the data.

The participants in the study had all experienced depression and the researcher was aware that talking about their experiences may cause distress. Therefore, the study incorporated a measure to monitor the participants' level of comfort before and after the interview. Participants were asked to rate, on a five point Likert scale (see Appendix 3.6), how they felt before and after the interview. Discussing personal experiences of depression and pregnancy did not affect level of comfort, in fact, anecdotally, many of the participants reported feeling they had benefitted from the discussion. The modal comfort level prior to the-interview was three, and post interview was four, suggesting

that in general women became more comfortable during the course of the interview (see Figure 1). In an attempt to facilitate a more equal power-balance, interviews were scheduled at a time and place of the participant's choice and took place in locations familiar to the participant, such as clinic rooms within the PMHS and an outpatient psychiatry department. Mothers who wished to, brought their infants to the interview and were encouraged to carry out any childcare tasks as and when necessary. Prior to commencing the interview an informal conversation was held between the researcher and participant to facilitate engagement and the building of a relationship between the two parties.

#### **Commitment and rigour**

Nine participants were interviewed. The length of interview was flexible ranging from 34 to 104 minutes (median length 50 minutes). Brief memos of personal reflections and theoretical insights (Charmaz, 2003) were made immediately after each interview. The author transcribed each interview, taking approximately 4-6 hours each, and simultaneously made memos concerning personal reflections and coding ideas. Data collection and analysis was conducted simultaneously in order to inform future data collection via the emerging analysis. Each transcript was then coded line-by-line, with each line of written data being assigned an individual code. This level of analysis enriched the researcher's understanding of codes which were related to the emerging categories and contributed to further memo-writing. This was followed by two levels of focused coding whereby initial significant and/or frequent codes were integrated and organised to produce sub-categories. Advanced memo-writing was performed to aid the elucidation of ideas and enhance future data collection. Analysis of the data was an iterative process, with the author continuously moving between coding and conceptualising data. Throughout this process the author was aware of the necessity to ensure that the emerging ideas and categories were firmly and clearly grounded in the experiences of those who constructed the data (Mills, Bonner & Francis, 2006).

Constant comparative methods (Glaser & Strauss, 1967) were used, throughout every stage of analysis, to generate similarities and differences between codes and later emerging theoretical ideas. For example, participant's views on positive aspects of their pregnancy were compared within and across interviews. The interviewer used negative cases to challenge and develop emerging themes. For example, participant 4 (Lisa)

disconfirmed the view that other people dismissing the participants' difficult emotions as part of the process of pregnancy was an unhelpful response. Instead she felt that attributing the feelings of distress and anxiety that she was experiencing to a hormonal or biological imbalance, brought about by the pregnancy, offered her a sense of comfort and hope that there would be an end point to the difficult emotions she was experiencing.

Lisa: I would say to myself it isn't depression it's just your hormones it's just you are pregnant and that was another way of dealing with it. *(Right, ok)*. So I am not always going to feel like this it is just 'cause you are pregnant.

Was that what you said to yourself or ..?

Lisa: No that was what {Person 1- partner} said to me. He said 'remember your hormones are all over the place you are pregnant so it is not always what you think it is that's wrong with you, your hormones have got a lot to do with it'. And when you think of it that way, you think, he says by the time you have your baby you'll not feel like this. And I thought that was another way to think as well.

Coding was compared within and across all interviews. The analysis including the coding framework, memo writing and emerging themes were discussed at bi-weekly research supervision meetings and within a grounded theory group that met frequently for peer supervision. Four transcripts were subject to coding conducted by a masters level English literature graduate who had a background in feminist literature. As such, the emerging codes and the process of constant comparative analysis were complemented by the involvement of others' perspectives.

Theoretical sampling refers to seeking further data to check emerging theory in order to refine and elaborate categories within the theory (Charmaz, 2006). This was used following interview 6 to develop the emerging categories. Statements and events were sought from participants to explore the emerging theory and initial categories. Theoretical sampling continued until interview nine, by which point it was felt that no new conceptualisations were emerging. Initially, theoretical development was guided by the interviews and the early coding and memo-writing processes. As the analysis progressed, the use of mind maps to structure and organise the data, methods of constant comparative analysis, advanced memo-writing and theoretical sampling enabled a more advanced level of analytic thinking and theory development. The research analysis sought to achieve "theoretical sufficiency" (Dey, 1999) rather than "theoretical saturation", as the latter has been argued to be a "goal rather than a reality" (Willig, 2001). It has been argued that researchers attempting to achieve theoretical saturation run the risk of forcing data into established categories, thereby limiting the

flexible and open nature of data collection and analysis which is a crucial aspect of grounded theory.

#### **Transparency and coherence**

The context in which the study was conceptualised, conducted and interpreted was considered throughout the entire process. The author of the research carried out this study as part of her Doctorate in clinical psychology. While the researcher had no personal experience of AD or motherhood, she did have experience of working with individuals who had suffered from depression, during her clinical work, throughout her training. The interest to conduct the study originated from awareness of issues surrounding postnatal mental health and the realisation that the phenomenon of AD remains poorly understood. Discussions with an expert in the field of perinatal mental health encouraged the author's interest in this area. Initially the author was keen to develop and evaluate a psychological intervention, based on a cognitive interpersonal psychotherapeutic approach, for AD. However, it was felt that it would be unrealistic to develop and deliver a psychological intervention within the time constraints. It was also apparent that the literature on women's experiences of AD required further development. Consequently, the author wished to build a theory that captured and reflected women's experiences of AD, based on what they themselves perceived as meaningful and important issues.

Where possible the context of excerpts has been presented to facilitate interpretation and transparency. The excerpts chosen represent the most variation in the theory presented, or reflected an important insight into the data. For example, the following quote reflects a number of salient insights into the data, including participants' expectations regarding others' understanding of their experience. It raises issues regarding biological and medical conceptualisations of depression, attempts to seek support and availability of support.

Tracy: I thought if anybody would have understood what I was going through it would have been my mum. *(Okay)*. Having been through depression so many times herself. Mum thinks that what I am going through is just my emotions with this pregnancy, which could very well be, my hormones are everywhere. But for my mum not to understand, like when I try to speak to her and stuff, it's like it's not important enough for her to stop what she is doing and listen.

The reflections and experiences of the researcher were discussed at bi-weekly meetings with the author's research supervisor. As already mentioned, the process of data gathering and analysis was designed to enhance transparency and coherence. The relative inexperience of the researcher helped to address the power balance between the researcher and participant, placing the participant as the expert in the situation.

#### **Findings**

For the purposes of clarity the researcher's dialogue is presented in **bold** type, however, brief remarks or comments made by the researcher are inserted into the paragraph in parentheses e.g. (*Right, okay*). Interviews were transcribed in accordance with the guidance set out by Main (1996), which was developed for the Adult Attachment Interview (George, Kaplan & Main, 1985, 1996). Pauses are indicated by dots with one dot representing a one second pause. Pseudonyms were used to protect participants' identities, while also preserving the persona and identity of the participants as individuals.

#### The research process as a vehicle for construction

It seemed that partaking in the research study activated a process of reflection within most participants, where they appeared to be attempting to develop a story about their experiences. This led to the exploration of potential conceptualisations and personal ideas regarding aspects of themselves, their relationships and their lives, which they believed may have impacted upon their experiences. This process was continuous throughout the interview. Several participants used phrases such as 'looking back' or 'in retrospect' to indicate that they were thinking about various issues which may be important aspects of their experiences and now had a new meaning for them.

Emma: Em I think in retrospect with the second pregnancy, I think at the time I kinda thought, you know, this is just exactly the same as I was with my first pregnancy, so I didn't really attribute the physical sickness to why I got depressed but then looking back I think it certainly didn't help. (*Okay*). I think it did get me down. **So, you think the feeling so physically unwell did end up getting you down?** I think it did contribute to it.

Other participants used terms to signpost events and time periods within their stories. For example, using phrases such as 'at that point' to represent how the information they were providing was relative to experiences that had occurred in the past and the feelings that were associated at that point in time. These participants reported having an understanding of what they believed was the cause or explanation for their experiences of depression. The presence of established conceptualisations regarding experiences of depression was reflected by a sense of certainty in these participants' responses, which was less obvious in those participants who were actively engaging in constructing meanings.

Lisa: I thought I don't want to be, go back down that road. (Yea). So at that point I was really really bad and I thought I cannae have this baby.

For some participants the opportunity to discuss their feelings, as offered by the research interview, was considered in and of itself a therapeutic encounter.

Tracy: And like speaking to yourselves, it's like then you'se are not judging me for what I am saying *(mm-hm)*, or kinda being, taking somebody's side or not taking, do you know what I mean? You'se are kinda just looking in on it from the outsider's point of view, you are not judging.

The research interview was developed and structured with the aim of creating a safe environment within which participants could openly explore the experiences they had encountered and associated thoughts and emotions. As such the researcher attempted to create some of the parameters of a 'secure base', as outlined by Holmes (2001), through the use of therapeutic techniques such as empathic listening, responsiveness, warmth, and intermittent summarizing. The majority of participants welcomed this forum for reflection and used it to create meaningful narratives influenced by in-depth explorations of experiences. One participant appeared to find the process of reflection challenging. She struggled to engage in the exploration of her experiences, resulting in many areas of discussion being closed down rather than elaborated on.

#### The construction of meaning – developing an understanding of AD

The construction of meaning of participants' experiences of AD provoked explorations of important aspects of experiences and began to uncover developing conceptualisations of AD. This occurred at both intra and inter personal levels, with the transactional nature of depressive experiences emerging within participants' accounts. As such, participants appeared to engage in a process of 'complementarity' (Kiesler, 1982) where certain interpersonal behaviours provoked or pulled for other specific interpersonal behaviours. The role of the participant, and her relationships with others, in construing and constructing her environment were embedded within all aspects of the construction

of meaning. Through the construction of meaning a central concept of *AD* as a *transactional, interpersonal process* emerged. This gained expression through core themes of 'developing an understanding of AD', 'recognising and managing transitions', 'the interpersonal environment' and 'reflections on the past and hopes for the future'.

Many participants' accounts were grounded in difficult experiences of pregnancy (e.g. miscarriage, obstetric complications and physical ill-health during pregnancy). It is important to consider the impact that such experiences may have had on aspects of the depressive episodes they suffered during pregnancy. Those participants who had themselves, or whose close relative, experienced a previous miscarriage referred to feelings of concern and anxiety throughout their pregnancy. A sense of urgency emerged, whereby, participants appeared to want to 'get through' the pregnancy so that they could ensure the safety of the baby. Feelings of protection and responsibility were associated with difficult experiences of pregnancy.

Kay: Just wanting to get to the end of the pregnancy. (Ok). Because the pregnancy was the, instead of the big enjoyment part of it, and or, well it, the first time being pregnant I enjoyed being pregnant. It was great I wasn't unwell and all the rest of it. (Yea). So that should have been a part that was enjoyed but instead it was let's get this move along, move along, move along. (Ok). Just get to the end, em, and it was just, kind of a process.

#### <u>Descriptions of Experiences – beginning with symptoms</u>

Central to the process of meaning making was the concept of developing a personal understanding of experiences. All participants began describing their experiences of suffering from depression during pregnancy by discussing the symptoms of depression that they had, or currently, suffered, including fatigue, apathy, loss of appetite, low mood and suicidal ideation. These descriptions evoked a sense of hopelessness and despair which had been felt by participants during depressive episodes.

Rebecca: I want to sleep all the time, eh, I don't want to open the blinds in the morning when me and my daughter do get up. (Ok). Em I have lost my appetite, anything even a sandwich I feel I am pure full and I can't finish it or em..I don't want to do anything.

Fiona: I think I am always going to be like this too. I don't see when I am going to get better. I don't believe that I will ever get better. I think it can be managed but it is not going to go away. (Ok). Em, and sometimes I do sort of give up every now and again.

It seemed that many participants felt surprised by, and unprepared for, the negative feelings they were experiencing while pregnant. These concerns appeared to be linked

to societal perceptions of pregnancy as a time of celebration and joy and the "myth of perfect motherhood" (Spinelli, 2001 p. 105). Participants discussed their efforts and desires to hide how they were feeling from others due to fears that they would be 'judged' (Tracy) or that people wouldn't 'approve' (Kay). The negative feelings the participants talked about seemed to threaten these socially and culturally constructed beliefs and ideals about pregnancy and the transition to motherhood. There was a sense of pressure to cover up negative experiences because they did not fit with 'the norm'.

# So it sounds like through the pregnancy and then after it as well, having all these fears and then trying to protect against those fears, is that right?

Erin: Yea. And protect other people from them as well, you know, not really saying what was going on.

#### Right ok so protecting other people from the thoughts you were having?

Absolutely, and I suppose I didn't even go into the real depth with {person 3- CPN} or {person 4- psychiatrist} just how gruesome my thoughts were. *(Yea)*. And these kind of visions or images, *(images yea)*, the whole time.

Lisa: I went into denial, I didn't tell anybody I was pregnant, *(mmm)*, apart from well my family knew but as far as like my friends. *(Mm-hm)*. I even told him don't tell anybody, I just really really didn't want to celebrate it at all. *(Yea)*. Em and I started really panicking. **You didn't want to celebrate and you were panicking?** 

I didn't want to celebrate at all. Just cause I knew the way I went, *(mmm)*, you know I got panicky, see when I got really low I just thought there is no way I can cope with a baby.

Some participants openly acknowledged the stigma they felt was attached to AD, reflecting that it was a barrier to accepting and exploring the feelings that they were experiencing. As such, stigma and the pressure to conform appeared to limit the process of meaning making and the development of a personal understanding. Instead pre-conceived concepts regarding pregnancy as a positive life event were assumed by many participants and experiences of negative emotions and thoughts were concealed.

#### That you were pregnant and she was..

Kay: That I was pregnant and I suppose em I didn't say then about, you know, there was no way that I could say then about how I felt about being pregnant or about having had the miscarriage and not being not enjoying pregnant as much as I would have liked to have done. So again sort of suppressing how I actually felt.

..... I don't know how it would have been if I had been more honest. (*Right*). But I think it's just there is such a stigma attached.

# Ok, so sorry you were saying there just before that break you were kind of managing by, well the difficulties were that you were shutting people out, is that right?

Erin: Yea I shut people out because I didn't want anybody to know what was going on, I, yea I just I kept thinking I'll get through, I should be able to get through it, *(yea)*, and feeling that kind of, I should be able to do this, *(mm-hm)*, I should be stronger than this, I should be able to do all this.

Fiona: I think there are lots of people that aren't very nice, not very understanding towards people that have got depression. (*Ok ok*). Even like friends, you just sort of hear people not being very nice and I have always thought kind of my little secret. (*Oh right, ok*) keep to myself.

#### Viewpoints of / Models of Depression

In attempting to develop a coherent understanding of experiences of AD many participants commented on the difficulty they had distinguishing between symptoms of depression and physiological aspects of pregnancy. This difficulty separating out symptoms appeared to cause further confusion and created more difficulty arriving at a personal understanding of their own experiences.

Emma: Did I feel so lethargic because of the medication or because I was nine months pregnant, or because I wasn't sleeping? I just,..it kind of, didn't really know what was contributing.

Lisa: It is hard when you are pregnant to understand how you feel 'cause your emotions are all over the place. It is hard to say, you know, is it a depression or is it your hormones?

Somatic symptoms of depression were frequently discussed by participants and a medical or biological view of depression appeared to dominate the majority of participants' accounts of their experiences. Participants used terms such as 'chemical' or 'hormonal' (Rachel) to describe depression and several women explained the occurrence of depression in terms of a family history or their genetic make-up.

Rachel: Yea it does tend to go in cycles and I think I can equate those cycles to my menstrual cycles. But I think my postpartum depression is just that, it is a hormone related depression. (Ok).

#### And did you feel that was the same during the pregnancy?

Yea absolutely, the more pregnant I got the heavier it felt that less em..positive I felt. (*ok*). And I think you know, whilst I feel guilty and all those things, I think that when you are depressed because of hormones you look for reasons to justify it, (*ok*), rather than just saying oh it is chemical. You know I think you reach for reasons because you want to feel you can do something about your hormonal imbalance or whatever but you actually can't or what you can do is a physical thing as opposed to an emotional thing so talking to someone about how I felt doesn't always help that much (*right*) cause it is a physical thing.

Rebecca: Em my depression wasn't that bad it's sort of an ongoing thing really, but it gets worse. (*At certain times?*). Yea after I had my son the first couple of weeks I was pretty bad but I am getting a lot better now. (*That's good*). So it was different, sort of ongoing thing, but it is worse at certain times. It kind of runs in my family, (*does it?*), my mum suffers from really bad depression and my grandpa, who has now died, he was depressed as well.

Fiona: Well I feel as if I was just born this way (*right*) I don't feel as if it is anything in particular that has happened that has made me like this I just think it is the way I have been born.

However, despite participants' expressions of biological or medical conceptualisations of their experiences this did not necessarily cohere with the experiences that emerged within their narratives. Interpersonal issues transpired to be particularly salient aspects of many of the women's experiences. For example, the quote above by Fiona suggested a perception of genetic vulnerability, or inevitability, regarding depression and she denied the possibility of other factors which occur(ed) in her life that could contribute to her experience of depression. Yet, throughout her narrative she described difficult or conflictual interpersonal relationships, which seemed to have been particularly important aspects of her life story that were likely to have impacted upon her experiences.

Fiona: Em, he wasn't a very nice husband or father. *(Ok)*. And it was pretty obvious and I often kind of think you know if your husband is that horrible to your children why would you stay you know. *(So he was horrible?)* Mm-hm. I think my mum is the old school where you made your bed so you lie in it. *(Right)*. But at the same time I think we kind of suffered for it. *(Ok)*... To me it was worse than that, it was all the psychological emotional, mental abuse he done to his family. *(Mm-hm)*. Sort of the worst enemy I have ever had.

Later in the interview Fiona discussed her experiences of, and views on, interpersonal relationships and describes a sense of threat and danger about developing relationships, which she herself linked to problems with trusting others and the expectancy that she will be let down by them.

#### Do you have many friends?

Fiona: Not really no. I have one friend but I don't see her that often. I have got acquaintances but nobody that I would really, it is not really something that I look for is friends *(Ok)*. It is probably a trust thing. *(Right)*. I have had friends in the past that have not found very trustworthy and things and I have lots of so-called friends, *(yea)*, and I kind of choose not to have any now. *(Right)*. It is probably easier not to let people get close.

This discrepancy between expression at one level (depression viewed from a biological stance) and construction at another (the interpersonal atmosphere in which depression can arise and exist) regarding processes involved in the participants' experiences of depression was noted in several other participants' narratives.

#### The impact of others' views on personal understandings

Many participants reported that significant others within their lives also viewed their experiences from a medical standpoint. One participant highlighted this issue when she was discussing her partner's and parents' views on the treatment she should receive. This account emphasises the feelings of disempowerment and lack of autonomy, which she experienced as a result of the use of this medical framework for conceptualising the difficulties she encountered.

Emma: Em but I think they knew that I would get better and they just were frustrated, and you know and they just, but I think it was just another one of those times where I was the invalid and I just.

# You were the invalid? Emma: Or I was ill and they were kind of I think it was quite often, kind of, talked about as if I either wasn't there. Right, and how did that make you feel? Emma: Well I didn't care really to be honest. You didn't care? Emma: Yeah I think from my husband's point of view he is more, he was more interested in what the professionals had to say I think my mum and dad were maybe.. there was an element that was their experience so that was kind of, well they were like 'that was how you fixed me so

The concept of depressive experiences eliciting a need to be 'fixed' arose in several participants' descriptions of their families' and partners' opinions and views regarding their experiences of depression. As outlined in the above quote the medical view of depression adopted by significant others seemed to provoke images of the participant as broken or damaged, which located the difficulties within the participant adding to feelings of disempowerment and lack of agency for several participants.

#### **Recognising and Managing Transitions**

why can't they fix you?'

Several transitions and changes were encountered during the course of pregnancy and early motherhood by the women who participated in the study. These transitions represented challenging, and in some instances positive, experiences. It seemed that awareness and acceptance of these transitions was an important part of both understanding depressive episodes and coping with them. Women described thoughts and feelings about becoming a mother for the first time, or becoming a mother to another child, while also suffering from depression. Motherhood represented a role transition for many participants, particularly those who did not have any previous children. However, those who were already mothers also described role transitions that would or had occurred in the context of having another child (i.e. being a mother to several children, leaving the workforce and the emergence of a family unit as opposed to parents and one child). It is interesting to note that almost all participants discussed their occupational roles when discussing the transition to motherhood. As well as role transitions, changes in relationships were discussed in terms of adapting relationships to include the infant and experiences of depression.

#### Identity

Participants struggled to incorporate their experiences of depression into their current life context. The various intrapersonal and interpersonal changes resulting from the women's experiences of depression created new dimensions to themselves and their relationships. All participants discussed how their experience of pregnancy and/or depression had impacted upon how they viewed themselves, and in many instances how they believed it had changed them. Several participants made direct comparisons between what they perceived to be their current and previous self, suggesting that the development of new perspectives and beliefs was a necessary process in order to incorporate their experiences of depression into their new understanding of themselves or self conceptualisations.

Rebecca: But I did feel pretty low the first couple of weeks. I felt like I was changing into a person that I didn't really like.

Ok can you tell me a bit more about that?

Rebecca: Em I just, I felt like I wasn't a good mother, em, I don't know I just felt like I had changed, it's really hard to describe but my whole personality was changing. 'Cause I had really wanted to breastfeed when I was pregnant, I really wanted to do it. I got annoyed at my mum, she was like 'but remember you might not be able to do it', and I was like you just don't want me to do it. And I was upset when I was breastfeeding him and it just wasn't working out. (*Mm-hm*). Em I just was angry about that, and my whole perspective of that has changed now. (*Ok what has kind of changed now?*) I just, if I had another kid I don't think I would breastfeed them, I kinda feel sad cause I really wanted to do it. (*Yea*). Em I think it was just because it was a lot harder than I thought it would be. I feel a lot better now, but I just remember feeling like I was like a completely different person after it.

Emma: I am a totally different person em no, and I think em, just far more kind of relaxed about things *(Mmm)* And now kind of since the pregnancy, and since em depression, I just, I am so much more laid back about everything.

Many participants referred to their occupational roles when discussing perceptions of themselves and the transitions associated with becoming a mother and suffering from depression. Several participants referred to the value they placed on their work role and its importance within their sense of self (Kay, Erin, Rebecca, Tracy, Rachel, Ashleigh). As such, difficult experiences brought about by negative reactions from individuals at work to either the pregnancy or the depression, or both, were distressing for participants.

Erin: I was having real difficulties with work about my return to work, *(mm-hm)*, because they wanted me to come back in the October and I said no, *(yea)*, I told you I was coming back in the January and it started real kind of, every day there would be like negative communication from work. *(Right)*. And that just killed me completely, *(mmm)*, cause work is always so important to me, *(yea)*, and then the idea that oh my god that is kind of gone now I have nothing left.

Kay: Having to, you know, from a full time full on job to not being at work it was difficult to explain why you aren't at work. *(Yea)*. And I went back to work in the April and things at work went really really badly with this particular em, gaffer em, *(ok)*, and that is when things

basically, I think started to go wrong, (*mm-hm*), which didn't necessarily register at the time. (*Mm-hm*). Em but my confidence really took a knock.

#### Loss

As also reflected in the above quote from Erin's interview, transitions experienced by participants often involved a sense loss, both within the individual and with regard to her relationships. The various transitions experienced by participants appear to have challenged their established beliefs and self concepts, which was often described as a frightening or threatening prospect. Participants described how such changes to their self concepts caused uncertainty and confusion which led to feelings of vulnerability and loss.

Emma: There was a lot going on, and I think because I hadn't realised it by being, operating within sort of quite narrow limits (Mm-hm). Like only do things that I was comfortable with and only going places that I felt comfortable. (Ok). Overnight I didn't have my home, I wasn't going to the same place for work, and it kinda it was maybe a sort of loss of identity. (Aha, Yeah). I just got very stressed

The idea of loss (in the context of identity) was also referred to, with regard to how other people were affected by the changes within the participants resulting from the difficulties they were experiencing. Several participants reflected on how changes in themselves were noticed by others, and the ramifications of such changes for interpersonal relationships.

Erin: You know {Person 1- partner} says now, he goes.. 'it was just you know I didn't know who you were anymore'. (Yea). And to go from you know very organised, work, (yea), kinda public appearance all in front of him. (Yea). And then just this person and he says I have never seen you like that. (Mm-hm). And he talks now about how frightening that was. (Yea). And when he left for a while and thought she is never going to be back to, (yea), the way she was. (mmm). And you will not go back to the way you were, (yea), I really believe that you don't. (Mm-hm). But he was kind of going she is never ever I am never going to get her back, (aha), you know and I think there is that sense that maybe people need to be a bit prepared for it more.

As well as loss, participants referred to the new roles and positive impacts on their relationships created by the difficult experiences they had encountered. For example, many participants referred to the pregnancy and experience of depression as developing or strengthening a sense of 'closeness' within their relationships. Several participants felt that they had become more self-aware and had developed new perspectives, beliefs and values regarding pregnancy and motherhood.

Tracy: Yea having my baby and it's kind of bringing my family closer. *(It's bringing your family closer?)*. Yea cause we are now engaged and we are getting married.

Emma: Em I think the whole thing has been really positive for me **Really?** I am a totally different person, em no, and I think em, just far more kind of relaxed about things.

#### Other people's reactions

Adjustment to change and integration of new experiences was also described in relation to interpersonal relationships. Participants reflected on their families and partners ability to renegotiate their relationships with the participant and acknowledge the difficult experiences that they were going through. Many of the women interviewed referred to the roles they played within their families and how the renegotiation of previous roles was a difficult process.

Erin: But I think they maybe struggled to come to terms that I wasn't coping. (*Right ok*). And they found that really hard, that 'the fixer' and 'the mender' needed fixed and mended, (*mm-hm*), and I think they, for a long time I think they would have preferred not to talk about it.

#### **The Interpersonal Environment**

#### Feeling Understood by Others

The ability of significant others, including partners and family members to empathise with the difficulties that the participant was experiencing was commented on by all participants. Feeling 'understood' by others was particularly important to participants, the majority of whom did not feel that their partners could understand what they were experiencing. Feeling understood by significant others appeared to be linked to the need for affiliation, whereby participants sought out information that would suggest partners and/or family members had an awareness and understanding of the depressive experiences they were experiencing. As such, feeling understood appeared to be a salient aspect influencing the way in which participants reconstructed their views of themselves and self concepts in relation to their experiences of depression.

Several women suggested that it was necessary to have suffered from depression in order to fully understand what it was like. However, it was noted that some of the participants who held this opinion, also observed experiences to the contrary, whereby individuals who they had expected to empathise with their situation were not empathic, or understanding, despite the fact that they too had suffered from similar difficulties.

Tracy: I thought if anybody would have understood what I was going through it would have been my mum. *(Okay)*. Having been through depression so many times herself. Mum thinks that what I am going through is just my emotions with this pregnancy, which could very well be, my hormones are everywhere. But for my mum not to understand like when I try to speak to her and stuff it's like it's not important enough for her to stop what she is doing and listen.

Negative responses from others – "becoming a joke" "you need to buck up"

Responses and reactions, to the participants' difficulties, from important individuals in their lives varied. Different types of responses were noted within and between members of the participants' interpersonal network. These included: denying or minimising the participants' difficulties, frustration and impatience, mirroring the participant's behaviour and providing sympathy, affection and reassurance. As such, these responses seem to represent a continuum which participants perceived as ranging from unhelpful and distressing to helpful and supportive responses. Several participants referred to their difficulties being minimised or denied by others.

Emma: I think it was becoming a bit of a joke, that I was becoming really neurotic.

Kay: My mum sort of jumped in and said em, 'it's something to do with low pulse and high blood pressure'. (*Right*). Anything other than it actually being something to do with mental, or difficult to explain.

Lisa: So she really didn't understand what I was, she just thought I was, she was just like 'you need to buck up' you know and, *(right)*, I would probably say the same thing if I wasn't going through what I was going through cause I didn't understand it myself.

The majority of participants who already had children suggested that their own difficulties were having a negative impact on their children. They referred to processes of modelling behaviour, whereby their children mirrored the behaviours their mums displayed. Discussing this impact of depression on their children frequently evoked upset and distressed affect for the participants during the interview. It seemed that participants were experiencing feelings of guilt and shame regarding the negative effects, they believed, their own difficulties had exerted on their children.

Ashleigh: And the way that I had been feeling I think I am affecting the children I have got with the way my moods are I think they are picking up on it. **What makes you think they are picking up on it?** Just the way the oldest one, the way her behaviour is.

Fiona: I think my daughter the older she gets the more she sees that there is something not right {(participant is upset)}. (*Right*). I do tend to take a lot of things out on her (*Ok you feel you take things out on her?*) Yea I feel as if I take my anxieties out on her (*right*) em which isn't right. What makes you think that that you do that?

Well things like when I get quite bad em, I become quite obsessive about cleaning things and tidying, *(right)*, so I tend to shout at her at the room her room is a mess *(Yea)*. She will come in from school and I will go absolutely ballistic and make her clean everything up and tidy everything up. *(Yea)*. Again it is probably the way I react isn't quite normal *(Mmm)* and the older she is getting the more she is seeing that this isn't right.

#### "They supported me"

Some participants discussed helpful and supportive responses they had received from individuals who were close to them. The meaning of what constituted a supportive response differed between participants. The majority described supportive responses as being listened to, empathic behaviours, affection, as well as attempts to reassure and problem solve. Several participants referred to practical support they received from family members with regard to childcare tasks.

Lisa: my family were really really good with me they supported me. What kind of things did they do that helped? Do you know just being there, and if I got upset they would just sort of you know 'are you ok', no mollycoddling me but just being positive.

Rachel: I mean my husband was great. I mean I would come home from work and he would just put me on the couch and feed me and take care of me I mean I had nothing to do at home. *(Ok yea)*. I didn't have to lift a finger which had a knock on effect of making me feel guilty, *(ok)*, cause he was doing everything in the household.

#### Availability of support

All participants believed that they had some form of support available to them. However, the quality of, and ability to access, such support varied. The dynamic nature of social support and interpersonal interactions influenced participants' ability to access or seek support. Some participants described relationships which appeared to preclude seeking assistance for the difficulties that they were experiencing based on attitudes and beliefs about mental health and coping.

Kay: And probably how I would be in any other circumstances, you just you know cope and pile it on you have always managed until now.
So there is an expectation that you have to cope?
Absolutely
Where do you think that is coming from?
I think it's just the way I always was. (Yea). My parents, it's just what we have always done.

#### Isolation - the "dark, cloudy, grey bubble"

Although many participants reported actively avoiding social activities and interpersonal interactions, they also described a sense of isolation and loneliness. Several women referred to being 'shut off' or 'shut down' in that the difficulties they were experiencing were preventing them from engaging in interpersonal relationships and social interactions, which they acknowledged may have been beneficial and supportive. The participants cited a number of different reasons for interpersonal difficulties including: feeling as if they were being a 'burden' to others, fear of being

judged or stigmatized by others and, more generally, not feeling able to trust other people with private and sensitive personal information.

Tracy: I have got my friend and my sister-in-law but even at that I feel as if I am being a burden, it is like the same stuff but different day.

Erin: I existed in a wee bubble, (*right*), you know and this bubble was so dark cloudy grey,(*mm-hm*), and it just seemed like everything else was going on around me, (*yea*), but I was no longer part of any of it. (*Yea*). And that I couldn't tell people what was going on, I couldn't talk to people, (*mm-hm*), I couldn't..you know I would be sitting in company, (*mm-hm*), and I wouldn't even have a clue what people were saying around me.

#### Attempts to cope with experiences of AD - "Swimming through mud"

Issues to do with coping were intertwined with many other salient aspects of the women's narratives, in particular the support they received from partners, family and health professionals. Most participants described avoiding certain situations and as a way of coping with the difficulties they were experiencing. For example, several women stated that they withdrew from social interactions and 'hid away' (Lisa), which they acknowledged may have limited pleasurable interpersonal experiences, in particular potential support from friends. Several participants referred to the progressive development of symptoms of agoraphobia due to their avoidant behaviours, which seemed to culminate in a period of socially acceptable 'confinement' (Kay, Rebecca) following the birth of their infants.

Kay: But just, I mean, once he was born and em, you know that was me I didn't need to go out of the house for anything. *(Mm-hm)*. There was no reason to go out I was feeding him myself so that was me. *(Ok)*. And had the perfect reason to be confined. *(Mm-hm)*. You know my confinement, ({transcriber note: the participant laughs}), what was called confinement obviously, my confinement started after I had him that was me I was quite happy. **And you were enjoying that?** 

Yea well I didn't have to deal with going out or anything.

Many participants believed that they were not able to cope with the difficulties that they were experiencing. They emphasised the relentless nature of depressed thoughts and the difficulty they had envisioning any change or hope for the future.

Erin: I talk now like days it felt worse than swimming through mud. 'Cause you just didn't feel that you were, I was moving forward in any way shape or form.

#### 'Clinging onto this appointment'

Entry into mental health services represented a starting point in the steps towards improvement for many participants. Several participants (Emma, Kay, Erin, Lisa,

Rebecca, Tracy) referred to the support that they had received from mental health professionals and services, which they believed to be instrumental in their process of recovery.

Kay: You know em, a process to go through the helpful side of having someone to speak to to say the things you want to say to other people and this was the thing about the time you know taking up somebody's time. (*Mm-hm*). And up until the self indulgence of sitting talking about yourself. (*Right*). To a point that nobody else has, or acknowledged that there is really anything wrong or a problem worth spending that kind of time on. (*Right*). But there is no em, I couldn't have gone without this place. I couldn't have managed without having the weekly hour, couple of hours and in between that, consultants, blood tests and all the rest of it. That kept me going that it really did I couldn't have..

Emma: I think I hadn't seen, I think I had maybe been to the GP before we went on holiday but because of, just wasn't sleeping and kinda just all over the place. (Mm-hm). And then the time I got back there was a kind of general psychiatric appointment. (Aha). And it was almost like we were kinda clinging onto this appointment.

Emma's description of 'clinging onto' an appointment again conveyed a sense of desperation that was noted within many participant's descriptions of their experiences of depression, and the associated symptoms they discussed during the early stages of the interviews. It also emphasised the overall need to make sense of experiences which was expressed by all participants in different ways (e.g. thoughts about feeling understood and reflecting on personal and other people's views).

While most participants discussed the advantages of engaging with mental health services, several participants also described the confusion created by the involvement of several different professionals in their care, who occasionally gave differing advice and recommendations. These experiences seemed to reflect the debate concerning the provision of services for women suffering from AD and whether this should originate from adult services, maternity services or specialist services for women in the perinatal period. This confusion and debate was apparent in several participants descriptions of themselves as an 'anomaly' (Emma, Kay) within services, suggesting that their experiences did not fit into a particular 'category' and, as such, there were disputes regarding which service would be involved in the participants' care.

Emma: So it was almost a case of only one team could look after me when I was pregnant and then the other team would look after me once I had the baby. **And how did you find that change? How did you feel about it?** Em, I just remember at the time it all just seemed quite confusing.

Rachel: The health visitor was really unhelpful she contradicted the information we had been given from all the other professionals. *(Right)*. So I think in terms of real pragmatic help I think

one hand has to know what the other is doing or somebody coming seeking help should be attended too quickly. *(Aha)*. 'Cause I think it is a fallacy to think people who are depressed actually seek help all that much and I think if I hadn't made a ruckus I would have been sitting floating in the system.

The difficulties experienced by a number of participants in accessing and/or receiving support from mental health services was portrayed as another form of rejection or abandonment by some individuals (Fiona, Rachel).

Fiona: Em when I first went looking for help after my daughter was born I came for a couple of years, *(mm-hm)*, they had a psychiatrist here that I attended here but he left and they didn't have a psychiatrist for a wee while so that sort of ended that. *(right)*. They just sort of lost contact with you.

#### Medication

Participants discussed the use of medication to help them to manage the symptoms of depression that they were experiencing. Medication was discussed in terms of its advantages of alleviating symptoms of depression, increasing participants' ability to function on a daily basis and keeping some participants 'safe' (Emma) from the suicidal thoughts that they were experiencing. However, negative aspects of using medication were also explored within the women's narratives. Several participants described experiencing problems related to the side effects of the medication they were taking. While others referred to the stigma associated with being prescribed antidepressant medication, and how this could be used in a negative way against them.

Emma: But my husband as long as I was on them he would say shut up you are ill, and it was a bit of a.. sort of joke that he sort of wouldn't listen to things as long as I was, his view was as long as you are on prescription medication then you need it so.. **How did that feel for you?** 

Em, I don't know em I think as long as I knew that I was well then not to kinda take it too seriously.

The context in which medication was proposed as an intervention strategy seemed important to many of the participants. Different experiences between participants regarding how medication was introduced and proposed as an intervention strategy were noted. These differences largely represented the level of control participants' perceived that they held regarding the decision to take medication or not. Several participants described feeling part of the decision-making process regarding whether or not they would commence anti-depressant medication. Inclusion of the participant in this decision seemed to give the woman a sense of control and created associated feelings of validation and self-worth.

Erin: And I think {Person 4- Psychiatrist} was really good in that he didn't really force medication onto me, *(mm-hm)*, it was very much in my hands what I wanted to do.

Ashleigh: I think I realised after a while that it was something and I just asked her {mother} to make an appointment for me at the doctors. (*Ok, so she made the appointment for you, with your GP is that right?*). Yea. (And what happened after that?). I just had to explain to them how I was feeling and they told me then to think about the medication and I had to think about that then before I went back down to get anything. (Yea, mm-hm, so did you see anyone else or was it just your GP). Just my GP I was seeing. (*Ok, so the GP told you to go away and have a think about medication and what were your thoughts about that?*) I just thought to try something, (mm-hm), to help try to pick me up a bit, (mm-hm, yea).

One participant discussed the fact that she 'had to' increase her medication which was something that she was not pleased about and created a sense of anxiety and fear for her that it would lead to dependency on the medication, which was a difficulty she had experienced in the past. In her narrative Lisa depicted a sense of being coerced regarding the decision to increase her medication which seems to have been out with her control creating feelings of anxiety and concern.

Lisa: The fact that I have had to up my medication I am not happy with that em because I am feared that, I will probably want to come off them, but 'cause I have been taking so low, the amount I am taking it is going to be harder to come off, *(yea)*, em so I am sort of worrying a wee bit about that. *(Ok)*. Cause I have upped my tablets to three a day, *(aha)*, but the doctor has told me they are not as strong. *(Ok)*. But I am feared of that, I am feared that I am going to end up the way I was with the other medication. *(Aha, ok)*.

#### Reflections on the past and hopes for the future

Lisa's discussion regarding the use of medication highlighted the issue of past experiences influencing current situations. Throughout the interviews all participants referred to the interpersonal environment, which they were a part of and most described how the relationships they had experienced, and continued to experience, influenced their construction and reorganisation of themselves in relation to their experiences. Reflecting on previous experiences and relationships encouraged participants to consider future prospects, and they expressed hopes and wishes for themselves, their child(ren) and significant others. Discussion regarding the future also evoked participants' views on AD and potential intervention strategies that they thought might be beneficial based on their own experiences.

#### The influence of Early Experiences & Experiences of Parenting

The construction of experiences associated with AD frequently led participants to reflect upon the parenting they themselves had received and the influence it had on their experiences of depression and their own beliefs about motherhood. Mothers appeared to

be central figures within most participants' stories. This was highlighted by a participant who discussed the difficulties that she experienced following the death of her mother and another participant who described a difficult relationship with her mother but who also acknowledged the tendency to revert to attachment seeking behaviours at times of distress.

Fiona: And then strangely I ended up at my mum's house and she lives in {Place1} so I kind of turned to her, *(mm-hm)*, which is odd because I still have got lots of problems with her but you sort of go you sort of turn to your mum when you are not right.

Many women discussed their relationship with their mother, their expectations of support from her and their views on motherhood including their own hopes and aspirations as mothers. Several participants described a type of role reversal wherein they sought to protect their mothers from the difficulties they had experienced.

And do you talk to your mum about things that you have been through?

Rebecca: I do but she gets upset 'cause she thinks it is her fault, a lot of things that have happened in the past. So I don't like to upset her, (ok), 'cause her mental health can be quite fragile at times. (Yea). So I don't like to upset her.

A number of participants talked about the unavailability of their mothers to provide them with support. This unavailability was interpreted in different ways by individual participants, with some referring to their mothers as 'doing her best' (Rebecca, Tracy) but not managing to meet their needs, while others conveyed a sense of being 'let down' (Erin). Participants also reflected on the changes that they hoped they could make with regard to their own roles as mothers.

Fiona: I don't want them growing up and looking back on their childhood having a horrible mother the way I look on my childhood you know.

The way you look back on your childhood?

Fiona: I look back on my childhood and think what horrible you know sort of parents and I am scared she is going to look back and think what a horrible mother I had. (Mmm). And then worrying that he is going to do the same too. (That is quite tough)

Several participants commented on extremely difficult relationships that they had with their fathers and how such relationships had been associated with adverse experiences and feelings of rejection, as well as participants' difficulty trusting other people. Within these accounts some participants reflected on their fathers' 'violent' (Tracy and Rebecca) behaviour which they had witnessed from a young age. Another participant described experiencing psychological and emotional abuse from her father, whom she referred to as 'the worst enemy I have ever had' (Fiona). The consequences of such difficult relationships were outlined by participants as creating problematic models for relationships and a sense of distrust of others as a form of self protection.

Fiona: It is probably a trust thing. (*Right*). I have had friends in the past that have not found very trustworthy and things and I have lots of so-called friends, (*yea*), and I kind of choose not to have any now. (*Right*). It is probably easier not to let people get close. **Right cause you feel that you have been let down before is that right?** Fiona: Yea **So sometimes letting people in can be a bit tough?** Fiona: Yea I don't let anybody in at all.

#### Intergenerational transmission

A struggle between inevitability of repeated cycles of problematic relationships and behaviours and the desire to change, or break, such patterns was noted within many participants' narratives. In the context of early life experiences and relationships with parents, many participants openly acknowledged their fears regarding repeating the same patterns in their own roles as mothers.

Rebecca: A lot of feelings about my own childhood has changed as well, *(right)*, it has brought up a lot of things that I realise now weren't right about my own childhood and I realise now that I really don't want that for my son. I want to have a more stable childhood for him. **Ok, so it has made you think about how things were for you and what you would like to be different for him?** 

Yea and I worry that I will let him down and stuff like that and just things that I don't want him to ever feel. *(Mm-hm)*. That I felt in my childhood, it has brought up a lot of things about that.

This struggle appeared to relate to the strong feelings of 'responsibility' (Erin, Rebecca, Lisa) that many participants described when reflecting on their transition to motherhood.

In order to break free from these patterns and provide a different experience and environment for their children some participants appeared to be striving to achieve and maintain a stable family unit. It seemed that participants engaged in 'self silencing' (Jack, 1991) behaviours and were apprehensive of 'pushing' (Tracy) their partners with regard to understanding their experiences of depression or requesting support from them, so that they could maintain their relationships. On the other hand, several participants used the same terminology of 'pushing' (Erin) to describe alienating their partners from their experiences and frequently suggesting that their partner would leave them, highlighting their fears of abandonment. This use of language reflects the influence that participants' exerted on their relationships and their role in constructing patterns of their own and others' behaviour. Tracy: Aha, he is supportive I am not saying that, he is a good man, but I don't want to push it do you know what I mean. *(Ok yea)*. I don't want to push for him to understand something that he can't.

Erin: So it was that kind of pushing him to the sidelines a lot, which he found really difficult, *(aha)*, and he says now that..he didn't get a big a chance in the early days to learn how to look after her.

It seemed that most participants were aware of, and keen to fight against, the recurrence of patterns of problematic parent-child relationships. However, the concept of intergenerational transmission of experiences of mental health problems, such as depression, was accepted by many individuals as inevitable reflecting the medical view of depression and lack of agency experienced by the women. Several women raised concerns about problems bonding with their baby as a result of their experiences of depression.

# Em I am just thinking about when you were saying you are concerned about when you have the baby how you are going to cope. So that is another thing on your mind, is that right?

Ashleigh: Just how I am going to be with it, if there is going to be any trouble bonding with it 'cause it was such a shock.

#### The Future

Alongside concerns that participants raised, such as problems bonding with their infants, hopes for the future were also discussed. This typically occurred in the latter stages of interviews where women began to emerge from their accounts of previous experiences and re-orientate themselves to the present in order to think about potential experiences in the future, for themselves and others. Several participants discussed the impact that their experiences of AD had on their own or their partner's views on future pregnancies or plans to have more children.

Emma: So, but then I would like to think I would know I think I would know now if I wasn't kind of coping.

So you feel that now you would be able to recognise?

Emma: Yea I feel a lot more aware now yea, (*mm-hm*), I do yea. I don't think I would ever get this happening again.

## And how do you feel about that, about thinking that you are able to recognise it or identify it now?

Emma: I think that it is just reassuring to know I think the thing that is always really reassuring is that chances are I'll have even if I do get depressed again chances are I won't be pregnant so I know the medication works for me so that I know I'll get better, *(mm-hm)*, so yea, and even if I am pregnant then I don't think you know short of a bereavement or something terrible happening I kinda feel..I could cope with it.

Rebecca: Yea just my whole views and ideas of children has completely changed and I am like why would people want, not why would people want to have children but it was, wasn't, I didn't really feel like I bonded with him in the hospital.

It seemed that some participants, such as Rebecca, continued to struggle with the development of coherent conceptualisations and personal views of motherhood, reflecting the dynamic nature of experiences. There was a sense that participants continued to conceal negative feelings or thoughts regarding motherhood and pregnancy within the interviews, despite the fact that they had been honest and open in their accounts of distressing and negative feelings associated with AD.

#### Sharing problems & experiences/Peer support

The sense that participants continued to conceal negative feelings described above was also reflected in the suggestion by several participants that the opportunity to speak to a 'peer counsellor' or somebody else who had 'been through it' would have been helpful. There was a sense that peer support might provide participants with a forum in which they could speak openly and honestly about their experiences. Several participants also believed that hearing other people's stories and personal accounts of AD might have given them hope regarding the process of recovery, which they felt was difficult to attain from others who had not been through similar experiences.

Emma: Em I think to be honest if I had kinda heard known someone else in the same situation it's just a case of telling them that they will get better I mean I never would have believed it at the time

Erin: And it was hearing other people's experiences. *(mmm)*. I think what I would have found really useful, to be honest, is somebody else who had been through it. *(Ok)*.who I could have met with or talked with. But yea..the opportunity to have a peer counsellor or something like that. *(Yea)*. A woman that you can relate to and who if you said some of this to wasn't going to think that you were the most horrendous person ever.

#### A family unit - Involvement of partners in treatment process

Another suggestion made by several women in the study was that services, and interventions provided by services, should be aimed at the entire family and, in particular, involve partners. Erin's quote below outlines her experience of being 'separated out' from her partner in relation to involvement with services, which seems to reflect a sense of isolation both for Erin and her partner. She also discusses her partner's need for support and how this could have been met if a more systemic approach to service provision, incorporating the entire family unit, was taken.

Emma: I think I think under the circumstances... I think a lot of it is focused on the patient kind of talking to the patient when maybe they are not kinda the best person to be I know obviously they are trying to treat me but it was almost he there was concern for the baby there was concern for kind of lots of different things em...

#### So you feel involving your partner, or, that would have been helpful?

Emma: Yea and maybe having more of letting them kind of take control more than the patient I don't know if that makes sense.

Erin: But also that he needed support. If there had of been someone that he could have spoken to or somebody to say 'this is what you are going to do together'. (*Mm-hm*). Instead of you are very much being separated out, (*yea*), me and him as a new father even though he was part of it, (*yea*), he wasn't getting anything. (*Yea*, *mm-hm*, *ok*). So I think that would have been useful.

#### Increased awareness of AD

Several participants (Emma, Kay, Erin, Rachel) refer to the stigma and lack of understanding surrounding AD. One participant specifically refers to the lack of awareness regarding AD in comparison to PD. She suggests that the increased awareness of PD has led to screening procedures being employed in the early postnatal period. However, as she described AD often remains ignored or unrecognised.

Emma: I know that once you have had the baby the health visitor or the health visitor quite often go through the they do the test to find out about your mood after.

Ok is that maybe the Edinburgh postnatal depression scale?

Emma: Yea aha, and just from talking to people since just other mums I know that because of maybe physically being sick or a few people have said 'oh I think I was maybe a bit depressed during my pregnancy', but I think you go for your antenatal appointments and it's blood pressure, and it's all these things, and there is not really the same kind of awareness.

So the focus is on the physical aspects?

Emma: Yea with your antenatal appointments I don't think it is really looked at or considered I don't know.

So it is only really postnatally that yourself and people you have talked to, that has come up?

Yea I definitely know that they are very aware of postnatal kind of mood and eh they will keep an eye but then when you are pregnant I don't think there is the same awareness at all.

#### **Discussion**

Grounded theory was used to explore women's experiences of pregnancy and AD. An account of the complex processes negotiated by participants during the perinatal period was derived from the distinct narratives provided within and between participants. Participants' narratives provided rich qualitative data regarding their experiences of pregnancy, AD and the transition to parenthood. Throughout the interviews interpersonal issues emerged as salient aspects of the women's experiences. As such, the data generated an overarching theory of AD as a transactional, interpersonal process: Four themes were evident within *AD as a transactional, interpersonal process:* The construction of meaning-developing an understanding of AD; Recognising and

managing transitions; The interpersonal environment; Reflections on the past and hopes for the future (see Figure 2).

Participants' narratives reflected interactions that, in the context of relationships, gave rise to key themes and constructs in which struggles, contradictions and unresolved aspects of experiences were unfolded and played out. This was particularly apparent within participants' search for meaning and understanding of AD. It seemed that participants were striving to reach a coherent 'explanation' for the difficulties they encountered, which appeared to be an important goal for themselves and for significant others in their lives. Differences were noted within and between participants regarding the development of understandings and construction of meaning. At one level this portrayed whether participants were reflecting on experiences in the past, or describing current experiences of AD, at the time of the interview. However, these differences were not exclusive, and participants' accounts moved forwards and backwards in relation to the development of meanings and understandings regardless of time since experiencing AD. A sense of desperation and frustration arose out of the struggles that participants had integrating the various emotions and events they had experienced in relation to pregnancy and depression. Bennett et al. (2007) also discuss women's ability to understand their experiences of AD and how attempts to deny or ignore problems in order to maintain 'normality' co-occurred with a sense of urgency to address the difficulties prior to the birth of their child.

Related to the process of constructing meaning was the need to identify and manage the various transitions that were occurring in the women's lives. Interpersonal relationships, roles and self concepts were renegotiated and reorganised to adjust to the transition to parenthood and the experiences encountered as a result of suffering AD. Fonagy et al. (1991) reported that the relationship between the mother and infant is constructed before birth with expectant mothers' mental representations and organisation of attachment predicting the quality of the subsequent mother-infant relationship. Adjusting to motherhood, incorporating an infant into the structure of the interpersonal environment while also suffering from AD, were challenging tasks faced by participants. These tasks frequently evoked difficult emotions for participants, including feelings of loss and vulnerability, and were influenced by responses from significant others. This finding was synchronous with literature that has emphasised the influence

of interpersonal relationships in the process of adjustment and transition to parenthood (Escriba-Aguir et al., 2008; Feeney et al., 2003; Lee et al., 1995; Spinelli & Endicott, 2003). Feelings of loss discussed by participants in the present study were also described by participants in Tseng et al.'s (2008) study of experiences of AD among Taiwanese women. Alongside these difficult emotions of distress and loss, women also described positive feelings and excitement about their roles as mothers. These varying emotional responses reflected another struggle, or tension, experienced by the participants in relation to AD.

Participants' experiences of AD occurred within an interpersonal environment, where relationships were important aspects of overall experiences. Feeling understood by others was emphasised by all participants. It seemed that this construct was related to how participants reconstructed the self in relation to their own and others' experiences. Those who described feeling understood discussed being listened to, cared for and accepted. Participants who felt that they were not understood discussed dismissive reactions from others which appeared to serve as a strategy for diverting attention from difficulties and closing down opportunities for exploration of experiences, perhaps reflecting an avoidant style of coping. Gross (2006) discusses the impact of denigrating and dismissive reactions in relation to emotion regulation. The author suggests that critical reactions of others imply messages that deny or devalue the appropriateness of the emotion or its expression, or the relationship between the person displaying the emotion and the individual responding to it.

Contradictions within narratives arose regarding many aspects of interpersonal relationships, for example, individuals' conceptualisations of AD, perceptions regarding availability of support, involvement with mental health services and the use of medication. The emergence of contradictions and struggles within participants' narratives highlighted topics of particular importance, which were associated with a variety of emotions. The women's stories were enriched by their accounts of conflicts and struggles which emphasised the complexity of the difficulties they experienced both in terms of their pregnancies and depression. This complexity was reflected in the challenge faced by the author in depicting the distinct stories within and between participants. Efforts were made to maintain the individuality of experiences and stories while also describing themes that emerged across narratives.

The need to uphold individuality while also discussing more general and widely experienced concepts was apparent with regard to participants' reflections on the past and hopes for the future. Early experiences of relationships, in particular experiences of parenting, were discussed in relation to their influence on current relationships and beliefs regarding motherhood, parenthood and the family. As stated by Fonagy et al. (1991) "there is increasing evidence of an association between the way in which a mother recalls her own childhood experience and the quality of the relationship existing between her and her child" (p. 891). The authors argue that it is not the quality of past experiences that predicts mother-infant relationships, but, the mother's organisation and mental representation of relationships and attachment related issues. The concept of intergenerational transmission of relationships was discussed by participants who described difficult experiences of received parenting. It seemed that their hopes and wishes for the future were centred on providing a different experience for their own children.

Many participants outlined strategies that they believed would or had been helpful and made suggestions for service development regarding AD. The benefits of having access to a form of peer support, sharing experiences and learning from others were considered by many participants. Women in Raymond's (2009) study also highlighted the potential benefits of a forum for peer support via a group intervention. Sleath et al., (2005) recommend that service providers be aware of, and refer women to, community-based groups, which could provide additional support to pregnant women. Participants reiterated the importance of interpersonal relationships, being understood by others and availability of support in their suggestions that services and interventions should be aimed at the entire family unit. In particular, women discussed the inclusion of partners, rather than separating out the individual who is suffering from AD, in the treatment process.

From a clinical perspective, the data that has emerged from participants' narratives helps to inform understandings of AD and the complex interpersonal processes inherent within experiences of AD. The interpersonal environment in which AD occurs cannot be separated from the experience itself. Women's narratives in the present study were laden with reference to interpersonal issues. It is likely that interpersonal theory and cognitive-interpersonal theory would offer important frameworks for conceptualising

and developing interventions to address AD. Safran and Segal (1996) outline essential aspects of interpersonal theory such as, the 'theorem of reciprocal emotions', the principle of 'complementarity' and processes of dyadic communication which shape interpersonal schema, representations of the self and how individuals construe and construct their environment. These tenets of interpersonal theory might help to elucidate some of the difficulties experienced by women suffering from AD.

Certainly, interpersonal therapy has been piloted for use with women suffering from AD (Grote, Bledsoe, Swartz & Frank, 2004; Spinelli, 2001; Spinelli & Endicott, 2003). Developmental theories of depression also emphasise the transactional nature of reciprocal relations and influences between individuals and their environment, suggesting that interpersonal stress and depression may be linked in a transactional relationship (Rudolph et al., 2000). The suggestions made by participants to include partners and family members in the intervention process for AD might address difficulties of interpersonal stress that, in the present study, seem to occur where shared understandings of AD and 'feeling understood' were not attained.

The findings of the present study provide further insights into the experience of AD. It is hoped that such insights would inform clinicians' understanding of AD and influence how they approach interventions for women experiencing AD. The findings of the study support the development of specific interventions for AD, such as cognitive interpersonal therapy. Cognitive interpersonal therapy would address the cognitive distortions that many individuals suffering from depression experience, while also framing the intervention within an interpersonal perspective thereby acknowledging the role of others in women's experiences of AD and the need to adopt a systemic approach to intervention for AD. The participants' accounts of AD suggested that the opportunity to attend a group, or work with a peer counsellor, would have been beneficial. This represents another potential area for development with regard to clinical interventions and applications of the present study's findings. From a research perspective, it is felt that the findings of this grounded theory study of AD provide a basis for further exploration of AD from a psychological rather than medical or biological perspective. It is hoped that this study would encourage future research which would aim to investigate specific aspects of women's experiences of AD that were highlighted in the present study. For example it would be interesting to research partners' and family's views and experiences of a loved one suffering from AD. An investigation of attachment experiences of women who suffer from AD might also further an understanding of the overall experience of AD.

The theory and themes that have emerged within the present study should be considered in relation to the analytic approach employed. A social constructionist grounded theory approach was used in the present study to explore the participants' accounts of experiences of pregnancy and depression. From this analytical standpoint women's narratives were considered in a relational context, where the participant and the researcher both influenced the construction and interpretation of experiences. Acknowledging the agency of the participants and the researcher in developing an understanding of the data emerging within the narratives encouraged engagement and the development of rapport between the researcher and participant. It is felt that efforts to ensure that the description and interpretation of women's experiences were 'grounded' in their own language (Dallos, 2006) facilitated a representation of participants' narratives which was based on co-created meanings between the participant and researcher. As such, the researcher recognised the role of her own thoughts, actions and values when constructing meanings and interpretations of women's experiences. Bennett et al. (2007) discuss criticisms of social constructivist approaches, such as, the 'charge of relativism' which has questioned the importance of one researcher's interpretation over alternative meanings and views developed by others. However, Charmaz (2006) argues that interpreting "a reality" (p.523) helps to represent individuals' voices and outlines their perspectives. The theory that emerged regarding AD as a transactional, interpersonal process is not intended to be an allencompassing account of AD. Rather, it represents a tentative claim about the experiences of those women involved in the study. While the findings from this study may not be transferable to other women's experiences of AD the issues highlighted by the study enable future researchers to consider these findings in relation to their own sample, the phenomenon under investigation and the context in which it occurs. A particular strength of a grounded theory approach is its flexibility, where the theory can be revised, expanded, adjusted to maintain its usefulness in the context of emerging themes and new conceptualisations (Wuest, 2000).

There are a number of different approaches to qualitative analysis available to the researcher. These approaches are underpinned by different, yet overlapping, epistemological, theoretical and methodological standpoints (Smith, 2004). As well as grounded theory, interpretative phenomenological analysis (IPA) and feminist discourse analysis (DA) could have been used to investigate women's experiences of pregnancy and depression. Similar to grounded theory, IPA aims to explore participants' experiences and acknowledges the researcher's part in accessing and understanding the individual's experience and the influence of their own beliefs on the interpretative process. However, the focus in IPA is on cognition, an assumption is made that the language used by participants represents their inner processes. As such, IPA relies on participants being adept at communicating their experiences, but as Willig (2001) states "how many people are able to use language in such a way as to capture the subtleties and nuances of their physical and emotional experiences?" (p.64). The requirement of small homogenous samples for IPA represents another criticism of the approach as it is difficult to achieve homogenous samples in research that is based on individual experiences which are personal and complex. Discourse analysis (DA), unlike grounded theory and IPA, does not specifically address individual experiences or issues of personhood instead it treats all data as text, focussing on how language is constructed. The goal in DA is to investigate the cultural and linguistic factors that influence ways of thinking, speaking and acting (Georgarca, 2000).

It was felt that grounded theory (from a social constructionist standpoint) was the most appropriate method of analysis for this study. The benefits of using this approach include: its focus on experience and meanings, and the acknowledgement of the role of the participant and researcher in constructing an understanding of experiences. Also, constant comparative methods within and between narratives enrich interpretation and understanding particularly where negative cases disconfirm aspects of emerging conceptualisations provoking further exploration and construction of meaning, and its flexibility enabling the incorporation of new findings.

#### Limitations

The findings of the present study are based on nine women's narratives and the interpretation of the researcher. As previously mentioned the findings represent one possible presentation of the data and are bound to the context and conditions of this

study. It is acknowledged that many other approaches to interpretation of the data could be taken. Efforts made by the researcher to foster transparency within the analytic process through the use of participants' quotes are aimed at providing the reader with the opportunity to arrive at their own interpretations. Respondent validation and triangulation may have been beneficial. However, inter-rater coding was undertaken by a qualified researcher experienced in qualitative techniques and the emerging themes were validated by the author's research supervisor. It has been argued that strategies such as triangulation and respondent validation do not fit with the relativist approach taken in social constructionist grounded theory research and can result in reducing the research to a checklist of analytical procedures (Barbour, 2001).

#### Conclusions

The study conducted a qualitative exploration of women's experiences of pregnancy and depression using a grounded theory approach. A social constructionist grounded theory approach facilitated exploration of experiences within and between participants, acknowledging the role of the participant and researcher in shaping interpretations and understandings of experiences. The research process acted as a vehicle for construction wherein participants' narratives conveyed experiences of AD as an interpersonal, transactional process. The interpersonal world of the women in the study played an important role in their experiences, including their construction of meaning of AD, role and relationship transitions they faced and the presence or absence of support. The complexities of experiences were reflected in the participants' narrative style, with contradictions and struggles arising within and between participants' accounts. Feeling understood emerged as a particularly important concept for the women included in the study. As such, it is argued that support groups and forums for peer support, and, interventions which involve partners and family members might be beneficial for women suffering from depression during pregnancy. Given the finding that interpersonal issues are inherent within participants' experiences of AD it is suggested that interpersonal theory and therapy could be particularly useful in conceptualising and treating AD.

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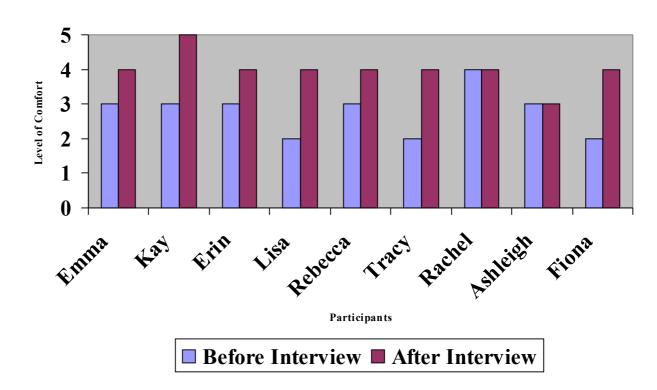
Participant	Age	Stage pregnancy/ Time since birth	Relationship status	Number of children
1	34	2 years since birth	Married	2 (5yrs; 2 yrs)
2	41	4 years since birth	Married	2 (8yrs; 4 yrs)
3	37	2 years since birth	Co-habiting with partner	1 (2yrs)
4	30	6 months since birth	Partner (not co-habiting)	1 (6mths)
5	21	3 months since birth	Co-habiting with partner	1 (3mths)
6	23	5 months pregnant	Co-habiting with partner	1 (3 yrs & pregnant)
7	39	2 months since birth	Married	4 (16yrs; 13yrs; 10yrs & 2mths)
8	27	8 months pregnant	Co-habiting engaged	2 (4yrs; 1yr & pregnant)
9	32	2.5 months pregnant	Married	2 (11yrs; 5mths & pregnant)

### Table 1: Participants' Demographic Information

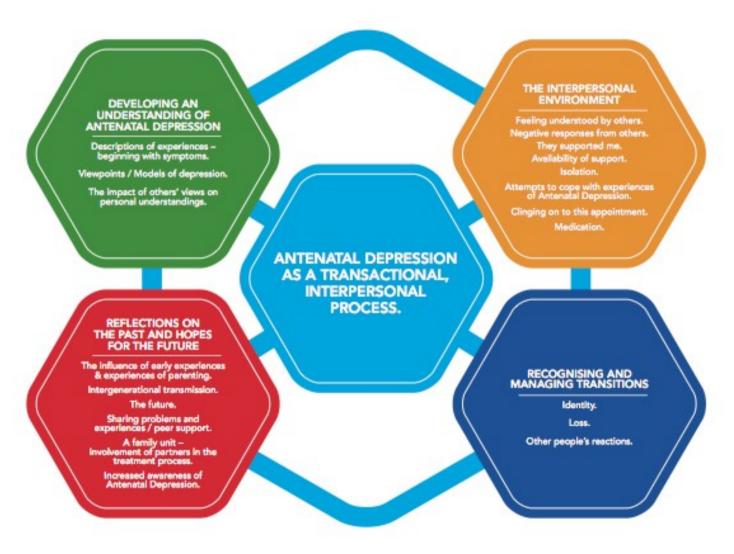
Participant	Education/ occupation	Ethnicity	Planned Pregnancy	Known diagnosis
1	School & university. Had worked in catering industry	Scottish white	Yes	Depressive episode
2	School and training course. Retired police officer	Scottish white	Yes	Bipolar mood disorder
3	School and university Development officer	Northern Irish white	Yes	Depression
4	School Hairdresser	Scottish white	No	Depression
5	School and SVQ Dental nurse	Scottish white	No	Depression
6	School Retail	Scottish white	Yes	No
7	School and university Chef	Canadian white	Yes	Depression
8	School and SVQ	Scottish white	No	Depression

	Nursery teacher			
9	School and SVQ Phlebotomist	Scottish white	No	Depression

#### Figure 1: Graph of Participants' Comfort Level



#### Figure 2: Women's Experiences of Antenatal Depression



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# **Chapter Three**

**Advanced Practice I: Reflective Critical Account Abstract** 

Assessing Capacity: A reflective account

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# <u>Abstract</u>

Reflective practice has received increased attention and emphasis within clinical psychology training in recent years. Within clinical practice, the term 'reflection' refers to both 'personal self-awareness' and 'learning by doing'. The present account outlines my experience of being involved in an assessment of capacity while on placement within a Neuropsychology service. Ethical, clinical practice and communication issues relating to this case are outlined. I have drawn upon Rolfe, Freshwater & Jasper's (2001) framework for reflective practice and Gibbs' (1988) model of reflection to structure my reflections. The account describes the various concerns and difficulties I encountered in relation to this case. In particular, I became aware of personal feelings of responsibility, which were compounded by the lack of a multi-disciplinary approach to working with this case. Areas for future development are also considered within the account.

# **Chapter Four**

# **Advanced Practice II: Reflective Critical Account Abstract**

# Sweeping back the ocean: the use of triage systems in the management of waiting lists

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# <u>Abstract</u>

This reflective account describes my experiences of working within a specialist service which suffers from the common problem of lengthy waiting lists and limited resources. Two models of reflection (Rolfe, Freshwater & Jasper, 2001; Boud, Keogh & Walker, 1985) are drawn upon to elucidate my emotions, thoughts and behaviours regarding a triage system employed by the service as a strategy to address waiting times. Professional issues concerning the management and provision of psychology services are discussed throughout the account. This exploration highlighted the impact of the triage system on the therapeutic relationship and my concerns about adapting to unfamiliar systems and ways of working. Development through experience and reflection is discussed in relation to the skills that I attained, and areas I feel could be built upon in the future.

# **Appendices**

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# Appendix 1.1: Guidance for Authors Clinical Psychology Review (continued)

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# Book

Paloutzian, R. F. (1996). *Invitation to the psychology of religion* (2nd ed.). Boston: Allyn and Bacon.

# Book with More than One Author

Natarajan, R., & Chaturvedi, R. (1983). *Geology of the Indian Ocean*. Hartford, CT: University of Hartford Press.

Hesen, J., Carpenter, K., Moriber, H., & Milsop, A. (1983). *Computers in the business world*. Hartford, CT: Capital Press. and so on.

The abbreviation *et al.* is not used in the reference list, regardless of the number of authors, although it can be used in the text citation of material with three to five authors (after the initial citation, when all are listed) and in all parenthetical citations of material with six or more authors.

# (continued)

# Web Document on University Program or Department Web Site

Degelman, D., & Harris, M. L. (2000). *APA style essentials*. Retrieved May 18, 2000, from Vanguard University, Department of Psychology Website: http://www.vanguard.edu/faculty/ddegelman/index.cfm?doc\_id=796

# Stand-alone Web Document (no date)

Nielsen, M. E. (n.d.). *Notable people in psychology of religion*. Retrieved August 3, 2001, from http://www.psywww.com/psyrelig/psyrelpr.htm

# Journal Article from Database

Hien, D., & Honeyman, T. (2000). A closer look at the drug abuse-maternal aggression link. *Journal of Interpersonal Violence, 15*, 503-522. Retrieved May 20, 2000, from ProQuest database.

# **Abstract from Secondary Database**

Garrity, K., & Degelman, D. (1990). Effect of server introduction on restaurant tipping. *Journal of Applied Social Psychology*, 20, 168-172. Abstract retrieved July 23, 2001, from PsycINFO database.

# Article or Chapter in an Edited Book

Shea, J. D. (1992). Religion and sexual adjustment. In J. F. Schumaker (Ed.), *Religion and mental health* (pp. 70-84). New York: Oxford University Press.

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# (continued)

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# Appendix 2.1: Quality Rating Criteria Assessment time points

Reviewer ID Article

Quality Item	Coding
A. Objectives	. 0
1. Are the aims/question/hypotheses clearly stated or described?	Adequate = $2$ Partial =1Inadequate =0Not Applicable
B. Sampling	1 11
2. Baseline demographic & clinical characteristics of the group are specified to allow appropriate comparisons	Adequate =2Partial =1Inadequate =0Not Applicable
3. Eligibility; inclusion/exclusion criteria are clearly specified	$\begin{array}{rrr} Adequate = & 2\\ Partial = & 1\\ Inadequate = & 0\\ Not Applicable \end{array}$
4. Type of sample group: Geographic cohort, convenience, highly selective	Geographic cohort 2 Convenience 1 Highly selective 0
5. How many participants are included in the study? Is the sample size based on adequate power calculations?	$\begin{array}{rrrr} Adequate = & 2 \\ Partial = & 1 \\ Inadequate = & 0 \\ Not Applicable \end{array}$
6. Was a well matched control group employed or in the absence of a control group were attempts to control for confounding variables in design?	$\begin{array}{rrr} Adequate = & 2\\ Partial = & 1\\ Inadequate = & 0\\ Not Applicable \end{array}$
7. Was a generally accepted diagnostic criteria used to confirm depression diagnosis? (e.g. SCID, DSM-IV, ICD-10)	Adequate =2Partial =1Inadequate =0Not Applicable
C. Design	
8. Is the length of time between assessments sufficient to allow investigation of changes in the outcome variables?	$\begin{array}{rrr} Adequate = & 2\\ Partial = & 1\\ Inadequate = & 0\\ Not Applicable \end{array}$
9. Is the study design appropriate to test the hypotheses?	$\begin{array}{rrr} Adequate = & 2 \\ Partial = & 1 \\ Inadequate = & 0 \\ Not Applicable \end{array}$
<ul> <li>10. Were confounders accounted for in the study design?</li> <li>Relationship status given</li> <li>Parity</li> <li>Stage of pregnancy/postpartum</li> <li>Baseline depression</li> </ul>	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable

Quality Item	Coding
D. Assessment	
11. Are standardised assessments used to measure social support in a standard way?	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
12. Are standardised assessments used to measure depression in a standard way?	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
13. Reliable measure used and reliability co- efficients given?	Adequate =2Partial =1Inadequate =0Not Applicable
E. Analysis	
14. The analysis is appropriate to aims, design and type of outcome measure	Adequate =2Partial =1Inadequate =0Not Applicable
15. The study clearly indicates how many people asked to take part did so in each group and percentage of those who dropped out before completion	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
16. Flow of participants through each stage is described (diagram desireable)	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
<ul><li>17. The analysis includes all those participants recruited</li><li>(intent to treat analysis).</li></ul>	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
18. Comparison is made between full participants and those lost to follow up by exposure status (adequate investigation and handling of drop outs if exceeds 15%)	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
19. Is there adequate reporting of summary statistics?	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
20. Have effect sizes and confidence intervals been reported?	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable
21. Were post hoc power calculations or confidence intervals reported for statistically non-significant results?	Adequate = 2 Partial = 1 Inadequate = 0 Not Applicable

F. Results and Discussion	
22. Do the findings relate to the aims/questions/hypotheses	Adequate = $2$
	Partial = 1
	Inadequate = $0$
	Not Applicable
23. Are recommendations for clinical practice/ future	Adequate = $2$
research discussed in relation to the findings	Partial = 1
	Inadequate = $0$
	Not Applicable
24. Are limitations of the study clearly expressed?	Adequate = $2$
	Partial = 1
	Inadequate = $0$
	Not Applicable

# **Total Score:**

\_\_\_\_/ 48

\_\_\_%

**Overall Rating:** Excellent (80%-100%)

Good (60%-79%)

Adequate (40%-59%)

Poor (Below 40%)

							<u>es Sco</u>						1.10			
Study Number	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
Aims stated?	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Baseline	2	2	2	2	2	2	2	2	2	1	2	1	2	2	1	0
demographics &																
characteristics																
stated																
Eligibility criteria	2	2	2	1	2	2	2	0	2	2	2	2	0	1	2	0
are specified	_			-			_				_	_		-		
Type of sample	1	1	1	1	0	2	1	1	0	1	1	0	1	1	1	1
group	1	1	1	1	U	-	1	1		1	1	0	1	1	1	1
Sample size based	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1
on power																
calculation																
Well matched	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0
control group or																
attempts to control																
for confounders																
Diagnostic criteria	0	0	0	2	0	2	0	0	0	0	0	2	2	2	0	0
used to confirm																
depression																
Length of time	1	2	1	1	2	2	2	2	2	2	1	2	2	2	1	2
between	1	-			<b>1</b>	<b>1</b>	1	<b>–</b>	1	1	1	1	1	-	1	1
assessments is																
sufficient											-					
Is the study design	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
appropriate to test																
hypotheses?																
Were confounders	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	0
accounted for?																
Are standardised	2	1	2	1	2	2	2	1	1	2	1	1	2	2	2	1
assessments used																
to measure SS?																
Are standardised	2	1	2	2	2	2	1	2	2	1	2	2	2	2	2	2
assessments used	-	1	-	-	-	<b>–</b>	1	-	-	1	-	-	-	-	-	-
to measure																
depression?	1	1		1	-	1	2	1	1	1	2	1			-	2
Reliable measures	1	1	2	1	2	1	2	1	1	1	2	1	2	2	2	2
used & reliability																
co-efficients																
provided?																
Is the analysis	1	2	1	2	2	2	1	1	1	1	1	1	1	2	1	1
appropriate?																
The study	2	1	0	2	2	2	1	2	2	2	2	2	2	2	2	1
indicates drop-out																
rates																
Is the flow of	1	0	0	1	1	2	1	1	1	1	1	1	2	1	1	1
participants is	1	ľ	Ĭ	1	1	<sup>-</sup>		1	1	<sup>*</sup>	1	1	-	1	1	1
described?																
	0	0	0	0	0	1	0	n/a	0	n/a	1	1	0	n/-	1	1
Analysis includes	0				0			n/a		n/a	1			n/a		
all participants																
recruited					<u> </u>			<u> </u>		<u> </u>				<u> </u>		
Comparison made	0	0	0	0	2	2	0	n/a	1	n/a	0	2	2	n/a	2	2
between full																
participants and																
those lost to follow																
up (if drop out																
exceeds 15%)																
	I	I	I		I	I	I	I	ļ	I	I	I	I	I	L	

Appendix 2.2: Included Studies Scores on Quality Rating

Appendix 2.2: Included Studies Scores on	Quality	Rating	(continued)

Study Number	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
Is there adequate reporting of summary statistics?	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2
Are effect sizes & confidence intervals reported?	1	1	1	1	1	2	1	2	0	2	1	2	1	1	1	1
Were statistically non-significant results reported?	1	2	1	0	1	1	1	2	2	2	2	2	2	2	1	2
Do the findings relate to aims/questions/hy potheses	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2
Are recommendations for clinical practice/future research discussed?	2	2	2	2	2	2	1	2	2	1	2	1	2	2	2	1
Are limitations of the study clearly expressed?	2	2	1	2	2	2	2	2	2	0	2	0	1	0	2	1
<b>Overall Score</b>	32	31	29	31	36	42	30	32	32	30	35	34	37	37	35	27

# Study Number

- 1. Castle et al. (2008)
- 2. Westdahl et al. (2007)
- 3. Martinez-Schallmoser et al. (2003)
- 4. Lee et al. (2000)
- 5. Seguin et al. (1999)
- 6. Brugha et al. (1998)
- 7. Bernazinni et al. (1997)
- 8. Kearns et al. (1997)
- 9. Barnet et al. (1996)
- 10. Paarlberg et al. (1996)
- 11. Logsdon et al. (1994)
- 12. Campbell et al. (1992)
- 13. Gotlib et al. (1991)
- 14. O'Hara et al. (1991)
- 15. Richman et al. (1991)
- 16. Turner et al. (1990)

# **Quality Rating (Score)**

Good (32/48) Good (31/48) Good (29/48) Good (31/48) Good (36/48) Excellent (42/48) Good (30/48) Good (32/44) Good (32/48) Good (30/44) Good (35/48) Good (34/48) Good (37/48) Excellent (37/44) Good (35/48) Adequate (27/48)

# **Scores**

Overall score / 48 (except those cases where specific items were not applicable) Excellent (80-100%) Good (60-79%) Adequate (40-59%) Poor (<40%)

# **Appendix 3.1: Ethical Approval**

### **Primary Care Division**

Research Ethics Primary Care, Community & Mental Health REC R&D Directorate 1<sup>st</sup> Floor – The Tennent Institute Western Infirmary 38 Church Street Glasgow G11 6NT www.nhsggc.org.uk



Ms Claire Atkins Trainee Clinical Psychologist NHS Greater Glasgow and Clyde Section of Psychological Medicine University of Glasgow Gartnavel Royal Hospital 1055 Great Western Road Glasgow G12 0XH Date09 December 2008Your RefOur RefDirect line0141 211 2123Fax0141 211 2811E-mailLiz.Jamieson@ggc.scot.nhs.uk

### Dear Ms Atkins

Full title of study:Expectations of Motherhood: a qualitative investigationREC reference number:08/S0701/129

Thank you for your letter of 17 November 2008, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered at the meeting of the Committee held on 04 December 2008. A list of the members who were present at the meeting is attached.

### Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

### Ethical review of research sites

The favourable opinion applies to the research sites listed on the attached form.

### Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

<u>Management permission or approval must be obtained from each host organisation prior to</u> the start of the study at the site concerned.

Management permission at NHS sites ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission is available in the Integrated Research Application System or at <u>http://www.rdforum.nhs.uk</u>.

### Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

# ALL ABOUT OF

D370787





# Appendix 3.3: Participant Information Sheet

Thank you for reading this information sheet. I would like to invite you to take part in a research study. My name is Claire Atkins, I am interested in learning about peoples' experiences of pregnancy and emotional changes experienced during pregnancy. You have been given this sheet as you may be able to help me in this study. Before you decide if you would like to take part it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and feel free to discuss it with others if you wish.

Please ask me any questions you have. You can phone me on the following number <u>01475 502 370</u> or you can leave a message with my secretary and I will get back to you as soon as possible. The best time to contact me is a Tuesday, Wednesday or Thursday.

# What the study is about

I am interested in understanding your experiences of emotional changes, such as low mood, during pregnancy. In particular, I would like to find out about the things that you think may have caused or kept the feelings of low mood going, and the effect this has had on your relationships. This kind of research might help to develop new psychological therapies aimed at helping people to cope with psychological distress.

# Why you are being asked to participate

We are asking women who have experienced depression during their pregnancy to take part in this study.

# Do I have to take part?

You do not have to take part in this study. It is up to you whether or not you wish to participate in the study. If you decide to take part you will be given this information sheet and be asked to sign a consent form. The consent form is a way of making sure that you know what you have agreed to. If you decide to take part you are still free to withdraw from the study at any point in time.

# **Appendix 3.3: Participant Information Sheet (continued)**

# Taking part in the study – what will I have to do?

If you decide to take part you can contact me and we can meet to have an initial chat about what taking part in the study would involve. I will answer any questions that you have. I will then arrange to meet with you again for a second time for approximately one hour. During this meeting I will ask you about your experience of depression and low mood during your pregnancy and the impact it has had on your relationships. I will ask you if the interview can be recorded (to make sure that I carefully understand your experiences and our conversation, and help me remember all the things we talked about). There are no right or wrong answers, the research just wants to find out about what you think and your own experiences.

# Is there a down side to taking part?

It is possible that our meeting(s) may cover topics that are difficult or distressing to talk about. However, if you do not want to continue you can end the interview, or have a break, at any time. If you feel distressed at all following the interview I will be available to talk with you.

# What are the possible advantages of taking part?

There are no direct benefits to you in taking part in this study. However, the information that we learn from the study will help us to plan future research, and develop new psychological therapies to help reduce the distress of experiencing these types of difficulties during pregnancy.

# Will my taking part in this study be kept confidential?

The medical doctor responsible for your treatment, usually your Consultant Psychiatrist and GP will know that you are taking part in the study. However, everything that you say during our interviews will be kept strictly confidential and no-one but myself will have access to the tapes of the interview. Your name, or other identifying information, will not appear in any reports. With your permission anonymous quotes of what you have said may be used in the report.

# Appendix 3.3: Participant Information Sheet (continued)

# What will happen to the results of the research study?

I will provide you with a summary of the results of the study. The final results and conclusions of the study will be published in a scientific journal and will form part of my qualification in Clinical Psychology. As stated above, your identification will not be included in any publication.

# Who is organising and funding the research?

The University of Glasgow.

# Who has reviewed the study?

The study has been reviewed by the department of Psychological Medicine to ensure that it meets important standards of scientific conduct and has been reviewed by NHS Greater Glasgow and Clyde Primary Care Division research ethics Committee to ensure that it meets important standards of ethical conduct.

Thank you very much for reading this and for any further involvement you may have with the study.





# Appendix 3.4: Participant Consent Form

I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason, without my medical care or legal rights being affected

I understand that the medical clinician who is involved in my care (Doctor or nurse at the hospital or GP) will be informed of my participation in the research

I understand that the interview will be tape-recorded solely for the purpose of the research study as described in the Participant Information sheet

I understand that quotations may be published but that all names, places and identifiers will be removed beforehand

I give consent for the researcher, Claire Atkins, to contact my key worker in order to ensure that participation in this research will not interfere with my ongoing treatment.

I agree to take part in the above study
Name of Participant Date Signature

Researcher (or name of<br/>Person taking consent if different)DateSignature

Thank you for taking part in this study

(1 copy for participant and researcher and 1 copy for medical notes)

# **Appendix 3.5: Interview Guide**

- 1. Perhaps you could start by telling me a bit about yourself and your family?
- 2. Can you tell me about your experience of this/your last pregnancy?
  - When did you find out you were pregnant?
  - How has the pregnancy gone?
- 3. In what ways (if any) has your pregnancy been positive experience?
- 4. In what ways (if any) has your pregnancy been a challenging experience?
- 5. How did you/do you feel during your pregnancy?
  - What was that like?
  - How did you respond/cope?
  - Was this helpful or not?
  - How did others respond?
  - Was that helpful/unhelpful?
  - How did that affect you?
  - Has anyone been particularly helpful?
- 6. What advice would you give to others about pregnancy (and antenatal depression)?
- 7. Can you tell me about your hopes and wishes for motherhood?
  - How do you feel being/becoming a mum?
- 8. Before we finish, is there anything else?

# Example probes

- Can you tell me more about that?
- What did you think about that?
- How did you feel about that?
- What did that mean for you?
- Could you give me an example of that?
- Thinking about that now...





# Appendix 3.6: Likert Scale Measuring Participant Comfort Levels

(Please circle)

5	very comfortable
4	comfortable
3	neither uncomfortable/comfortable
2	uncomfortable
1	very uncomfortable

Appendix 4: Major Research Project Proposal

# **Expectations of Motherhood: A Qualitative Investigation**

**Claire Atkins** 

### <u>Abstract</u>

**Background:** Pregnancy represents a major life event, which is associated with transition and change. For many individuals pregnancy is a positive experience which engenders feelings of hope and well-being. However, previous research has established that life events that require change are frequently associated with increased levels of stress. It has been found that pregnant women are at an increased risk of experiencing depression. Antenatal depression (AD) causes suffering in women and has negative consequences for their social relationships, and their infant's neonatal and neurobehavioural outcomes. Few studies have examined women's subjective experience of pregnancy and AD.

**Aims:** The present study aims to explore women's subjective experiences of pregnancy, in particular, the factors that are involved in the development and maintenance of AD.

**Methods:** A social constructionist grounded theory approach will be employed to explore participants' construction of meanings of their experiences of pregnancy and AD. In depth semi-structured interviews will be conducted. Interviews will be transcribed and coded. Constant comparative analysis and memo writing will be used.

**Applications:** Findings from the study will potentially inform effective treatment packages for AD and will highlight risk and resilience factors associated with pregnancy.

# **Introduction**

Depression has been identified as the leading cause of disease burden among women of childbearing age (Bowen & Muhajarine, 2006). Much of the literature on depression and motherhood has focused on postnatal depression (PD). However, a number of studies have demonstrated that an equal or greater rate of depressive symptoms occur during the antenatal period (Dennis, Ross & Grigoriadis, 2007; Heron, O'Connor, Evans, Golding, Glover & The ALSPAC Study Team, 2004). Estimates of prevalence rates for antenatal depression (AD) range from 6.9% to 20%, with a mean of 10.7%, compared to 7% in the general population (Mian, 2005). Parry and Newton (2001) propose that hormonal changes account for the increased incidence of depression during pregnancy. As well as the biological changes associated with pregnancy, the experience of pregnancy itself represents a period of transition and change. The transition to parenthood is considered a developmental phase which involves significant personal, familial and social change (Feeney, Alexander, Noller & Hohaus, 2003). Life events that require change are associated with increased levels of stress, as pregnancy involves many changes, involving both gains and losses, it represents a particularly stressful time for many individuals (Lee, 1995).

Recognition of the increased prevalence rate of, and vulnerability to, depression in the antenatal period has led to attempts to profile the risk factors associated with AD. Lee et al. (2007) and Spinelli and Endicott (2003) outlined several risk factors for depression during pregnancy including, personal or family history of mood disorder, low self-esteem, stressors and demographic variables (i.e. young age, low educational status and history of child abuse). Little research has been conducted on factors which might protect against depression in the antenatal period. Grote, Bledsoe, Larkin, Lemay and Brown (2007) report that individual protective factors can buffer against the adverse effects of exposure to risk factors with regard to depression. Grote et al. (2007) found that individual protective factors, such as, optimism and perceived control are associated with less severe symptoms of depression. They argue that individuals with high levels of optimism and perceived control employ constructive coping strategies and have increased levels of motivation to cope when exposed to stressors. Protective factors at family and community levels might include good social support networks and

access to appropriate services, however, further research is required to investigate these factors.

Murray, Cooper and Hipwell (2003) reported that pregnant women with depressive symptoms experience emotional and social withdrawal, as well as excessive concerns about the pregnancy and their ability to parent. Research has shown that women with depressive symptoms are more likely to demonstrate unhealthy behaviours such as poor adherence to antenatal care, use of tobacco, alcohol and other substances than those without depression. A study by Oberlander, Warburton, Misri, Aghajanian, and Hertzman, (2006) found that a range of neonatal outcomes were associated with AD including, birth-weight, gestational age and birth complications. An association between psychosocial stress and preterm delivery and/or low birth-weight has been demonstrated by a number of studies (Orr, James, & Blackmore, 2002; Rich-Edwards et al., 2001). Infants of mothers with AD also show neurobehavioural differences, such as poor performance on neurological exams demonstrating poor motor skills, activity, coordination and resilience (Lyons-Ruth, Connell & Grunebaum, 2000). These adverse neonatal outcomes may have long term consequences for some children. Mian (2005) suggests that behavioural and biological changes have been found to persist into late childhood and are predictors of increased vulnerability to psychopathology.

Another long term consequence of AD is the associated increased risk of postnatal depression. Approximately 50% of PDs begin during pregnancy (O'Keane & Marsh, 2007). PD is a distressing experience for both the mother and the infant, which affects a mother's ability to cope with the care of her baby and limits her capacity to engage positively with her baby in social interactions (Poobalan et al., 2007). The parent-child relationship is a key factor influencing child development and attachment security. Moderate associations between maternal depression and negative disengaged parenting behaviours were observed in a meta-analysis by Lovejoy, Graczyk, and O'Hare (2000). These alterations in parenting behaviours impact upon the infants' cognitive and emotional development. It appears that the negative effects of PD on parenting behaviours can lead to the development of an insecure attachment organisation (Teti, Gelfand, & Messinger, 1995). It has been suggested that attachment insecurity is associated with conduct problems in school, poor modulation of affect, and increased risk of psychiatric problems (Rutter, 1990).

Clinicians are faced with the task of providing timely and appropriate interventions to avoid such adverse effects of AD. Concerns regarding the risks of antidepressant medications during pregnancy include, spontaneous abortion, teratogenesis, neonatal toxicity and long term neurobehavioural sequalae. Chabrol (2004) found that the majority of their sample group (n = 405) opted for psychological interventions over antidepressant medication to treat PD. It has been suggested that psychological interventions may provide secondary benefits including longer lasting effects than pharmacological interventions, learning new skills which may be particularly beneficial to postpartum women and mobilisation of support resources (Dennis et al., 2007). Most psychotherapeutic work on depression during pregnancy has focussed on the use of Interpersonal Psychotherapy (IPT). The focus on role transitions as a major tenet of IPT is particularly relevant in the perinatal period. Adaptations to IPT have been made by Spinelli (2001) to address the specific needs and problems of AD. A controlled trial of IPT versus a parenting education programme for depressed pregnant women (Spinelli & Endicott, 2003), found that IPT resulted in significant mood improvement relative to the parenting education programme and there was a significant difference in recovery rates between the two groups (in favour of IPT). The authors of this trial suggest that IPT should be used as a first line treatment for AD. Grote, Bledsoe, Swartz & Frank (2004) conducted a pilot study of brief IPT for a sample group of low income pregnant women with depression. Improvements in depressive symptomatology were noted prior to the birth of the infant and these improvements were maintained at 6 months follow up. A recent review (Dennis et al., 2007) of psychosocial and psychological interventions for treating AD stated that the evidence was inconclusive regarding the effectiveness of IPT to treat AD, as only one trial was of adequate quality to be included in the review.

For many individuals pregnancy and childbirth represent positive life events that engender feelings of hope, satisfaction and well-being. Motherhood may represent an opportunity for many individuals to experience an emotionally rich and rewarding role (Mowbray, Oyserman, Zemencuk & Ross, 1995). However, for a smaller group of women pregnancy and childbirth are not experienced in this way. In fact, the prospect of parenthood could be construed as potentially threatening. Individuals and families may be faced with feelings of uncertainty regarding the future and the need to adapt current relationships and lifestyles in order to adjust to changes. Alexander, Feeney, Hohaus and Noller (2001) found that problematic adjustment to childbirth was predicted by increased levels of depression, low self esteem, poor problem solving strategies and insecure attachment organizations. It seems likely that these factors will impact upon how a mother prepares for and perceives parenthood.

Literature on AD and women's subjective experiences of being pregnant while suffering from low mood is limited. Potential reasons for the dearth of research on AD include: an emphasis on physical well-being of the mother and fetus during pregnancy by professionals, families and society to the exclusion of mental well-being, misconceptions regarding the experience of pregnancy as a "buffer" against low mood and misattribution of symptoms of depression to the changes and emotions associated with pregnancy. A small number of studies have examined women's experiences of being pregnant (Zasloff, Schytt & Waldenstrom, 2007; Rudolfsdottir, 2000 & Lee, 1995) but have not addressed the issue of AD. Zasloff et al (2007) found that expectations and experiences of childbirth varied according to maternal age. The younger women in the study were observed to have more anxious and depressive symptoms during the pregnancy and social problems were more prevalent in this group. However, the sample size included in the younger and older age extremes were small affecting the external validity of these findings. Rudolfsdottir (2000) outlines a feminist perspective on how pregnancy is formulated in medical and healthcare discourses and how these formulations affect the experience of pregnancy, in particular women's agency. The author argues women's experiences of pregnancy and childbirth do not mirror the institutionalized normative ideas with which they are presented because individuals have different life stories. Results of the study suggest that the binary opposition between the mind and body makes women's agency in reproduction problematic and allows those in positions of authority to ignore women's wishes and views. The study did not investigate the views of staff working in medical/healthcare settings. Lee (1995) investigated women's views on what they considered to be the central psychological events of their pregnancy. The author states that pregnancy is a critical time or occasion which composes an integral sequence of changes involving several interpersonal milestones. As such, Lee (1995) argues that the events of pregnancy should be viewed as developmental milestones or crises.

One study to date has investigated women's experiences of managing AD. Bennett, Boon, Romans and Grootendorst (2007) examined the processes that women used to manage their depression. Women in the study accounted for their experiences of depression in terms of symptoms, the events and circumstances that they perceived contributed to their depression and the steps they took to address their depression. To arrive at what they considered to be the optimum maternal situation women in the study engaged in a complex process which included; recognising the problem, dealing with their feelings of shame and embarrassment and considering the consequences of depression and its management in order to reground the self and regain control of their lives. This study is the first to examine women's experiences of AD. However, the focus of the study is relatively narrow, concentrating on the management of AD. Other limitations of the study include a highly selective participant group and the fact that interviews were conducted, on average, one year after the pregnancy.

Interpersonal themes (such as role transitions and the importance of supportive relationships) permeate the research on prevalence rates, risk factors and treatment studies of AD. Despite the lack of methodologically rigorous intervention trials for AD, the effectiveness of IPT in perinatal populations makes theoretical sense (Dennis et al., 2007). Future research is required to establish the active ingredients of effective interventions and investigate salient issues regarding women's experiences of AD. Examination of interpersonal issues in relation to the experience of being pregnant and suffering from low mood would inform the existing research base. It may enable the identification of specific issues which professionals and services need to address when working with this client group and highlight specific issues which interventions should focus on. Qualitative methods of research allow in-depth exploration of individual's personal experiences and identification of common themes which may emerge among participants' accounts. A qualitative approach would allow for systematic investigation of interpersonal issues such as role transitions, social relationships and attachment experiences associated with AD. The present study will explore individual's experiences of pregnancy and the transition to parenthood, in particular experiences of AD will be investigated. Interpersonal issues which impact upon AD will be explored using a qualitative approach.

# **Aims and Objectives**

# **Aims/Research Questions**

The study aims to investigate women's experience of pregnancy and their expectations of motherhood.

Role transitions and interpersonal factors associated with AD will also be explored.

# **Objectives**

To describe women's experiences of pregnancy and AD.

To describe role transitions experienced by pregnant women who suffer from AD.

To describe the challenging and rewarding aspects of pregnancy and transition to parenthood in women who suffer from AD.

To describe their relationships with family and partners

# **Plan of Investigation**

# **Participants**

The participants in this study will include women who are suffering from AD or have suffered from AD in the past. Pregnant women who have not experienced AD will also be included. Individuals recruited will be outpatients who are attending (or have attended in the past) a specialist perinatal mental health clinic or an antenatal clinic. Theoretical sampling procedures will be employed to develop emerging categories and refine ideas with the aim of theory construction, in keeping with a grounded theoretical approach (Charmaz, 2000).

### Inclusion criteria

Pregnant women 16 years of age or over, English speaking, within the 1<sup>st</sup> or 2<sup>nd</sup> trimester of pregnancy and meeting criteria for major depression according to the Diagnostic and Statistical Manual of Mental Disorders DSM-IV (APA, 1994), who have been referred to a specialist mother and baby psychiatric unit on an out patient basis and report experiencing interpersonal problems as a feature of their overall presentation. Women who are 16 years of age or over, English speaking, who suffered from AD during their pregnancy and received input from a perinatal mental health clinic within the previous three years. Women who are 16 years of age or over, English speaking and within the 1<sup>st</sup> or 2<sup>nd</sup> trimester of pregnancy and are attending an antenatal clinic.

# Exclusion criteria

Substance misuse or dependency, or a learning disability DSM-IV (APA, 1994).

# Recruitment

It is anticipated that a poster advertisement will be used to identify both women who are currently suffering from, or have in the past suffered from, AD and pregnant women (who are not suffering from AD) at the Perinatal Mental Health Service and antenatal clinics. An opt-in system will allow individuals who are interested in participating in the research to obtain further information about the study (i.e. the Participant Information Sheet) from staff at both clinics. The researcher will conduct presentations of the project to staff at potential referral agencies. Stamped addressed envelopes will also be provided to enhance confidentiality and anonymity. Individuals who contact the researcher opting in to the study will then be given consent forms. A brief preliminary meeting with potential participants will be conducted to ensure that they fully understand the procedures involved in the study. Once consent has been obtained, Key Workers will be contacted to confirm that those individuals wishing to participate are suitable. Interviews will then be conducted on an individual basis. Clinicians responsible for the participant's care will be informed of their participation in the study.

# Measures

In-depth interviews will be conducted on an individual basis and will be audio taped for transcribing purposes. The interviews will be semi-structured, using open-ended questions consistent with the aims and objectives of the study. Probe questions will be used to obtain further information about particular issues. Participants' responses will shape the content of the interview. A collaborative, reflective stance will be encouraged throughout the interviews. It is anticipated that open-ended questions will aid the participant to reflect upon their experience of AD and explore relevant interpersonal issues. However, it is important that the researcher remain receptive to new ideas and not impose their own preconceived ideas about the topic. Therefore the proposed interview agenda will be used only as an aid to elicit participant's views. The content of the interviews will change as new themes emerge and concepts are identified, which is in keeping with the ethos of grounded theory. To aid this process, following each interview the data will be studied to identify the emerging themes and incorporate them into later interviews.

# Design

A social constructionist grounded theory approach (Charmaz, 2003) will be employed. This approach emphasizes the development of an interactive relationship and mutual construction of knowledge between the researcher and the participant (Charmaz, 2000). In this approach the phenomena under investigation is viewed as central. Benoliel (2001) suggests that a social constructionist approach is appropriate when attempting to explore individual's experiences, meanings and motivations of everyday life and the basic processes that people use to deal with social situations to which they must adapt. This approach is also particularly well suited to depression research as the experience of depression often involves the individual's construction of the world and their relationships in that world (Bennett et al., 2007). Using a qualitative design allows for flexibility and acknowledges the subjective nature of individual's experiences.

# Procedure

Prior to recruitment the researcher will consult with a service-user to gain further knowledge of pertinent issues relating to the experiences of this participant group. Information obtained from the service-user, as well as a literature search, will form the basis of the semi-structured interview. As outlined in the recruitment section (above) potential participants will be recruited through perinatal mental health and antenatal clinics. Participant information sheets will be distributed to individuals who meet criteria for the study. When informed consent has been obtained interviews will be conducted. It is anticipated that a number of women who are currently, or have in the past suffered from AD will be interviewed first and emerging themes will be identified. These initial interviews will be followed by interviews with non-depressed pregnant women, which in turn will be followed by more interviews with women who have experienced AD. It is anticipated that this structure will allow the exploration of varying themes which can inform later interviews. During the interview participants' level of distress will be monitored using a Likert scale, participants will be informed that they can stop the process at any time. Some socio-demographic information will be gathered at the initial stages of the interview. This will serve the purposes of introducing the participant, beginning to develop a rapport with the participant and providing useful contextual information on the participant group included in the study. To facilitate transparency, all aspects of the research process will be disclosed to the participant.

Interviews will be transcribed verbatim, line-by-line coding, focussed coding and theoretical coding will be conducted. Constant comparative methods will be used to investigate whether there are emerging subcategories or differences in the identified categories. Memo writing will also be conducted by the researcher after each interview. This process will continue until theoretical sufficiency is achieved and no new data emerges from the categories identified. Themes that do not fit with the analysis will also be explored as they can provide alternative explanations and further develop theories (Charmaz, 2006).

# Justification of Sample Size

Theoretical sampling will be conducted until data sufficiency is achieved and no new themes or categories emerge from the data. In grounded theory power, purpose and patterns evolve from scrutinizing categories that have emerged from the data (Charmaz, 2006). It is anticipated that a minimum of 8 participants will be included in the study as suggested by Turpin et al. (1997).

# Settings & Equipment

Interviews will be conducted at a specialist Perinatal Mental Health Service. Clinical space (interview room) will be provided on site. Staff at the perinatal service (nurses, midwives and a psychiatrist) will be on site at all times while the study is being conducted. The perinatal service is located in a general hospital which has maternity facilities. A digital voice recorder will be used to record interviews.

# **Data Analysis**

Data analysis will be an ongoing process as outlined in the procedures section above. Methods of data analysis from the social constructionist approach of grounded theory will be used. Pregnant depressed and non-depressed women, as well as women who previously experienced AD will be interviewed about their experiences to increase the variability and diversity of the data. This will enable similarities and differences between these women's experiences of pregnancy to be compared and explored. Transcription of interviews will occur as soon as possible following the interview, each transcript will be read several times to gain familiarity with its content and to identify conceptual categories. As further interviews are conducted data collection will become increasingly focused as a result of the analytic process. This process of simultaneous data collection and analysis will shape data collection and inform emerging analysis. Analysis will involve line-by-line coding, where each line of data in the transcript is assigned a code. Focused coding will then allow the integration of frequent codes to produce categories. Finally theoretical coding will be conducted to establish possible relationships between categories. Constant comparative methods and memo writing will be will be used throughout all stages of data analysis. Initial themes that emerge in the data will be strengthened by the process of memo writing which will aid the identification of themes that require further exploration.

# Health & Safety Issues

<u>Researcher safety issues:</u> the study will be conducted in a clinical setting with numerous mental health professionals on site. Staff at the perinatal mental health clinic will be available at all times should the need arise during the course of the study. Home visits will not be conducted. Supervision will be provided on a regular basis.

<u>Participant safety issues:</u> all participants will be given adequate information about the study to allow for informed consent. The participants will be clients of the specialist psychiatric team to which they were referred and therefore they will be under the care of a multidisciplinary team (including specialist mental health nurses, social workers and psychiatrists). As mentioned above the perinatal mental health service is adjacent to a general hospital which has maternity facilities should they be required. Interviews will be recorded and reviewed by an experienced clinical psychologist.

# **Ethical Considerations**

Care will be taken throughout the study to ensure that the participants are fully informed of the procedures of the study (transparency) and have the opportunity to refuse or withdraw consent at any stage. All data will be anonymised and a coding scheme will be used to identify participants. Levels of participant distress will be monitored. There is the potential for participants to disclose suicidal ideation and/or intent. Staff at the perinatal mental health service will be available should any concerns regarding suicidal intent arise appropriate risk assessments would be conducted.

# **Financial Costs**

A digital recorder will be obtained from the section of Psychological Medicine

Paper	Approx £15
First class stamps	Approx £15
Travel costs	Approx £60

(£5 to cover travel to and from interview based on estimate that 12 participants might be included in the study)

# <u>Timetable</u>

August	Submission to University of Glasgow & begin ethic submission
September	Submission to ethics committee and research and development
October –	Begin recruitment process, meetings with referrers etc. & initial 2
December	interviews, coding and analysis of data following each interview
December –	Conduct interviews $3 - 10$ , coding and analysis of data following
March	each interview
March –July	Analysis and write up
August	Submission

# **Practical Applications**

As I have already outlined, subjective experiences of pregnancy and AD have received little attention in the research base. The results from this study are anticipated to provide greater understanding of the psychological factors involved in AD. It is hoped that women's experiences of pregnancy and AD, and, the factors that influence these experiences will be explored in depth in the present study. Such insight into personal experiences will allow mental health and other healthcare professionals, as well as families, partners, friends and the individuals themselves to gain knowledge and understanding of these issues. This knowledge could then be used to design appropriate and effective interventions for AD. It is also hoped that the hypotheses and findings of this research study will encourage and inform future research in this area.

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# Addendum to Major Research Proposal

Following discussions with both research and field supervisors, it was decided that nondepressed pregnant women would not be included in the study. This decision was taken due to the difficulties recruiting non-depressed pregnant women within the time constraints of the study and the fact that the study's focus was on developing a psychological understanding of antenatal depression.